

# Central Connecticut State University

## 2024 - 2025 Undergraduate/Graduate Catalog



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## **ABOUT CENTRAL**

Central Connecticut State University (CCSU) is the largest university in the Connecticut State Colleges and Universities system. Founded in 1849, CCSU is also the state's oldest publicly funded university. [Learn more about Central.](#)

## ALL COURSES

### AAPI - Asian American and Pacific Islander

#### AAPI 110 - Introduction to Asian American and Pacific Islander Studies (3)

Examines, through multidisciplinary lenses, the centuries of experiences of Asian Americans and Pacific Islanders in the United States. Focuses on a wide range of contemporary issues.

Prerequisite: None

#### AAPI 202 - Prejudice, Harassment, and Bias Crime in the 21st Century (3)

This course will provide a historical and contemporary overview of prejudice, harassment, and bias crimes in the United States with a focus on the increase of hate attacks in the last 5 years. Legislation, offender typologies, and victim categories will also be addressed specifically attacks based on race/ethnicity, religion, sexual orientation/gender identity, and disability. No credit given to students with credit for CRM 202 or CRM 302.

Prerequisite: None

Corequisite: None

Cross-Listed as: Cross-listed with CRM 202. No credit may be received by students who have received credit for CRM 202.

#### AAPI 207 - Special Topics in Asian American Literature (3)

An exploration of Asian American literature, with a specific focus on its literary and cultural significance. Topics to be announced each semester. Students may repeat for up to 6 credits under different topics.

Prerequisite: WRT 105 or WRT 110 (may be taken concurrently)

Cross-Listed as: Cross-listed with ENG 207. No credit may be received by students who have received credit for ENG 207 or AAPI 207 on the same topic.

#### AAPI 270 - Topics in Asian American and Pacific Islander Studies (3)

Topics in Asian American and Pacific Islander Studies. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

#### AAPI 370 - Advanced topics in Asian American and Pacific Islander Studies (3)

Advanced topics in Asian American and Pacific Islander Studies. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

#### AAPI 410 - Readings in Asian American and Pacific Islander Studies (1-3)

Directed independent studies in Asian American and Pacific Islander studies.

Prerequisite: AAPI 110 or permission of the program coordinator

#### AAPI 470 - Seminar in Asian American and Pacific Islander Studies (3)

Seminar on one of the Asian American and Pacific Islander subjects. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

### AC - Accounting

#### AC 210 - Accounting for Decision-Making (3)

An introductory study of accounting fundamentals for non-business majors only. Examines the measurement of financial position, net income, cost behavior, inventory, operational assets, and budgeting. Emphasis is on the use of accounting data in decision making. No credit toward Business Majors.

#### AC 211 - Introduction to Financial Accounting (3)

Basic concepts and practice of accounting's role in providing information to external users to aid their decision-making activities. Topics include the preparation of financial statements and accounting for cash, receivables and payables, inventories, prepaid expenses and long-term assets. Business majors cannot receive General Education credit for this course.

Prerequisite: MATH 101, or MATH 102, or MATH 103 (C- or higher).

#### AC 212 - Introduction to Managerial Accounting (3)

Basic concepts and practice of accounting's role in providing information to managers to assist in their planning, control, and decision-making activities. Topics

include cost accounting systems, cost behavior relationships, analysis for managerial decisions, and the budget process.

Prerequisite: AC 211 (C- or higher).

### **AC 300 - Intermediate Accounting I (3)**

First of a three-course sequence. A comprehensive review of accounting cycle and analytical concepts. Historical development of current financial reporting, FASB's conceptual framework, preparation of primary financial statements, measurement, recognition, and reporting of assets.

Prerequisite: FIN 295 (may be taken concurrently) and AC 211 (with C- or higher), and admission to the upper division of the Business School.

### **AC 301 - Cost Management Systems (3)**

Development of principles of cost management systems. Emphasis on job order, process, activity-based, operations, just-in-time and standard costing procedures. Focus on accounting system choices and the implications of cost information for managing and reporting costs.

Prerequisite: STAT 201 (may be taken concurrently with AC 301) and AC 212 (both with C- or higher); admission to upper division of the Business School.

### **AC 302 - Introduction to Income Taxation (3)**

Analysis of the basic framework utilized in measuring and reporting taxable income of individuals and business entities including gross income, deductions, tax rates, credits, timing issues and procedural matters.

Prerequisite: AC 212 (with C- or higher).

### **AC 305 - Personal Financial Planning (3)**

This course covers general principles of financial planning, financial statements, the basis of tax planning, time value of money, credit management, cash management, basics of risk management and insurance planning, investment planning, retirement planning, estate planning, and consumer rights and responsibilities. The course introduces fundamental concepts of personal financial planning to enhance students' financial literacy and application. Students are encouraged to participate in instructor-approved service-learning activities.

Prerequisite: FIN 295 (C- or higher)

Cross-Listed as: No credit granted to students with credit for FIN 300

### **AC 311 - Accounting Applications (3)**

Current financial reporting processes, issues and applications are studied. Emphasis on bookkeeping processes and technology.

Prerequisite: AC 212 (C- or higher).

### **AC 335 - Accounting Analytics and Professional Competencies (3)**

This course is designed to develop students' communication skills, spreadsheet skills, ethics reasoning process, and provide students an understanding of how accountants can transform big (and small) data into useful information. Students will use a variety of applicable software to assess, analyze, and present accounting data in a meaningful and impactful way.

Prerequisite: AC 300 (may be taken concurrently) C- or higher, STAT 201, MC 207 (all with C- or higher)

### **AC 340 - Accounting Information Systems (3)**

Developing data models of evolving business processes and implementing accounting information systems based on the semantic data models. Analysis, development and documentation of internal controls for organizational systems are also emphasized.

Prerequisite: AC 300 and MIS 201 (both with C- or higher).

### **AC 350 - Intermediate Accounting II (3)**

Second of a three-course sequence. In-depth coverage of the measurement, recognition, and reporting of inventories, long-lived assets, intangible assets, current and noncurrent liabilities, and shareholders' equity.

Prerequisite: AC 300 (C- or higher) and admission to the upper division of the Business School.

### **AC 356 - Retirement Planning and Estate Planning (3)**

Retirement Planning and Estate Planning is designed to provide students with a strong and rigorous foundation in retirement planning and estate planning to begin preparation for a career as a professional in financial planning, accounting, or related fields. The purpose of this course is to educate future financial planners on how to help clients achieve four key outcomes: (1) financial independence, (2) financial security, (3) financial assets and income maximization across the life course, (4) application of estate planning methodologies and policies to financial planning. The course includes two modules: Module 1 - retirement planning covers three main topics: accumulations from retirement plans, types of retirement plans and retirement income sources, and distributions

from retirement plans; Module 2 – Estate planning covers the estate planning process, probate process, estate taxes, and trusts.

Prerequisite: FIN 295 (C- or better)

Cross-Listed as: No credit granted to students with credit for FIN 356

### **AC 390 - Current Accounting Topics (3)**

Seminar course that will focus on current topics in financial accounting, tax, managerial accounting, accounting systems. Course content will vary from semester to semester. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: Permission of instructor AND have taken AC 211

### **AC 398 - Internship in Accounting (3)**

Accounting majors with approved contracts work with an accounting organization for at least 150 hours. Minimum eight weeks. Internships are opportunities for students to gain practical work experience to enhance their academic studies. Students already in an accounting position may not receive credit for continuing in the same position.

Prerequisite: AC 350 (C- or higher); permission of internship instructor and department chair.

### **AC 400 - Intermediate Accounting III (3)**

Third of a three-course sequence. In-depth coverage of the measurement, recognition, and reporting of leases, pensions, deferred income taxes, accounting changes, statement of cash flows, and other topics.

Prerequisite: AC 350 (with C- or higher).

### **AC 402 - Fundamentals of Corporate Taxation (3)**

Analysis of federal tax law relating to the formation, operation, and liquidations of corporations including dividend distributions and stock redemptions.

Prerequisite: AC 302 (C- or higher).

### **AC 410 - Fraud Examination (3)**

Principles and methodology of fraud detection and deterrence. Topics include: skimming, cash larceny, check tampering, register disbursement schemes, non-cash misappropriations, corruption, accounting principles and fraud, fraudulent financial statements and interviewing witnesses.

Prerequisite: AC 300 with a C or higher

### **AC 420 - Managerial Analysis & Cost Control (3)**

Advanced topics in managerial and cost accounting, along with formulation and application of cost accounting procedures. Topics include systems management, strategic cost management, JIT, TOC, ABC, ABM, Lean, Quality reports, environmental reports, professional exam review.

Prerequisite: STAT 201 and AC 301 (both with a grade of C- or higher).

### **AC 445 - Auditing (3)**

Introduction to the audit process and reporting using PCAOB and ASB auditing standards. Topics include demand for audit and other assurance service, legal and regulatory environment, professional ethics, and rules of conduct.

Prerequisite: AC 350, AC 335 or AC 340 and STAT 201 (all with C- or higher).

### **AC 455 - Internal Auditing (3)**

An introduction to the internal audit profession and the internal audit process. Topics include the International Professional Practices Framework (IPPF), business processes and risk, governance, control issues, as well as planning, conducting, and reporting assurance engagement.

Prerequisite: AC 350, AC 340; STAT 201 (all with C- or higher).

### **AC 497 - Independent Study in Accounting (3)**

Research-oriented project in a special area of accounting.

Prerequisite: Senior standing and permission of instructor.

### **AC 500 - Financial and Managerial Accounting (3)**

Foundational concepts and practice of accounting's role in providing information to external users to aid their decision-making activities and to managers to assist in their planning, control, and decision-making activities. Topics include the preparation of financial statements and accounting for cash, receivables and payables, inventories, prepaid expenses and long-term assets, plus cost accounting systems, cost behavior relationships, analysis for managerial decisions, and the budget process.

Prerequisite: None

### **AC 501 - Financial Reporting I (3)**

A comprehensive review of accounting cycle and analytical concepts. Historical development of current

financial reporting, FASB's conceptual framework, preparation of primary financial statements, measurement, recognition, and reporting of assets. In-depth coverage of the measurement, recognition, and reporting of inventories, long-lived assets, and intangible assets.

Prerequisite: Admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Accounting Chairperson. Completion of both AC 211 or equivalent and AC 212 or equivalent (with grade of B or higher) or AC 500 (with grade of B or higher)

### **AC 502 - Introduction to Individual and Corporate Taxation (3)**

Analysis of the basic framework utilized in measuring and reporting taxable income of individuals and business entities including gross income, deductions, tax rates, credits, timing issues and procedural matters, and analysis of federal tax law relating to the formation, operations, and liquidations of corporations including dividend distributions and stock redemptions.

Prerequisite: Admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Accounting Chairperson, plus AC 211 (Introduction to Financial Account) or equivalent, or AC 500 (Introduction to Financial and Managerial Accounting)

### **AC 503 - Financial Reporting II (3)**

Second of a two-course sequence. In-depth coverage of the measurement, recognition, and reporting current and noncurrent liabilities, shareholders' equity, leases, pensions, deferred income taxes, accounting changes, statement of cash flows, and other topics.

Prerequisite: Admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Accounting Chairperson, plus AC 501 (with grade of B or higher)

### **AC 504 - Auditing and Internal Controls (3)**

Introduction to the audit and reporting process including an introduction to internal controls. Topics include demand for audit and other assurance services, internal controls in an IT environment- CoBIT, legal and regulatory environment, professional ethics, and rules of conduct. Includes audit project on internal controls.

Prerequisite: Admission to a School of Business graduate program, or permission of the Associate Director of

Graduate Programs, or permission of the Department of Accounting Chairperson, plus AC 300 (Intermediate Accounting I) and AC 312 (Intermediate Accounting II) or AC 501 (Financial Reporting I)

### **AC 507 - Advanced Accounting (3)**

Consolidation of financial information, foreign currency translation, and partnership accounting are covered. Economic theories behind accounting standards and practice entries through worksheet tools. Students prepare a comprehensive case for each topic. No credit given to students with credit for AC 407.

Prerequisite: AC 531, or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Accounting Chairperson

### **AC 520 - Managerial Analysis & Cost Control (3)**

Advanced topics in managerial and cost accounting, along with formulation and application of cost accounting procedures. Topics include systems based approaches using integrative cases. No credit given to students with credit for AC 420.

Prerequisite: AC 531, or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Accounting Chairperson

### **AC 524 - Accounting for Government and Non-Profit Institutions (3)**

This course introduces the fundamentals of accounting for non-commercial businesses. The course examines the theory and techniques of accounting and financial reporting for public entities such as cities, counties, and states, as well as not-for-profit entities. The course coverage emphasizes fund accounting including GASB and FASB financial reporting concepts, applications, and practices for governmental and not-for-profit entities, transaction analysis, journal entries, preparation, use and analysis of financial statements and auditing and tax issues.

Prerequisite: AC 531, or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Accounting Chairperson.

### **AC 531 - Accounting Information for Decision Making (3)**

Explores the use of financial accounting information to support decision-making, the effects of external financial reporting on business and investment decisions, and the

use of financial and managerial accounting information to manage costs and evaluate performance throughout the organization.

Prerequisite: Admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Accounting Chairperson

### **AC 543 - Advanced Accounting Analytics (3)**

Emphasizes the use of analytic techniques in the examination of “big data” from various accounting and financial sources. Students use relevant tools and technology to search for anomalies that might be indicative of fraud, analyze and interpret company performance, and visualize relevant output.

Prerequisite: Admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Accounting Chairperson

### **AC 544 - Financial Statement Analysis and Valuation (3)**

How to extract and synthesize information from financial statements for investing in business and how to conduct fundamental analysis to determine the underlying value of the firm. Students should have knowledge of financial accounting and valuation theory.

Prerequisite: AC 531, or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Accounting Chairperson. No credit for those who took FIN 411 undergraduate.

Cross-Listed as: Cross-listed with FIN 540.

### **AC 545 - Advanced Assurance Services (3)**

Critically examining the auditors' assessment of the quality of information in financial statements through case analysis. Detailed coverage of audit planning, risk analysis, assessing internal control, executing audit procedures to substantiate validity of key financial accounts, and presenting audit findings in a final audit report.

Prerequisite: AC 531, or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Accounting Chairperson

### **AC 546 - Advanced Forensic Accounting (3)**

In depth coverage of the most common fraud schemes including how they work, how they can be prevented,

detected and investigated. Includes the use of digital analysis. Covers legal issues associated with fraud investigation and expert witnessing.

Prerequisite: AC 531, or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Accounting Chairperson

### **AC 548 - Contemporary Accounting Topics (3)**

Seminar and internship course. Seminar course provides a critical understanding of contemporary accounting topics. Subjects covered will vary from semester to semester. May be repeated with different topics for a maximum of 6 credits.

Internship course is for Graduate students with approved contracts with an organization in an accounting position for at least 180 hours. Minimum eight weeks. Internships are opportunities for students to gain practical work experience to enhance their academic studies. Students who received undergraduate internship credit or already in an accounting position may not receive credit for continuing in the same position. No more than three credits can be earned for an accounting internship.

Prerequisite: AC 531, or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Accounting Chairperson

### **AC 550 - Financial Accounting Standards (3)**

An in-depth examination of recently-developed accounting standards. Topics include revenue recognition, investment, accounting for intangibles, EPS computational issues, pension, lease, accounting changes, and errors. IFRS are examined, contrasted, and critiqued vis-à-vis U.S. standards.

Prerequisite: AC 531, or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Accounting Chairperson

### **AC 551 - Evolution of Modern Accounting (3)**

Students in their undergraduate studies mastered the “hows” of accounting; this course focuses on the “whys” of accounting practice. The course would span the history of accounting from double entry bookkeeping to present day. The course will examine the purposes and limitations of financial, cost, tax, and regulatory accounting including examining controversial accounting topics that have emerged over the past century.

Prerequisite: AC 531, or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Accounting Chairperson

### **AC 552 - Taxation of Business Entities (3)**

Examines C corporations, partnerships, and S corporations as taxable entities. Topics include the philosophy of taxation, income determination, deductions and credits, acquisition and disposition of property, and related gains and losses. Additional topics, including distribution from and liquidation of business entities, tax planning, and tax research.

Prerequisite: AC 531, or admission to a School of Business graduate program, permission of the Associate Director of Graduate Programs, or permission of the Department of Accounting Chairperson

### **AC 560 - Taxes and Business Strategy (3)**

Develops a student's ability to identify, understand, and evaluate tax-planning opportunities. The material focuses on high-level tax planning concepts and the effect of taxes on business decisions. A conceptual framework for evaluating how tax rules affect financial decisions is developed. The framework is then applied to various types of financial decisions, including savings vehicles, business entity choice, capital structure, international tax planning, financial statement analysis, compensation planning, and mergers, acquisitions, and divestitures.

Prerequisite: AC 552, or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Accounting Chairperson

### **AC 582 - Capstone Seminar (0)**

Activities measuring the degree to which students have mastered the material relevant to the MSA Learning Goals and Objective.

Prerequisite: Completion of core requirements, or permission of the Associate Director of Graduate Programs, or by the Department of Accounting Chairperson.

### **AC 598 - Graduate Internship in Accounting (3)**

Accounting students with approved contracts work with an accounting organization for at least 150 hours. Minimum eight weeks. Internships are opportunities for students to gain practical work experience to enhance their academic studies. Students already in an accounting

position may not receive credit for continuing in the same position. No credit given to students with credit for AC 398.

Prerequisite: Permission of department chair.

## **ACP - Nurse Anesthesia**

### **ACP 502 - Anesthesia Clinical Practicum (0)**

Continuation of ACP 501. Conducted at affiliated hospital school of nurse anesthesia or their affiliated sites. Includes clinical practice, advanced principles of nurse anesthesia practice, applied pharmacology, and professional aspects of nurse anesthesia practice.

Prerequisite: ACP 501 and 3.00 cumulative GPA.

### **ACP 503 - Anesthesia Clinical Practicum (0)**

Continuation of ACP 502. Conducted at affiliated hospital school of nurse anesthesia or their affiliated sites. Includes clinical practice, advanced principles of nurse anesthesia practice, applied pharmacology, and professional aspects of nurse anesthesia practice.

Prerequisite: ACP 502 and 3.00 cumulative GPA.

### **ACP 504 - Anesthesia Clinical Practicum (0)**

Continuation of ACP 503. Conducted at affiliated hospital school of nurse anesthesia or their affiliated sites.

Prerequisite: ACP 503.

### **ACP 505 - Anesthesia Clinical Practicum (0)**

Continuation of ACP 504. Conducted at affiliated hospital school of nurse anesthesia or their affiliated sites.

Prerequisite: ACP 504.

### **ACP 743 - Advanced Specialization Clinical Practicum in Anesthesia I ( )**

Structured documentation and analysis of professional hours within the clinical, research, and/or leadership role using critical thinking skills and personal reflection. Creation of a professional portfolio with written case studies of clinical experiences; with focus on methods for determining best clinical practices through identification of problems, review and systematic evaluation of current research, interdisciplinary collaboration, and consideration of economic and other factors that impact patient outcomes. Conducted at an affiliated hospital school of nurse anesthesia or other approved clinical sites.

Prerequisite: Admission to the Doctorate of Nurse Anesthesia Practice: Advanced Specialization

**ACP 743 - Advanced Specialization Clinical Practicum in Anesthesia I ()**

Structured documentation and analysis of professional hours within the clinical, research, and/or leadership role using critical thinking skills and personal reflection. Creation of a professional portfolio with written case studies of clinical experiences; with focus on methods for determining best clinical practices through identification of problems, review and systematic evaluation of current research, interdisciplinary collaboration, and consideration of economic and other factors that impact patient outcomes. Conducted at an affiliated hospital school of nurse anesthesia or other approved clinical sites.

Prerequisite: Admission to the Doctorate of Nurse Anesthesia Practice: Advanced Specialization

**ACP 744 - Advanced Specialization Clinical Practicum in Anesthesia II ()**

Continuation of ACP 743. Continuation of professional portfolio at more advanced level. Conducted at affiliated hospital school of nurse anesthesia or other approved clinical sites.

Prerequisite: ACP 743

**ACTL - Actuarial Science****ACTL 335 - Financial Mathematics I (3)**

Theory and applications of the theory of interest. Topics include simple and compound interest, installment buying, annuities certain, sinking funds, amortization, depreciation, bonds, and related securities.

Prerequisite: MATH 152.

**ACTL 464 - Financial Mathematics III (3)**

Introduces uncertainty to financial valuation and decision making. Topics include mean/variance optimization, asset pricing models (CAPM), and both discrete and continuous time derivatives pricing models. The student cannot receive credit for both ACTL 464 and ACTL 564.

Prerequisite: ACTL 482 Financial Mathematics II or permission of the instructor

Cross-Listed as: ACTL 564

**ACTL 465 - Long Term Actuarial Models (4)**

Life contingency topics including survival models and life tables, net premium and reserve calculation including an introduction to multiple life and multiple decrement models. Students will not receive credit for both ACTL 465 and ACTL 565.

Prerequisite: STAT 315.

**ACTL 466 - Short Term Actuarial Models (4)**

Topics related to risk theory including frequency and severity of losses, approaches to calculation of the aggregate loss distribution, and estimation of the probability of ruin. Students will not receive credit for both ACTL 466 and ACTL 566.

Prerequisite: STAT 315.

**ACTL 481 - Review-SOA/CAS Course I (3)**

Review and extension of the principles of calculus and probability as related to the material on the SOA/CAS Course 1 exam.

Corequisite: STAT 416 (can be taken concurrently) or permission of instructor.

**ACTL 482 - Financial Mathematics II (3)**

Review and extension of the principles of theory of interest, economics, and finance as related to the material on the SOA/CAS Course FM/2 exam.

Prerequisite: ACTL 335 or permission of instructor.

**ACTL 564 - Financial Mathematics III (3)**

Introduces uncertainty to financial valuation and decision making. Topics include mean/variance optimization, asset pricing models (CAPM), and both discrete and continuous time derivatives pricing models.

Prerequisite: ACTL 482 or permission of the instructor.

**ACTL 565 - Graduate Long Term Actuarial Models (4)**

Models the valuation of life contingent payments. Specific topics include survival models and life tables and their use in the calculation of net premiums and reserves. Multiple life and multiple decrement models are introduced. This is a link course with ACTL 465. Not open to students who have passed ACTL 465.

Prerequisite: Admission to M.A. program in Mathematics with specialization in Actuarial Science.

**ACTL 566 - Graduate Short Term Actuarial Models (4)**

Frequency and severity models, compound distribution models, stochastic process and ruin models. This is a link course with ACTL 466. Not open to students who have passed ACTL 466.

Prerequisite: Admission to M.A. program in Mathematics with specialization in Actuarial Science.



**ACTL 580 - Advanced Topics in Actuarial Science (3)**

Seminar in risk theory, basic actuarial principles, actuarial models, actuarial modeling, or other advanced topic. May be repeated under different topics for a maximum of 6 credits.

Prerequisite: Permission of instructor.

**AFAM - African-American Studies****AFAM 110 - Introduction to African-American Studies (3)**

Interdisciplinary survey of African-American experience from pre-colonial Africa to today, focusing on key figures and on discussion of a wide range of contemporary issues.

Prerequisite: None

**AFAM 111 - Race and Ethnicity in US and Global Politics (3)**

Examines the impact of race in ethnicity within the context of the American political system from the foundation of the country to the present and the relevance of the unique experiences of African Americans, Latinos, Asian Americans and others. The course also examines the comparative political role of race and ethnicity in the global context. Several country cases will be examined.

Cross-Listed as: Cross-listed with PS 111

**AFAM 200 - Dimensions of Diversity and Inequality (3)**

Prerequisite: None

Cross-Listed as: Cross listed with ANTH 200. See ANTH 200 for detailed description. No credit given to students with credit for ANTH 200.

**AFAM 212 - African-American Literature (3)**

Prerequisite: None

Cross-Listed as: Cross listed with ENG 212. See ENG 212 for detailed description. No credit given to students with credit for ENG 212.

**AFAM 250 - Topics in African American Studies (3)**

Examination of selected topics in African American Studies. Topics may vary from semester to semester. May be repeated with a different topic for up to 6 credits.

Prerequisite: None

**AFAM 260 - African Philosophy (3)**

Examination of some or all of the five leading trends in African philosophy; ethnophilosophy, sagacity philosophy,

metaphilosophy, modern/critical philosophy, and liberation philosophy.

**AFAM 263 - The History & Culture of African Americans to 1900 (3)**

The purpose of this course is to explore the role of Blacks in the United States from their African origins to the beginning of the 20th century, while considering their relationship to people throughout the African Diaspora. The course will examine Black survival and resistance to enslavement, emancipation, citizenship, and the struggle for equality.

**AFAM 264 - The History & Culture of African Americans Since 1900 (3)**

This course surveys the economic, social, cultural, and political facets of the African American experience from 1900 to the present. Topics in Black history will be examined, such as Jim Crow laws, the Harlem Renaissance, the Civil Rights Movement and Black Power Movement to Black Lives Matter.

Cross-Listed as: HIST 264

**AFAM 345 - Modern African-American Literature (3)**

Prerequisite: None

Cross-Listed as: Cross listed with AMS 345 and ENG 345. See ENG 345 for detailed description. No credit given to students with credit for ENG 345 or AMS 345.

**AFAM 360 - African-American Philosophy (3)**

Critical examination of the writings of African- American philosophers from 1619 to the present. Addresses issues in moral, social, and political philosophy.

Prerequisite: None

Cross-Listed as: PHIL 360

**AFAM 361 - African-American Religion (3)**

We shall examine multiple complex religious issues relating to Black religious life and identity from West Africa (prior to European colonization) to the present era in the United States.

Cross-Listed as: REL 361

**AFAM 382 - Special Topics in African American Studies (3)**

We will examine topics in African American Studies.

Prerequisite: None

### **AFAM 424 - Peoples and Cultures of Africa (3)**

Prerequisite: None

Cross-Listed as: Cross listed with ANTH 424. See ANTH 424 for detailed description.

### **AFAM 469 - African Americans in the 20th-Century (3)**

Prerequisite: HIST 301 or 310 or permission of instructor.

Cross-Listed as: Cross listed with HIST 469. See HIST 469 for detailed description. No credit given to students with credit for HIST 469.

## **AI - Artificial Intelligence**

### **AI 460 - Topics in the Application of AI (3)**

The application of AI is an interdisciplinary topic that gives students the ability to see how AI can be applied to their discipline. Any course that has a substantial AI component can be Cross-listed with this course to give the students the ability to count the course towards their minor and their major.

Prerequisite: Permission from the department chair offering the course and the AI interdisciplinary program director are required.

## **AMS - American Studies**

### **AMS 110 - Introduction to American Studies (3)**

Interdisciplinary introduction to central themes in American Studies. Considers wide-ranging aspects of the culture of the United States of America, past and present.

Prerequisite: None

### **AMS 210 - Topics in American Studies (3)**

Study of selected topics in American Studies. May be repeated under different topics for up to 6 credits.

### **AMS 310 - Special Topics in American Studies (3)**

Study of selected topics in American Studies. May be repeated under different topics for up to 6 credits.

### **AMS 410 - Seminar in American Studies (1-4)**

Study of selected topics in American Studies. When cross-listed, credit hours align with the host program or department.

## **ANES - Nurse Anesthesia Practice**

### **ANES 590 - Clinical Correlation Conferences (2)**

Lectures, clinical case study presentations, student presentations, and analysis of current anesthesia literature and research.

Prerequisite: Admission to the DNAP program and cumulative GPA of 3.00.

## **ANTH - Anthropology**

### **ANTH 100 - Search in Anthropology (3)**

Introduction to processes and value systems of anthropology. Theme and title may vary from section to section.

Prerequisite: NONE

### **ANTH 140 - Introduction to Anthropology (3)**

Holistic overview of human societies and their cultures throughout time and place. Course relates human evolution, lifeways, material culture, and communication to contemporary global issues and challenges.

Prerequisite: None

### **ANTH 150 - Introduction to Archaeology (3)**

Overview of theories and methods of studying past and present societies and cultures through material objects that people created, used, lost and discarded. Includes present examples of archaeological research in a variety of societies and contexts.

Prerequisite: None

### **ANTH 151 - Laboratory in Introductory Archaeology (1)**

An introductory archaeology laboratory course to accompany, or follow, ANTH 150. During the semester four full days of field and/or lab work are required, ordinarily on weekends. Not open to students who have taken ANTH 450.

Prerequisite: None

### **ANTH 160 - Introduction to Biological Anthropology (3)**

Introduction to the anthropological study of the human species. Course will cover humans as members of the primate order, human genetics, evolution and variation, stressing anthropological perspective of interaction of physical, environmental, and cultural factors.

Prerequisite: None

**ANTH 161 - Introduction to Biological Anthropology Laboratory (1)**

Methods, skills and techniques of biological anthropology. Includes exercises in genetics, human biological variation, pedigree analysis, adaptability, non-human primates, human skeletal anatomy and the analysis of skeletal remains for fossils and forensic studies.

Prerequisite: ANTH 160 Introduction to Biological Anthropology (may be taken concurrently)

**ANTH 170 - Introduction to Cultural Anthropology (3)**

Cultural anthropology involves the study of socio-cultural norms, practices and change. What does it mean to be human? How are humans shaped by and adapt to diverse environments and encounters? This course demonstrates how insights gained from ethnography can help us engage theories about social practice, as well as reflect on our own cultures and contemporary issues. Students will learn how anthropological practice informs social policy, business and academia.

Prerequisite: None

**ANTH 200 - Dimensions of Diversity and Inequality (3)**

Cross-cultural examination of human diversity, focusing on class, race, gender, and ethnicity. Consideration of the ways that cultural differences figure in the development of social, political, and economic inequality.

Prerequisite: None

Cross-Listed as: Cross listed with AFAM 200. No credit given to students with credit for AFAM 200.

**ANTH 201 - Archaeology, Cultural Heritage, and Ethics (3)**

The identification and control of cultural heritage is central to the framework for research within other communities. Contemporary field research must be based on a series of ethical standards that will be discussed and examined throughout this course. Issues include cultural identity, human rights, repatriation, representation, museums, colonialism, working with communities, among many other topics.

Prerequisite: None

**ANTH 210 - The Ancient World (3)**

A scientific examination of the mysteries of the ancient world. Astronomical, mathematical, architectural, and medical achievements of prehistoric peoples are considered, as well as possible explanations for these, ranging from ancient astronauts to human ingenuity.

Prerequisite: None

**ANTH 215 - The Unwritten World (3)**

The human past before the development of writing. Investigates the archaeology of the first four million years of human existence from our earliest upright ancestors to the evolution of complex civilization.

Prerequisite: None

**ANTH 220 - Introduction to Forensic Anthropology (3)**

Course provides an introduction to the field of forensic anthropology. Topics include identifying skeletal remains, reconstructing the circumstances surrounding an individual's death, and ethics in forensic anthropology.

Prerequisite: None

**ANTH 230 - Archaeology of Indigenous North America (3)**

Surveys the archaeological record of indigenous North America. Begins with the archaeology of the earliest human settlement and continues until the period of European contact in the sixteenth and seventeenth centuries C.E.

Prerequisite: None

**ANTH 239 - Economic Anthropology (3)**

Work and labor are central to human subsistence and existence, relations, aspirations, and identity formations. This course offers an anthropological approach to the study of work and its social and cultural meanings and context by introducing the broader field of economic anthropology. We will look at how work and notions of production are caught up with the economy, and how these vary over time, place, and ideology. We will also reflectively examine how our own definitions and categories of work, sociality, and what constitutes the economic arena are shaped. In this course students will produce "auto-ethnographies" drawing upon past, present, or future personal experiences or aspirations of work, and how they relate to sociocultural norms and expectations that may or may not be immediately apparent.

Prerequisite: None

**ANTH 240 - The Supernatural (3)**

A study of the beliefs in gods and spirits, visions, rites relating to beings and powers of other realms, and the effects of religion, magic, and witchcraft on human lives. Explores culturally diverse forms of spirituality and mythology, from a variety of anthropological perspectives.

Prerequisite: None

**ANTH 250 - Introduction to the Primates (3)**

Course offers an introduction to non-human primate species, including their behavioral and anatomical diversity, their evolutionary history, and the conservation efforts that are being made to protect those species that are endangered.

Prerequisite: None.

**ANTH 260 - Anthropology of Food (3)**

Explores connections between what we eat and who we are through cross-cultural study of how personal identities and social groups are formed via food production, preparation, and consumption. Organized around critical discussion of what makes "good" food good (healthy, authentic, ethical, etc.). Uses anthropological and literary classics as well as recent writing and films on the politics of food and agriculture.

Prerequisite: None.

**ANTH 270 - Applying Anthropology (3)**

Views methods and techniques to apply anthropological knowledge for practical results. Examines role of anthropology in medicine, education, social service, and the development and implementation of public policy in the U. S. and cross-culturally.

Prerequisite: None

**ANTH 322 - Historical Archaeology (3)**

Anthropological study of the past 500 years of cultural history, using documentary and artifact data to interpret changing cultural patterns in New England and across the world. Specialized techniques of archival research, field excavation, and artifact analysis in historical archaeology are introduced.

Prerequisite: None

**ANTH 324 - Archaeology of the State (3)**

Discusses the forces leading to the emergence of the state in both the distant and more recent past. Focuses on prehistory and early history of the world's first complex civilizations.

Prerequisite: None

**ANTH 329 - Experimental Archaeology (4)**

Archaeological lab methods, analysis and investigation of the techniques used by archaeologists in the reconstruction of prehistoric technology. This course will

include experiments in tool manufacture and use, as well as lab and artifact curation and analysis.

Prerequisite: ANTH 150 or permission of instructor.

**ANTH 335 - Theories of Human Evolution and Behavior (3)**

Examination of major schools of thought in biological evolution, with special emphasis on their application to human behavior, from the pre-Darwinian period to sociobiology.

Prerequisite: ANTH 140 or ANTH 160 or permission of instructor.

**ANTH 340 - Theories of Culture (4)**

A historical survey of major schools of thought in socio-cultural and bio-cultural anthropology. Includes critical analysis of Evolutionist, Historicist, Functionalist, Structuralist, Interpretive, and Marxist explanations with focus on post-1960s period.

Prerequisite: ANTH 140 or ANTH 170 or permission of instructor.

**ANTH 350 - Genders and Cultures Around the Globe (3)**

Cross listed with WGSS 350. See WGSS for detailed course description. No credit given to students with credit for WGSS 350.

Prerequisite: None

Cross-Listed as: Cross listed with WGSS 350. See WGSS for detailed course description. No credit given to students with credit for WGSS 350.

**ANTH 352 - Ethnicity and Ethnic Identity (3)**

This course can be taken for the American Studies program. Examination of the processes by which ethnic groups and identities are created, maintained, or modified. Comparison of ethnic sub-cultures focusing on Connecticut groups.

Prerequisite: None

**ANTH 365 - The Anthropology of Human Differences (3)**

The biological and cultural processes which have brought about the individual, sexual, and racial variation of the human species.

Prerequisite: 100 level Anthropology course or permission of instructor.

**ANTH 373 - Methods in Biological Anthropology (4)**

This course will give students the opportunity to learn and practice traditional osteological data collection techniques along with more recent advances in the field of biological anthropology. Students will receive training on how to plan a project, caliper-based and digital-based 2D measurement techniques, and 3D measurement techniques. The first half of the course will be a general introduction to different methods, and the second half will involve students applying what they learn to a specific research topic in a subfield of biological anthropology that is of interest to the student (e.g., forensic anthropology, primatology, or paleoanthropology).

Prerequisite: Permission of instructor.

**ANTH 374 - Field Research Methods (4)**

Examines field research methods with focus on qualitative techniques such as participant-observation, applied and action research, and ethnographic interviewing. Quantitative techniques include time budget analysis and single subject design.

Prerequisite: None

**ANTH 375 - Anthropological Data Analysis (4)**

Investigation of techniques in numerical analysis of anthropological data. Covers statistical methods of correlation, spatial analysis, and factor analysis. Focuses on the application of various statistical methods to actual anthropological data. Anthropology majors only.

**ANTH 401 - City Life & Culture (4)**

Exploration of the historical and contemporary development of urban spaces in the United States and Hartford area. Development of diverse cultural identities through neighborhood, social and, religious institutions will be examined.

Prerequisite: None

**ANTH 402 - Space, Place, and People: The Archaeology of Landscapes (4)**

This course considers landscapes as “built environments,” created from human transformations of natural environments into cultural spaces and places. These human modifications include roads and paths, monuments, walls, agricultural fields, terraces, gardens, and aqueducts, among many others. What can landscape transformations reveal about ritual practice, land management, social organization, and everyday life? Ethnographic, ethnohistorical, and global archaeological

case studies will be investigated to answer these questions.

Prerequisite: ANTH 150 or permission of instructor.

**ANTH 416 - Archaeology of Africa (4)**

Examines pre-historic and historic period of Africa via archaeological, documentary, and oral historical data.

Prerequisite: ANTH 150 or permission of instructor.

**ANTH 418 - New England Archaeology (4)**

An examination of past communities of New England through analysis of fragmentary remains of their villages, burial grounds, and trash deposits. Focus will be on sites excavated by the Anthropology Department at Central Connecticut State University.

Prerequisite: ANTH 140 or ANTH 150 or permission of instructor.

**ANTH 420 - African Diaspora Archaeology (4)**

Examination of early African diaspora life via analysis of archaeological remains. Consideration of issues such as diversity of populations, health and diet, and labor conditions.

Prerequisite: ANTH 150 or permission of instructor.

**ANTH 423 - Vietnam, A Country, Not a War (4)**

Introduction to the history and culture of the country itself - prior to and following the Vietnam War (known in Vietnam as the "American War"). Examines topics related to the contemporary society, culture, and nation-state of Vietnam as well as its global diaspora.

Cross-Listed as: East Asian Studies

**ANTH 424 - Peoples and Cultures of Africa (4)**

Samples the diversity of African peoples, their cultures and related social relations. Primary focus on colonial and contemporary life, African liberation movements, and the influence of global political economy on life in modern Africa.

Prerequisite: None

**ANTH 428 - Cultures of Latin America (4)**

Introduction to modern and pre-Colombian societies in Latin America. Objectives include tracing the historical roots of social and economic relations in Latin America today, and the diverse responses Latin Americans have made and are making to rapid social change.

Prerequisite: ANTH 140 or ANTH 170 or SOC 110.

Cross-Listed as: Cross listed with LAS 428. No credit given to students with credit for LAS 428.

**ANTH 433 - Independent Study in Anthropology (1 TO 3)**

Directed study in Anthropology.

Prerequisite: Senior standing and permission of department chair.

**ANTH 435 - The Anthropology of Violence and Human Rights (4)**

Violence is a cultural force around the world. Wars, ethnic conflicts, genocide, structural discrimination and domestic abuse are a few examples of violence. This course investigates the multidimensional forces that create violence among diverse groups locally, regionally and internationally. Additionally, we examine theories and practices that underlie violence and how non-violence and restorative justice may serve as intervening resources.

**ANTH 437 - Internship in Anthropology (3)**

Anthropologically relevant work experience in an appropriate local, national, or international venue. Includes consultation with faculty, analysis of related resources, and preparation of final report.

Prerequisite: Permission of instructor and written acceptance of sponsoring organization.

**ANTH 450 - Archaeological Field School (3 TO 6)**

Provides instruction in survey techniques, mapping, scientific excavation, photographic and laboratory skills and analysis. Field schools are operated in both historical and prehistorical archaeology. Enrollment is limited. Send letter of application to department. May be repeated.

Prerequisite: None

Notes:

Course may be taken for graduate credit.

**ANTH 451 - Field School in Cultural Anthropology (3 TO 6)**

Development of qualitative research skills central to cultural anthropology through language study, home stays, seminars, speakers, and excursions. Normally involves travel outside the United States.

Prerequisite: Permission of instructor.

Notes:

Course may be taken for graduate credit.

**ANTH 452 - Field School in Biological Anthropology (3-6)**

Research activities in the field school include examination of skeletal collections of past populations from a number of sites and receiving training in leading-edge techniques in Virtual Anthropology, including digital data collection and analysis. Involves travel outside of the United States

Prerequisite: Permission of instructor

**ANTH 475 - Topics in Anthropology (3)**

Examination of selected topics in Anthropology. May be repeated under different topics up to 6 credits.

Prerequisite: None

Notes:

Course may be taken for graduate credit.

**ANTH 489 - Senior Thesis Preparation (1)**

This one-credit course requires seniors to draw on previous course and field work to identify and develop a working senior thesis statement.

Prerequisite: Pre- or co-requisites ANTH 374, ANTH 373 or ANTH 375, or permission of instructor.

**ANTH 490 - Senior Capstone (4)**

Semester-long independent project developed by the student in consultation with an Anthropology faculty advisor who will serve as the student's instructor for the course. The Capstone may include applied or basic research. Students must meet with the instructor and demonstrate they are prepared for the proposed project to receive permission to register for the course. Students are expected to complete 300-level theories and methods courses before registering for the Capstone.

Prerequisite: Permission of instructor

**ARAB - Arabic**

**ARAB 111 - Elementary Arabic I (3)**

Open to students with one year or less of Arabic in high school. Not open to native speakers of Arabic. Through a direct conversational approach, foundations of Arabic linguistic structure are established.

Prerequisite: One year or less of Arabic study in high school

Offered: Fall

**ARAB 112 - Elementary Arabic II (3)**

Not open to native speakers of Arabic. No credit given to students with previous credit for more advanced work in Arabic except by permission of the department chair. Study of spoken and written Arabic languages structure.

Prerequisite: ARAB 111 or equivalent

Offered: Spring

**ARAB 125 - Intermediate Arabic I (3)**

Revision of principles of the Arabic language structure. Reading, conversation and composition on topics of general interest.

Prerequisite: ARAB 112 or equivalent

**ARAB 126 - Intermediate Arabic II (3)**

Continuation of ARAB 125. Practice in oral and written Arabic.

Prerequisite: ARAB 125 or equivalent

**ART - Art****ART 100 - Search in Art (3)**

Introduction to nature and structure, processes and implications of selected topics in fine and applied arts. Titles and contents may vary from section to section.

Prerequisite: None

**ART 110 - Introduction to Art History (3)**

General survey of historical development of visual arts in architecture, painting, and sculpture. Credit not given to students who have taken ART 112 or ART 113.

Prerequisite: None

**ART 112 - History of Art I (3)**

A survey of paintings, sculpture, and architecture from prehistoric times to the Renaissance. CSUS Common Course.

Prerequisite: None

**ART 113 - History of Art II (3)**

A survey of paintings, sculpture, and architecture from the Renaissance to the present. CSUS Common Course.

**ART 120 - Design I (3)**

Exploration of spatial division, color, aesthetic theories, and their relationships to typical design problems in two dimensions. CSUS Common Course.

Prerequisite: None

**ART 124 - Three-Dimensional Design (3)**

Introduction to design elements of architecture, environment design, sculpture, etc. Construction of three-dimensional assemblages required. CSUS Common Course.

Prerequisite: None

**ART 130 - Drawing I (3)**

An investigation of the components of drawing: line quality, volume, value, space, and composition. Exercises are designed to strengthen the student's ability to see, while developing hand to eye coordination. CSUS Common Course.

Prerequisite: None

**ART 141 - Photography I (3)**

Introduction to digital photography as an art form. Students will learn about manual mode photography and editing as a vehicle for greater creative possibilities. A final project of the student's choice helps students create their own visual language. DSLR or Mirrorless camera with manual mode is required. No credit given to students who already have credit for ART 247.

Prerequisite: None

**ART 148 - Video Art I (3)**

An introduction to video art production that covers filming with camera and drone and editing video, sound and color in service of conceptual creative expression through the moving image. No credit given to students who already have credit for ART 348.

Prerequisite: No prerequisite

**ART 200 - Introduction to Global Art (3)**

A survey of painting, sculpture, architecture, and other arts of India, China, Japan, Korea, Africa, Oceania, the Islamic world, and Latin America. Discussions of aesthetics, practical methods of artmaking, identity, religion, the art market, contact with Western cultures, and the legacy of colonialism.

**ART 211 - Greek and Roman Art (3)**

Development of the architecture, painting, and sculpture of ancient Greece and Rome from the 8th C BCE to the 4th C CE. Emphasis will be placed on the social and cultural history that the art reflects, and on how the literature and philosophy of the age shaped it.

Prerequisite: none

### **ART 215 - The African Diaspora (3)**

Introduction to the fine arts contributions of African-American artists as expressed through their culture. Focus is on individual research and presentations on historical and contemporary topics.

Prerequisite: None

### **ART 216 - Modern Art (3)**

Survey of rapidly changing artistic styles such as Post-Impressionism, German Expressionism, Bauhaus, Surrealism, Feminist Art, and Activist Art within their historical context including major political events, such as World War I and World War II.

Prerequisite: ART 110 or ART 112 or ART 113.

### **ART 218 - Renaissance Art (3)**

Historical development of European painting, sculpture, and architecture from 1400 to 1600.

Prerequisite: None

### **ART 224 - Illustration I (3)**

Introduction of a variety of illustration techniques and procedures. Emphasis upon the selection and application of illustration techniques suitable for translating written or suggested material into visual form.

Prerequisite: ART 130.

### **ART 230 - Drawing II (3)**

An in-depth study in drawing techniques as applied to individual expression.

Prerequisite: ART 130.

### **ART 235 - Digital Processes in Art Making (3)**

This course is designed to introduce students to digital media as a contemporary art medium focusing primarily on the programs Adobe PhotoShop and Illustrator. Students will be directed through a variety of techniques and tools with these programs, and will have the opportunity to use the media to build a portfolio of artworks that address a series of issues relevant to art making today. Emphasis will be placed on the creative problem solving, research and the ability to articulate about artistic process and decision-making.

Students will be guided through a series of visual problems and contextual information in order to develop artworks that engage both personal and social issues and ideas.

Prerequisite: None

### **ART 240 - Printmaking I (3)**

Introduction to the technical processes and the aesthetic possibilities of lithography, intaglio and silkscreen. CSUS Common Course.

Prerequisite: ART 120 or ART 130.

### **ART 241 - Photography II (3)**

Building on techniques and concepts learned in Photo I, this course explores advanced image generation practices in photographing and editing. Students create their own photo book. Camera with manual mode is required. No credit given to students who already have credit for ART 347.

Prerequisite: Art 141 Photography I

### **ART 248 - Video Art II (3)**

Intermediate course in video art production that covers techniques such as filming with cameras and drones and editing video and sound in service of creative expression through the moving image. No credit given to students who already have credit for ART 448.

Prerequisite: Art 148 Video Art I

### **ART 250 - Watercolor Painting (3)**

Styles and techniques of painting in transparent and opaque watercolors, with emphasis on individual creative expression.

Prerequisite: ART 120 and ART 130.

### **ART 252 - Painting I (3)**

Exploration of techniques of painting in still life, landscape, and creative composition. CSUS Common Course.

Prerequisite: ART 130.

### **ART 260 - Ceramics I (3)**

Functional and non-functional design in clay and glaze using various techniques. CSUS Common Course.

Prerequisite: None

### **ART 261 - Sculpture I (3)**

Introduction to creative sculpture: modeling, carving, constructing, and assembling. Clay, firebrick, mass-produced objects, and plaster will be used to develop figurative, abstract, and non-objective sculpture. CSUS Common Course.



Prerequisite: ART 124.

### **ART 263 - Crafts I (3)**

Creative structuring of materials and ideas into art forms through the use of tools and processes. Open to majors only.

Prerequisite: None

### **ART 264 - Design--Handicraft Materials and Techniques I (3)**

Varied handicrafts and materials are included. May not be substituted for ART 263.

Prerequisite: ART 120 or ART 130.

### **ART 265 - Exploratory Topics in Art (1-6)**

Selected topics in studio art, art education, or art history announced each semester. Many not be repeated for credit under the same topic.

Prerequisite: To be stipulated at time of course offering.

### **ART 266 - Women in Art (3)**

Introduction to work by women as cultural producers from antiquity to contemporary times. Various media including sculpture, architecture, embroidery, quilting, painting, and cut paper will be explored.

Prerequisite: None

Cross-Listed as: Cross-listed with WGSS 266

### **ART 270 - Art in Community (3)**

In this studio course students will develop, organize and execute community service art projects that support local communities of need in alignment with the community engagement mission of CCSU. The course is open to all students interested in community development. Students will utilize modalities such as mural painting, installation, performance art and photo and video documentation depending on the project needs. Students from a range of disciplines are welcome and encouraged to join the course for a diversity of skills and opinions.

Prerequisite: No Prerequisites

### **ART 301 - Art Education Theory and Practice I (3)**

Contemporary principles and practices in education through art in the elementary schools. Theories, materials, and processes applicable to these levels will be explored and evaluated. Field experience required. Open to Art Education majors only. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in

the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: ART 099, ART 112, ART 120, ART 130, ART 240, ART 252, ART 260 or permission of instructor.

### **ART 302 - Pre-Practicum in Art Education (1)**

Taken concurrently with ART 303. Eight-week pre- student teaching requirement involving on-site class- room visits to assist with and observe a variety of public school settings accompanied by seminars. Reflective journaling, field reports, and resource development in art education are required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: ART 099, ART 301, and admission to the professional program in teacher education.

### **ART 303 - Practicum in Art Education I (2)**

Taken concurrently with ART 302. Actual teaching experience in CCSU's Saturday Art Workshop as a pre- student teaching requirement, accompanied by weekly seminars. Lesson planning is required. Open to Art Education majors only. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: ART 099, ART 301, and admission to the professional program in teacher education.

### **ART 324 - Illustration II (3)**

Continuation of Illustration I.

Prerequisite: ART 099 and ART 224.

### **ART 332 - Life Drawing I (3)**

Structural approach to drawing the nude and clothed model with focus on gesture, proportion, and the figure in the environment. Open to majors only.

Prerequisite: ART 099 and ART 230.

**ART 341 - Intaglio I (3)**

A successful portfolio review is required before enrollment. Investigations in hardground, softground, aquatint, spitbite, sugarlift, drypoint, and monotype procedures using single and multicolor applications.

Prerequisite: ART 099 and ART 240.

**ART 343 - Silkscreen I (3)**

A successful portfolio review is required before enrollment. Single and multicolor water-based explorations in the following stencil techniques: photo emulsion, paper, tape, screen filler, fluid drawing and hand-cut film.

Prerequisite: ART 099 and ART 240.

**ART 349 - New Media Arts I (3)**

Continuation of ART 348. Digital manipulation of video as a studio medium in terms of its potential for subjective expression. Creation of video art projects and examination of the aesthetics and history of the medium.

Prerequisite: ART 099, ART 347, and ART 348.

**ART 352 - Painting II (3)**

Continuation of Painting I.

Prerequisite: ART 099 and ART 252.

**ART 353 - Painting III (3)**

Continuation of Painting II.

Prerequisite: ART 099 and ART 352.

**ART 360 - Ceramics II (3)**

Continuation of ART 260, with emphasis on wheel skills and glaze calculation.

Prerequisite: ART 099 and ART 260.

**ART 361 - Sculpture II (3)**

A successful portfolio review is required before enrollment. Continuation of Sculpture I.

Prerequisite: ART 099 and ART 261.

**ART 366 - Handwrought Jewelry (3)**

A successful portfolio review is required before enrollment. The basic principles of handwrought jewelry construction will be explored with emphasis on use of materials, tools, and processes as they may be utilized in a simple studio setup.

Prerequisite: ART 099 and ART 120 or ART 130.

**ART 400 - Art Education Theory and Practice II (3)**

Contemporary theory and methods for art teachers of children in secondary grades. Comprehensive curriculum planning, materials and processes, and evaluation of teaching methods. Field experience required. Open to Art Education majors only. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: ART 099 and ART 303 and admission to the professional program in teacher education.

**ART 401 - Student Teaching Seminar - Art (1)**

Taken concurrently with EDSC 428 and 429. Eight-week seminar series addressing issues related to student teaching placements including classroom management, curriculum planning, organizational skills, and professional collaboration within the school and community. Open to Art Education majors only.

Prerequisite: ART 099 and ART 400.

**ART 402 - Practicum in Art Education II (1)**

Supervisory, mentoring, evaluatory experience in addition to exhibition installation for the CCSU Children's Art Workshop. Art Education majors only. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: ART 099 and ART 402 must be taken concurrently with or after completion of ART 401, EDSC 428, EDSC 429.

**ART 403 - Art Education and Technology (3)**

A successful portfolio review is required before enrollment. Development of basic skills in the use and application of audiovisual equipment, video, computers, and other related technologies for integration into the art classroom as teaching tools and tools used to communicate, create, and exhibit art.

Prerequisite: ART 099 and ART 303 and admission to the professional program in teacher education.

**ART 409 - Studies in Art History (3)**

Selected topics in the history of art, announced each semester. Students may not take this course under the same topic more than once.

Prerequisite: ART 110 or ART 112 or ART 113.

Cross-Listed as: No credit given for those with credit for ART 509 in the same topic.

**ART 412 - Asian Art (3)**

Historical development of visual arts of Far Eastern societies: architecture, painting, sculpture, and minor arts of China, India, Japan, and Korea.

Prerequisite: None

**ART 414 - American Art & Architecture (3)**

Historical development of painting, sculpture and architecture in America from the 17th century to 1960.

Prerequisite: ART 110 or ART 112 or ART 113 or permission of instructor

Cross-Listed as: No credit given for those with credit for ART 509 in the same topic.

**ART 420 - Issues in Contemporary Art (3)**

American art from the revolutionary 1960s to the present with emphasis on topics such as postmodernism, public sculpture, feminist art, activist art, multiculturalism, eco-art, and contemporary art criticism. May include visits to Hartford and New York galleries.

Prerequisite: ART 110 or ART 112 or ART 113 or permission of instructor

Cross-Listed as: No credit given for those with credit for ART 509 in the same topic.

**ART 424 - Illustration III (3)**

A successful portfolio review (ART 099) is required before enrollment. Topics in the development of individual media techniques.

Prerequisite: ART 099 and ART 324.

Notes:

Course may be taken for graduate credit.

**ART 430 - Color Drawing (3)**

Advanced course in drawing using a painterly approach. Strengthening of individual direction through an exploration of space, composition, color, and surface in a variety of color drawing mediums.

Prerequisite: ART 099 and ART 230 or ART 252 or ART 332.

**ART 432 - Life Drawing II (3)**

Continuation of ART 332. Open to majors only.

Prerequisite: ART 099 and ART 332 or permission of instructor.

**ART 435 - Advanced Drawing (3)**

Emphasis on development of expressive use of line and value. Various materials used including ink, pencil, conte crayon, chalk, wire, charcoal, and others.

Prerequisite: ART 099 and permission of instructor.

**ART 441 - Intaglio II (3)**

before enrollment. Continuation of Intaglio I.

Prerequisite: ART 099 and ART 341, graduate standing or permission of instructor.

**ART 443 - Silkscreen II (3)**

Continuation of Silkscreen I.

Prerequisite: ART 099 and ART 343, graduate standing or permission of instructor.

**ART 449 - New Media Arts II (3)**

Multimedia fine arts topics selected by faculty and students to reflect their artistic preoccupation, or to provide research in particular skills, subjects, or trends in media arts. Examination of the aesthetics and history of multimedia.

Prerequisite: ART 099 and ART 349.

**ART 450 - Advanced Watercolor Painting and Related Media (3)**

This course will explore the various watercolor processes and the effects unique to each, i.e., tempera, aquarelle, water acrylics, and colored inks. Historical and contemporary examples of watercolor techniques will be discussed.

Prerequisite: ART 099 and ART 250 or permission of instructor.

**ART 451 - Sequential Art, Comics and the Graphic Novel (3)**

This is a studio-based course where, through in-class and long term research projects, discourse, and study of historical and contemporary comics and graphic novels, students will develop practical skills and a critical eye towards their creative development in the comprehension and realization of this visual language. We will attempt to

define and practice this common medium that is frequently taken for granted, and come to appreciate comics as a medium unto itself.

Prerequisite: ART 120, ART 130, ART 224

Cross-Listed as: ART 515

### **ART 460 - Ceramics III (3)**

Advanced clay and glaze techniques.

Prerequisite: ART 099 and ART 360.

### **ART 464 - Design-Handcraft Materials and Techniques II (3)**

Continuation and extension of ART 264. Varied handcrafts, materials, and processes are explored as modes of artistic expression.

Prerequisite: ART 099 and ART 264 or ART 435.

### **ART 465 - Studio Topics (1 TO 3)**

Selected topics in studio art, announced each semester. Students may not take this course for credit under the same topic more than once.

Prerequisite: ART 099 and others to be stipulated at time of course offering.

### **ART 466 - Jewelry Design (3)**

Course exploring possibilities of materials and equipment in jewelry and metal work, with emphasis on design.

Prerequisite: ART 099 and ART 366.

### **ART 468 - Ceramics IV (3)**

Thesis-clay and glaze design used to express a statement in form.

Prerequisite: ART 099 and ART 460.

### **ART 490 - Curatorship (3)**

Theory and practice in collection management, gallery and museum programming, and exhibition design.

Prerequisite: ART 098 for students earning a specialization in art history; or ART 099 for all other students

### **ART 491 - Aesthetic and Critical Dialogue About Art (3)**

Investigation of art criticism and aesthetics through readings and critical discussions of art. Introduction to aesthetic and art criticism theories and issues applicable to the K-12 school art classroom will be explored. In accordance with CT law, districts may require criminal

background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: ART 301 and admission to the professional program in teacher education.

### **ART 494 - Location Studies - Art (3 OR 6)**

Direct contact with cultural resources internationally. Consideration of principles common to all arts and those unique to art and architecture. Field trips to exhibits, private collections, artist's ateliers, operas, and museums. Preparatory reading, discussion, critical analysis and concluding projects.

Prerequisite: ART 099.

### **ART 498 - Independent Study (1 TO 3)**

Individually planned program of independent study in Art or Art Education for students who wish to pursue specialized areas not covered in regular course offerings or go beyond that provided for in the program. Must be requested three weeks before new semester. May be repeated up to a maximum of 6 credits.

Prerequisite: Formal application to Art Department chair following procedure approved by the Art Department faculty.

### **ART 499 - Capstone in Art (3)**

Intensive exploration of the student's individual development of artistic direction. Emphasis on either the professional-level portfolio or research project in art.

Prerequisite: ART 098 for students earning a specialization in art history; or ART 099 for all other students

### **ART 500 - Problems in Art Education (3)**

Required of all Art and cross-certification graduate students. Designed to orient students to current issues surrounding the field of art education. The role of art teacher will be studied from the standpoint of professional growth, art organizations, administrative structures of schools and professional ethics.

Prerequisite: 9 credits of approved graduate study or approval of advisor.

### **ART 509 - Advanced Studies in Art History (3)**

Selected topics in the history of art announced each semester. Students may not take ART 509 for credit under

the same topic more than once. No credit given to students who have taken a previous course on the same topic. This is a link course, on demand, with ART 409, ART 412, ART 414, or ART 420.

Prerequisite: Permission of department chair.

Notes:

### **ART 515 - Sequential Art, Comics and the Graphic Novel (3)**

This is a studio-based course where, through in-class and long term research projects, discourse, and study of historical and contemporary comics and graphic novels, students will develop practical skills and a critical eye towards their creative development in the comprehension and realization of this visual language. We will attempt to define and practice this common medium that is frequently taken for granted, and come to appreciate comics as a medium unto itself. This course has the potential for a diverse group of students with different interests, sensibilities and backgrounds to engage with visual communication and work with each other to develop rich narratives regardless of a conventional background in visual art. No credit given to students with credit for ART 451.

Cross-Listed as: ART 451

### **ART 549 - Advanced Painting I (3)**

Exploration of varied qualities of painting media, historical and contemporary techniques and styles.

Prerequisite: Permission of department chair.

### **ART 550 - Advanced Painting II (3)**

For the advanced student who wishes to concentrate more deeply in one or two of the media or technique areas with the intention of developing personal expression.

Prerequisite: Permission of instructor or chair, or admission to M.S. in Art Education.

### **ART 551 - Advanced Painting III (3)**

Continuation of ART 550.

Prerequisite: ART 550.

### **ART 559 - Advanced Ceramics I (3)**

Emphasis on skills in wheel use, glazing and firing techniques.

Prerequisite: Permission of department chair.

### **ART 560 - Advanced Ceramics II (3)**

Various types of firings. Advanced techniques leading to professional studio potter.

Prerequisite: Permission of instructor or chair or admission to M.S. in Art Education.

### **ART 561 - Advanced Ceramics III (3)**

Using self-designed clay and glaze to make a mini solo exhibition.

Prerequisite: ART 560.

### **ART 565 - Advanced Studies in Art (3)**

Selected topics in studio art and/or art education announced each semester. Maximum credits in one studio area and/or art education is 12. Students may not take ART 565 for credit under the same art education topic more than once.

Prerequisite: Permission of department chair.

### **ART 570 - Advanced Sculpture I (3)**

Students pursue directed assignments in several sculptural areas. Past and present styles discussed. Studio and seminar.

Prerequisite: Permission of instructor or chair or admission to M.S. in Art Education.

### **ART 571 - Advanced Sculpture II (3)**

In-depth exploration of one or possibly two sculptural processes to be announced.

Prerequisite: ART 570 or equivalent.

### **ART 572 - Advanced Sculpture III (3)**

Continuation of ART 571.

Prerequisite: ART 571.

### **ART 576 - Independent Study in Art and/or Art Education (1 TO 6)**

Maximum credits in any one studio area or in art education research is 12. Maximum credits permitted during one semester is 6. Course is only for advanced graduate students who have shown evidence of ability to complete satisfactorily graduate work in art or art education. The student does independent studio or research work of advanced nature and works with an assigned advisor for criticism.

Prerequisite: Department chair's approval, and a minimum of 6 credits in the area selected for independent study.

**ART 597 - Exhibition Research (Plan C) (3)**

Student is expected to carry on research related to exhibition topic. Credit will be granted when the student's art exhibition is accepted by the exhibition committee.

Prerequisite: 21 credits of approved graduate study or recommendation of student's graduate advisor, and a 3.00 overall GPA.

**ART 598 - Research in Art Education (3)**

Designed to familiarize student with techniques and resources associated with research in the field of specialization. Opportunity for practical application will be provided.

Prerequisite: 9 credits of approved graduate study or recommendation of student's advisor.

**ART 599 - Thesis (Plan A) (3)**

Preparation of the thesis under the supervision of the thesis advisor. Plans A, C, D, and E require completion of 18 credits for programs with 30-35 credits, or 24 credits for programs with greater than 35 credits, and a 3.00 overall GPA.

Prerequisite: 21 credits of approved graduate study or recommendation of student's graduate advisor, and a 3.00 overall GPA.

**ASL - American Sign Language****ASL 111 - American Sign Language I (3)**

Introduction to American Sign Language, the language used by the Deaf community in the United States. Through a direct communicative approach, fundamentals of the basic structure of ASL grammar, sign vocabulary, fingerspelling/numbers, and information related to Deaf Culture are taught.

Prerequisite: None

**ASL 112 - American Sign Language II (3)**

Continuation of American Sign Language I. Further coverage of the fundamentals of ASL grammar, vocabulary, fingerspelling/numbers, visual-gestural communication, and information related to Deaf Culture.

Prerequisite: ASL 111

**ASL 125 - Intermediate American Sign Language I (3)**

Development of receptive and expressive skills in American Sign Language on topics of general interest aimed at better understanding Deaf Culture. Revision of ASL basic structures and sign vocabulary. No credit given

to students with credit for more advanced coursework in ASL. No credit if student has previous taken ML 125 Intermediate ASL.

Prerequisite: ASL 112 or equivalent.

**ASL 126 - Intermediate American Sign Language II (3)**

Continuation of ASL 125. Further study of ASL structures and sign vocabulary at the intermediate level. No credit given to students with credit for more advanced coursework in ASL. No credit if student has previous taken ML 126 Intermediate ASL.

Prerequisite: ASL 125 or equivalent

**AST - Astronomy****AST 113 - The Cosmos (3)**

Topics in modern astronomy with an emphasis on the process of scientific discovery and the scale and evolution of the universe. May not be applied to a major or minor in Earth Sciences. This course is equivalent to ESCI 113 and credit will not be earned if this course has been previously taken.

Prerequisite: MATH 099 or higher.

**AST 208 - Planetary Astronomy (4)**

The formation and evolution of the solar system, including the Earth, other planets, and Sun. Topics include comparison of the surfaces, interiors, atmospheres, and climates of solar system bodies, the formation of the solar system, detection of planets around other stars, and mathematical techniques for remote study of astronomical objects. Three hours of lecture and one two-hour laboratory per week. This course is equivalent to ESCI 208 and credit will not be earned if this course has been previously taken.

Prerequisite: MATH 101 (C- or higher) or MATH 102 (C- or higher) or MATH 103 (C- or higher)

**AST 209 - Stellar and Galactic Astronomy (4)**

Study of stars and galaxies as separate bodies and members of clusters. Topics will include astrophysical properties of stars and galaxies, stellar and galactic evolution, and cosmology. Emphasis will be placed on observational and experimental methods astronomers use to study the universe. Three lectures and one two-hour laboratory per week. This course is equivalent to ESCI 209 and credit will not be earned if this course has been previously taken.

Prerequisite: MATH 101 (C- or higher) or MATH 102 (C- or higher) or MATH 103 (C- or higher)

### **AST 212 - Studies in Astronomy (3)**

Examination of interdisciplinary topics, contemporary issues, and ongoing problems in Astronomy and Planetary Science such as the possibilities for life outside Earth and the cultural relevance of the science of astronomy. This course is equivalent to AST 112 and ESCI 112 and credit will not be earned if this course has been previously taken. Course may be repeated one time with a different topic. Three hours of lecture per week.

Prerequisite: MATH 101, MATH 102, or MATH 103, and WRT 105 or WRT 110 (may be taken concurrently)

### **AST 278 - The Night Sky (3)**

Emphasis on communicating knowledge of astronomy to others through the use of simple astronomical tools, including binoculars. Learn to operate a telescope and the planetarium equipment. Participation in public outreach events is required. Two 50-minute lectures and one two-hour laboratory per week.

Prerequisite: 3 credits in AST or permission of instructor

### **AST 378 - Earth and Planetary Science (3)**

A comparison of the natural processes affecting objects in the Solar System with the goal of better understanding the geology and climate of the Earth system. Topics include formation of the solar system, impact cratering, and analysis of satellite images and geophysical datasets with the goal of understanding the evolution of planetary bodies, including Earth, over geologic time. Three hours of lecture per week. This course is equivalent to ESCI 378 and credit will not be earned if this course has been previously taken.

Prerequisite: GSCI 121 or GSCI 131 or AST 208.

### **AST 418 - Stellar Astrophysics (3)**

Astrophysics of stars, including binary star orbital dynamics, stellar structure, nuclear reactions, and stellar evolution. This course is equivalent to ESCI 418 and credit will not be earned if this course has been previously taken.

Prerequisite: MATH 221 and PHYS 126; or permission of instructor.

### **AST 460 - Independent Research in Astronomy (1-3)**

Investigation of a topic of current research interest as determined by the student in consultation with the faculty. Research technique, critical data evaluation,

specialized knowledge, independence and originality are cultivated as the project develops. Written report and presentation are required. May be repeated for a maximum of 4 credits.

Prerequisite: One of the following courses is required in addition to permission of project advisor

### **AST 470 - Exoplanets and Astrobiology (3)**

Exploration of the processes related to planet formation and evolution and the planetary conditions required for the emergence of life, as well as the astronomical techniques used to detect extrasolar planets, discern their properties (include potential habitability), and collect statistics on their occurrence in the universe. This course is equivalent to ESCI 470 and credit will not be earned if this course has been previously taken.

Prerequisite: AST 208, and either BIO 121 or BMS 102 and BMS 103; or permission of department chair.

### **AST 490 - Topics in Astronomy (1-3)**

Selected studies in Astronomy which are not offered presently in the curriculum of the Earth and Space Sciences department. Course may be repeated with different topics. This course is equivalent to ESCI 490 and credit will not be earned if this course has been previously taken with the same topic.

Prerequisite: Permission of instructor.

### **AST 495 - Seminar in Astronomy (1)**

Study of contemporary topics in astrophysics, astrobiology, or planetary science through individual readings, discussions, and presentations. May be repeated under a different topic.

Prerequisite: C- or better in a 200-level Astronomy course

## **ATR- Athletic Training**

### **ATR 500 - Pre-Clinical in Athletic Training (1)**

This course is designed to provide hands-on experience in the clinical integration of athletic training competencies under the direct supervision of a health care provider. Clinical settings include (but not limited to) university, high school, clinic/outreach hospital, industrial setting experience. Includes a one hour weekly seminar component that will engage students in clinical problem-centered discussions focusing on integrating concepts of basic taping, splinting, padding, first aid, and protective equipment. This course will acclimate the students to the policies and procedures in the athletic training facility.

Requires 80-120 hours of on or off campus clinical experience.

Prerequisite: Admission to the MSAT program

### **ATR 501 - Clinical I: Acute Care & Emergency Medicine (3)**

This course is designed to provide hands-on experience in the clinical integration of athletic training competencies under the direct supervision of a health care provider. Clinical settings include (but not limited to) university, high school, clinic/outreach hospital, industrial setting experience. Includes a one hour weekly seminar component that will engage students in clinical problem-centered discussions focusing on integrating concepts of emergency medical care, as well as concepts from the preclinical experience. Requires 280-320 hours of on or off campus clinical experience.

Prerequisite: ATR 500

### **ATR 502 - Clinical II: Orthopedics (3)**

Course designed to provide hands-on experience in the clinical integration of athletic training competencies under the direct supervision of a health care provider. Clinical settings include (but not limited to) university, high school, clinic/outreach hospital, industrial setting experience. Includes a one hour weekly seminar component that will engage students in clinical problem-centered discussions focusing on integrating concepts of orthopedic evaluations, general medical assessments, pre-participation evaluations, baseline concussion testing, on-field assessments, emergency medical care, prevention of environmental conditions as well as concepts from previous clinical experiences. Requires 280-320 hours of on or off campus clinical experience.

Prerequisite: ATR 501

### **ATR 503 - Clinical III: Rehabilitation (1)**

This course is designed to provide hands-on experience in the clinical integration of athletic training competencies under the direct supervision of health a care provider. Clinical settings include (but not limited to) university, high school, clinic/outreach hospital, industrial setting experience. Includes a one hour weekly seminar component that will engage students in clinical problem-centered discussions for providing integration of concepts of advanced rehabilitation skills, including design, implementation, and analysis of rehabilitation programs; return to play protocols as well as concepts from previous clinical experiences. Requires 80-120 hours of on or off campus clinical experience.

Prerequisite: ATR 502

### **ATR 504 - Clinical IV: PPE/Pre-Season Experience (2)**

Course designed to provide hands-on experience in the clinical integration of athletic training competencies under the direct supervision of a health care provider. Clinical settings include (but not limited to) university, high school, clinic/outreach hospital, industrial setting experience. Includes a one hour weekly seminar component that will engage students in clinical problem-centered discussions focusing on integrating concepts of orthopedic evaluations, general medical assessments, pre-participation medical history review, pre-participation screenings, pre-existing injury assessment, baseline concussion testing, medical clearance for athletic participation, pre-event preparation, prevention & management of environmental conditions, as well as concepts from pervious clinical experiences. This is an immersive 4 week/40 hour per week clinical rotation experience.

Prerequisite: ATR 503

### **ATR 505 - Clinical V: General Medical (3)**

This course is designed to provide hands-on experience in the clinical integration of athletic training competencies under the direct supervision of a health care provider. Clinical settings include (but not limited to) university, high school, clinic/outreach hospital, industrial setting experience. Includes a one hour weekly seminar component that will engage students in clinical problem-centered discussions for focusing on integrating concepts of injury and illness evaluation & diagnosis which includes general medical conditions, orthopedic, neurological, biomechanical analysis, as well as incorporating skills from the previous clinical experience.

Prerequisite: ATR 504

### **ATR 506 - Clinical VI: Non-Sport & Adolescent (6)**

This course is designed to provide hands-on experience in the clinical integration of athletic training competencies under the direct supervision of a health care provider. Clinical settings include (but not limited to) university, high school, clinic/outreach hospital, industrial setting experience. Includes a one hour weekly seminar component that will engage students in clinical problem-centered discussions for focusing on integrating concepts of general medical issues, psychosocial issues, non-sport patient populations and adolescents. This rotation consist of 40 hour per week clinical experiences including Non-Sport population and Adolescent rotations

Prerequisite: ATR 505



**ATR 512 - Principles of Professional Practice (3)**

This course introduces the student to the profession of Athletic Training, professional organizations, certification & licensure, continuing education, medical terminology, legal issues, evidence based practice and medical documentation.

Prerequisite: Admission to the MSAT program

**ATR 513 - Organization & Administration in Sports Medicine (3)**

This course will examine the contemporary principles and practices that the entry-level athletic trainer must possess to 1) manage the delivery of patient and health care services in a manner that incorporate the principles of EBP, 2) manage physical, human, and financial resources in the delivery of healthcare services, 3) provide athletic training services in a manner that incorporates the principles of evidence-based practice (EBP), and 4) use critical thinking and reflection to analyze and solve problems that impact athletic training practice.

Prerequisite: Admission to the MSAT program

**ATR 517 - Prevention and Care in Sports Medicine (3)**

Course provides an essential overview of injury recognition, mechanisms and characteristics of sport trauma. Students will gain knowledge in risk management strategies; environmental risk factors; basic assessment of musculoskeletal injuries and various medical conditions; and the basic management and coordination of immediate care.

Prerequisite: Admission to the MSAT program

Corequisite: ATR 518

Cross-Listed as: ATR 517 is cross listed with EXS 417 (Formerly EXS 217). Students enrolled in ATR 517 will be required to complete additional assignments for graduate credit.

**ATR 518 - Clinical Application of Prevention & Care in Sports Medicine (1)**

This course will develop the essential skill application needed for the prevention, assessment, and treatment of acute and emergent illnesses and injuries within the profession of athletic training. Emergency procedures, therapeutic taping, bracing, splinting techniques, protective equipment and referral decisions will also be evaluated in this course

Prerequisite: Admission to MSAT Program

Corequisite: ATR 517

**ATR 519 - Seminar in Emergency Medicine in Sport (1)**

Seminar component will engage students in clinical problem-centered discussions for the identification of risk factors, preparation of emergency action plans, and recognition and management of care for emergency medical conditions including those that may lead to sudden death.

Prerequisite: ATR 517

**ATR 521 - Pharmacology in Sports Medicine (3)**

Basic principles of pharmacology, pharmacokinetics, and commonly prescribed therapeutic medications in an athletic population. Introduction to contemporary medications, social drugs, and performance enhancers used in sports medicine.

Prerequisite: Admission to MSAT program

Cross-Listed as: ATR 521 is cross listed with EXS 421. Students enrolled for in ATR 521 will be required to complete additional assignments for graduate credit.

**ATR 527 - Therapeutic Exercise (3)**

Course will study the theories and application of therapeutic exercise with focus on the design, implementation, and analysis of the rehabilitation plan for achieving symptom-free movement and function according to evidence-based protocols. Content includes basic principles of exercise, therapeutic effects of exercise, functional evaluation of exercise, documentation, goniometry, manual muscle testing, muscle length testing, and isokinetic testing.

Prerequisite: Admission to the MSAT program

**ATR 528 - Clinical Exam & Diagnosis in Sports Medicine I (3)**

This course focuses on pathology and mechanics of injury; clinical examination of musculoskeletal conditions to the upper extremity, lower extremity and spine; including gait and posture assessment. Decision-making will be based on the integration of evidence-based knowledge and skills.

Prerequisite: ATR 517

Corequisite: ATR 527

**ATR 529 - Clinical Exam & Diagnosis in Sports Medicine II (3)**

This course focuses on the pathology and clinical examination of general medical conditions; including neurological assessments and a comprehensive examination of sport-related traumatic brain injuries.

Decision-making will be based on the integration of evidence-based knowledge and skills.

Prerequisite: ATR 528

### **ATR 532 - Psychosocial Aspects of Injury & Rehabilitation (3)**

This course educates students on the varied predisposing injury factors, including stress and personality variables, injury prevention, rehabilitation goal setting, recovery, and reintegration into the sport role. Psychosocial aspects of sport participation are reviewed with emphasis on the ability to recognize, intervene, support, refer, and work with clients/patients exhibiting behavioral health conditions, abnormal social, emotional, and psychological crises to qualified mental healthcare providers. Additional content topics will also include stress management and burn-out of practitioners and motivational/performance-enhancing techniques such as imagery, cognitive, and relaxation techniques.

Prerequisite: Admission to the MSAT program or MS in Physical Education program

### **ATR 540 - Therapeutic Interventions (3)**

The course explores physiological response to injury and the application of therapeutic modalities according to evidence-based protocol. Students will design and analyze the effects of therapeutic interventions for patients with physical dysfunctions that stem from inflammation, pain, and limited movement patterns.

Prerequisite: ATR 517

### **ATR 590 - Capstone Experience in Athletic Training (3)**

The capstone experience will involve the student completing a special project under the direction of an academic advisor. The capstone experience will culminate in a presentation to the Athletic Training Education Program faculty and students.

Prerequisite: ATR 505

Corequisite: ATR 506

## **BE - Business Education**

### **BE 410 - Office Education Methods (3)**

Concepts underlying office systems technologies taught at the secondary level. Includes instructional methods and techniques, teaching and reference material, and the use of community resources.

Prerequisite: Senior status, MIS 201, Keyboarding Proficiency Examination, and Word Processing Proficiency Examination or WP 204.

## **BIO - Biology**

### **BIO 100 - Search in Biology (3)**

Examination of various topics, contemporary issues, and problems in biological sciences. Three hours of lecture per week. No credit given toward biology majors or minors. Course may be repeated one time with a different topic. CSUS Common Course.

Prerequisite: None

### **BIO 101 - Search in Biology with Lab (3)**

Examination of various topics, contemporary issues, and problems in biological sciences. Sections include two lectures and one two-hour lab per week. No credit given toward biology majors or minors. Course may be repeated one time with a different topic. CSUS Common Course.

Prerequisite: None

### **BIO 102 - International Search in Biology (3)**

Examination of various international biological topics, global contemporary issues, and biological problems of current society. Three hours of lecture per week. No credit given toward biology majors or minors. CSUS Common Course.

Prerequisite: None

### **BIO 107 - Plants and Civilization (3)**

Plant growth and reproduction, and the economic and social importance of plants. No credit given toward biology majors or minors. Two lectures and one two-hour lab per week. Study area IV.

Prerequisite: None

### **BIO 113 - Laboratory Experience in Biology (1)**

Laboratory experiences in biology, with a strong emphasis on hypothesis development, experimentation, data analysis, and written reports. One two-hour laboratory per week.

Prerequisite: BIO 100 or BIO 111 (may be taken concurrently), or permission of department chair.

### **BIO 120 - Plants of Connecticut (3)**

From sea lettuce to mountain laurel-introduction to the plants of Connecticut. Naturalistic approach dealing with common names and practical information. Field walks and

plant collections required. Two lectures and one three-hour laboratory per week. Not open to Biology majors.

Prerequisite: None

### **BIO 121 - General Biology I (4)**

This course will provide an in-depth introduction to cell form and function, metabolic processes, genetic inheritance principles and the central dogma of biology. While it is open to anyone interested in the subject, the level of detail is intended for biology majors; it is the first course in the biology major core. Three hours of lecture and one three-hour laboratory per week.

Prerequisite: None

### **BIO 122 - General Biology II (4)**

This course will introduce students to the biology of organisms on Earth from microbes to animals. Each clade of living organisms will be reviewed through an evolutionary and ecological lens to provide a foundation about their evolution, structure and function, nutrition, life cycles, and ecology. While open to anyone interested in the subject, the level of detail is intended for biology majors; it is the second course in the biology major core. Three hours of lecture and one three-hour laboratory per week.

Prerequisite: BIO 121.

### **BIO 132 - Introductory Ecology (3)**

Introductory course that introduces students to ecological processes structuring the biosphere and our impacts on it. Emphasis will be placed on current local and global environmental issues and ways of making human lifestyles sustainable. Three lectures per week. Cannot be used to meet requirements for major or minor in Biology.

Prerequisite: None

### **BIO 133 - Laboratory in Introductory Ecology (1)**

Introductory biology laboratory course in field ecology to accompany, or follow, BIO 132. One three-hour laboratory or field trip per week. Cannot be used to meet requirements for major or minor in Biology.

Prerequisite: BIO 132.

### **BIO 171 - Introduction to International Field Studies in Biology (1 TO 4)**

Travel-based international field biology experience. Non-major students will learn to identify biological questions, design and conduct observations and/or experiments,

analyze data, and reach valid conclusions. May be repeated at different international field sites.

Prerequisite: Permission of instructor based on interview.

### **BIO 200 - Integrative Biology (3)**

Emphasis on integration of genetic concepts with ecology, evolution, and biodiversity. Includes DNA replication, gene expression, viruses, phylogeny, animal behavior, and population dynamics. This is the third course in the biology major core. Three hours of lecture per week.

Prerequisite: Grade of C- or higher in BIO 121 and BIO 122

### **BIO 211 - Concepts in Biology (3)**

Introduction to cellular, genetic, evolutionary, and ecological principles with laboratory emphasis on application of basic concepts. Two lectures and one two-hour laboratory per week. Cannot be used to meet requirements for major or minor in Biology.

Prerequisite: None

### **BIO 230 - Natural History (3)**

Consideration of local wild species and their natural history traits, habitats, range, and evolutionary history. Two hours of lecture and one two-hour outdoor laboratory meeting per week.

Prerequisite: BIO 121; or BIO 132 and BIO 133; or BIO 111 and BIO 113; or BMS 111 and BMS 113

### **BIO 290 - Biology Research Experience I (3)**

Introduction to research design and the analysis, interpretation, and presentation of biological data. Covers both parametric and nonparametric statistical analysis methods. Includes lectures, seminars, and computer laboratory. Two lectures and one two-hour lab per week.

Prerequisite: MATH 102 (C- or higher) or MATH 103 (C- or higher) and BIO 121 (may be taken concurrently).

### **BIO 305 - Ecology (4)**

Distribution and abundance of different types of organisms and the physical, chemical, and biological features and interactions that determine survival, growth, and reproduction in changing environments. Ecological theory and quantitative analyses included in lecture and laboratory. Three hours of lecture and one three-hour laboratory per week.

Prerequisite: BIO 200 and BIO 290 (or permission of department chair) and CHEM 161 and CHEM 162

**BIO 315 - Microbial Ecology (4)**

Ecology and biodiversity of aquatic and terrestrial microbes. Laboratories deal with microbial distribution, ecosystem function, and methods of studying microbes in the environment. Three hours of lecture and one, three-hour laboratory per week.

Prerequisite: BIO 200 (or permission of instructor) and CHEM 161 and CHEM 162

**BIO 318 - Anatomy and Physiology I (4)**

Human gross morphology, histology, and physiology of the skeletal, integument, muscular, nervous, and respiratory systems, including effects of aging. Three hours of lecture and one three-hour laboratory per week.

Prerequisite: BIO 122 or BMS 201 (or for Nursing students only: BMS 102 and BMS 103, and CHEM 210, and NRSE 150, NRSE 150 may be taken concurrently), or permission of department chair.

Cross-Listed as: Cross listed as BMS 318. No credit given to students with credit for BMS 318.

**BIO 319 - Anatomy and Physiology II (4)**

Human gross morphology, histology, and physiology of the endocrine, cardiovascular, lymphatic, renal, digestive, and reproductive systems. Nutrition, metabolism, fetal development and aging will also be covered. Three hours of lecture and one three-hour laboratory per week.

Prerequisite: BIO 122 or BMS 201 (or for Nursing students only: BMS 102 and BMS 103, and CHEM 210, and NRSE 150) or permission of department chair.

Cross-Listed as: Cross listed as BMS 319. No credit given to students with credit for BMS 319.

**BIO 322 - Vertebrate Zoology (4)**

Vertebrate classification and life histories of representative forms. Laboratory work will emphasize identification of North American species. Three lectures and one three-hour laboratory per week. No credit given to those with credit for BIO 222.

Prerequisite: BIO 200 or permission of the department chair.

**BIO 326 - Mushrooms, Mosses, & More (4)**

Natural history and importance to human health, agriculture, and industry of fungi, algae, lichens, liverworts, and mosses. Three hours of lecture and three hours of lab/field trips per week. Occasional Saturday field trips. No credit given to those with credit for BIO 226.

Prerequisite: BIO 200 or permission of the department chair.

**BIO 327 - Vascular Plants (4)**

Phylogenetic relationships, life cycles, distribution and economic significance of vascular plants. Emphasis is placed on the seed plants. Three lectures and one three-hour laboratory per week. No credit given to those with credit for BIO 227.

Prerequisite: BIO 200 or permission of the department chair.

**BIO 331 - Neurobiology (4)**

Basic principles of neuroscience. Resting potentials, action potentials, synaptic transmission, sensory systems, learning, neural circuits underlying behavior, neurological diseases and mental illness. Three hours of lecture and one, three-hour laboratory per week.

Prerequisite: BIO 200 or permission of instructor.

**BIO 333 - Endocrinology (3)**

Structure and function of endocrine systems. Endocrine disease and hormonal control mechanisms involved in regulating reproduction, growth, and homeostatic systems within animals.

Prerequisite: BIO 200 or permission of department chair.

**BIO 335 - Wildlife Management (3)**

Principles and practices related to the conservation and management of wild animal populations. Course includes lectures, a class project, a proposal, and problem-solving exercises. Topics include the history of wildlife management, wildlife laws and regulation, vegetation assessment and management, population growth and regulation, counting animals, wildlife harvesting and control, ecosystem management, and population viability analysis. Three hours of lecture per week.

Prerequisite: BIO 200 and BIO 290 (or permission of department chair)

**BIO 390 - Biology Research Experience II (1)**

Specific projects in various aspects of biology under the supervision of one or more department members. Written report or poster presentation, and portfolio review required. Course may be repeated with a different instructor for a maximum of two credits.

Prerequisite: BIO 290, or permission of instructor and department chair.

**BIO 391 - Internship in Biology (1 TO 6)**

Projects in Biology under the supervision of one or more department members. Projects generally involve work with associated organizations off campus. Written report or poster presentation, and portfolio review required.

Prerequisite: Written permission of instructor and department chair.

**BIO 401 - Human Nutrition and Metabolism (3)**

Biochemical and physiological processes that affect the nourishment of humans, including newborns and the aging. Interactions among nutrients, the environment and the body resulting in perturbations affecting human health are considered.

Prerequisite: BIO 200 and BIO 290, or permission of department chair.

**BIO 403 - Human Reproductive Biology (3)**

Human reproductive anatomy and physiology, including fertilization, embryonic/fetal development and pregnancy, contraception, and assisted reproductive technologies. In addition, non-human species will be briefly examined. Will also include analysis of topics related to human reproduction reported in the media and in scientific literature.

Prerequisite: BIO 200 and BIO 290, or BMS 201 and BMS 390, or permission of department chair.

**BIO 404 - Epigenetics in Development and Disease (4)**

Epigenetic mechanisms and epigenetic research methods will be thoroughly examined. In-depth analysis and discussion of primary literature through in-class group work will demonstrate the roles of epigenetic regulation in mammalian development and human disease. Laboratory component will expose students to several widely used epigenetic research methods, such as bisulfite conversion of DNA, chromatin immunoprecipitation, methylated DNA enrichment and quantitative PCR. Three hours of lecture and one, three-hour laboratory per week. This is a link course with BIO 504.

Prerequisite: BIO 200 and BIO 290; or BMS 201 and BMS 390

**BIO 406 - Personalized Medicine (3)**

Exploration of cutting-edge “omics” analyses, such as genomics, transcriptomics, epigenomics, proteomics, microbiomics, etc. and how they promote individualized medical care, including diagnosis, treatment, monitoring, and prognosis. Examples of medical applications are

provided through analysis of scientific articles. Also includes discussion of policy and ethics.

Prerequisite: BIO 200 and BIO 290, or BMS 201 and BMS 390, or permission of department chair.

Cross-Listed as: Cross-listed with BIO 512. No credit for this course if you have credit for the cross-listed equivalent.

**BIO 407 - Stream Ecology (4)**

Stream Ecology is a study of flowing fresh waters emphasizing interactions between stream organisms and the physical and chemical environment; as well as stream-watershed processes and human effects on stream ecosystems. The laboratory will include field observations and laboratory analyses of stream ecosystems, including measurement of physical and chemical parameters, stream biota, and a synthetic study of a local stream-watershed system. Three hours of lecture and one, three-hour laboratory per week. Some Saturday field trips required. This is a link course with BIO 507.

Prerequisite: BIO 200 and BIO 290, CHEM 161 and CHEM 162

**BIO 411 - Embryo Biotechnology (1)**

The fundamentals of pre-implantation, mammalian, embryonic development in select species and analysis of the techniques used in embryo biotechnology, such as cloning, human assisted reproductive technologies, transgenesis, genome editing, and regenerative medicine. Includes discussion of applications and ethical issues surrounding embryo manipulation.

Cross-listed with BIO 511. No credit for this course if you have credit for the cross-listed equivalent.

Prerequisite: BIO 200 and BIO 290 or BMS 201 and BMS 390 or permission of department chair

Cross-Listed as: Cross-listed with BIO 511. No credit for this course if you have credit for the cross-listed equivalent.

**BIO 412 - Human Physiology (3)**

Study of the human body and its reactions to internal and external environmental changes. Physiology of the musculoskeletal, nervous, circulatory, respiratory, excretory and endocrine systems is considered. Integrative mechanisms of the system are emphasized.

Prerequisite: BIO 122; or BMS 201; or BIO 318 or BIO 319; or BMS 318 or BMS 319 or permission of department chair.

Cross-Listed as: Cross listed as BMS 412. No credit given to students with credit for BMS 412.

**BIO 413 - Human Physiology Laboratory (1)**

Laboratory course to accompany BIO 412. One three-hour laboratory per week.

Prerequisite: Prereq. or coreq.: BIO 412 or BMS 412 (either may be taken concurrently).

Cross-Listed as: Cross listed as BMS 413. No credit given to students with credit for BMS 413.

**BIO 414 - Human Disease (3)**

Human diseases caused by pathogenic organisms, environmental factors, and physiological and immunological disturbances. Review of normal functions and homeostasis followed by discussion of altered function. Three hours of lecture per week.

Prerequisite: BIO 200, BIO 290, BIO 318 and BIO 319.

Cross-Listed as: This is a link course with BIO 518.

**BIO 420 - Ornithology (4)**

Life histories, physical and physiological adaptations, evolution, ecology, and behavior of birds. Laboratories will include field identification and other behavioral and ecological research techniques. Three hours of lecture and one three-hour field or laboratory period per week.

Prerequisite: BIO 200 and BIO 290 or permission of department chair.

**BIO 421 - Marine Invertebrate Biology (4)**

Evolutionary relationships and morphological, physiological, developmental, and ecological variation within and among taxonomic groups of marine invertebrates. Three hours of lecture and one, three-hour laboratory per week.

Prerequisite: BIO 200 and BIO 290; or permission of the department chair.

**BIO 425 - Biology of Marine and Freshwater Algae (4)**

Ecology and classification of micro- and macroalgae from marine, estuarine, and freshwater environments. Laboratories and field trips include collection and identification of algae from Connecticut aquatic habitats. Three hours of lecture and one three-hour laboratory per week. Some Saturday field trips required. No credit for this course if you have credit for the cross-listed equivalent.

Prerequisite: BIO 200 and BIO 290, or permission of department chair.

Cross-Listed as: BIO 516

**BIO 434 - Ecology of Inland Waters (4)**

A comparison of lotic and lentic freshwater environments, with emphasis on physical and chemical parameters influencing the distribution of aquatic organisms, nutrient cycling, and factors affecting aquatic productivity. Three hours of lecture and one three-hour laboratory per week. Some Saturday field trips required.

Prerequisite: BIO 200 and BIO 290, or permission of department chair and CHEM 200 and CHEM 201

**BIO 436 - Environmental Resources and Management (3)**

Analysis of the interactions of human population-resource depletion-pollution at local to global scales from an environmental management/protection perspective. Emphasis upon better understanding the impacts of overpopulation and methods for control, significance and loss of biodiversity, aquatic pollution, and global climate change.

Prerequisite: BIO 200 and BIO 290, or permission of department chair and CHEM 163 and CHEM 164 or CHEM 122.

**BIO 438 - Aquatic Pollution (4)**

Study of the various types of aquatic pollutants, their sources and control/treatment, and the effects of water pollution upon aquatic ecosystems, as well as Federal and State water pollution regulatory programs. Laboratory will include field collection of water samples and measurement of indicators of water quality. Three hours of lecture and one three-hour laboratory per week. Some Saturday field trips required. No credit for this course if you have credit for the cross-listed equivalent.

Prerequisite: BIO 200 and BIO 290 and CHEM 161 and CHEM 162 (or permission of department chair)

Cross-Listed as: BIO 538

**BIO 440 - Evolution (3)**

Mechanisms of inter-generational change including mutation selection, and drift; sexual selection; speciation; and extinction.

Prerequisite: BIO 200 and BIO 290 or permission of department chair.

**BIO 444 - Plant Taxonomy (3)**

Scientific approach to identification and classification of locally occurring plants using taxonomic keys. Includes ferns, fern allies, conifers and flowering plants, with emphasis on the latter. Field walks and plant collections required. Two hours of lecture and one three-hour laboratory per week.

Prerequisite: BIO 200 and BIO 290 or permission of department chair.

**BIO 449 - Plant Physiology (3)**

Basic principles of plant function. Emphasis on the soil-plant-air continuum, phloem transport, photosynthesis and mechanisms of plant responses to the environment.

Prerequisite: BIO 200 and BIO 290; or BMS 201 or permission of department chair.

**BIO 463 - Parasites and Human Disease (3)**

A study of parasitic protists and helminths that cause human disease. Emphasis will be on the biology and life-cycles of parasites of human significance, mechanisms of transmission and infection, pathology, global public health implications, and approaches to control parasites in human populations.

Prerequisite: BIO 200 and BIO 290

**BIO 469 - Entomology (4)**

In depth study of insect systematics and biology. Laboratory includes building an insect collection and working with live specimens.

Prerequisite: BIO 200 and BIO 290 or permission of department chair.

**BIO 470 - Field Studies in Biology (1 TO 4)**

Travel-based field biology experience. Students will learn to identify biological questions, design and conduct observations and/or experiments, and analyze their data and reach valid conclusions. May be repeated at different field sites.

Prerequisite: BIO 200 and BIO 290, or permission of department chair (interview with instructor required for courses outside of the U.S.).

**BIO 471 - International Field Studies in Biology (1 TO 4)**

Travel-based international field experience. Students will learn to identify biological questions, design and conduct observations and/or experiments, analyze data, and reach valid conclusions. May be repeated at different field sites.

Prerequisite: BIO 200 and BIO 290, or permission of department chair; and interview with instructor.

**BIO 480 - Animal Behavior (4)**

Understanding animal behavior from the perspectives of adaptive function, evolutionary history, development and physiological control. Laboratories focus on techniques of observation, experimental design, and data analysis. Three hours of lecture and one three-hour field or laboratory session per week.

Prerequisite: BIO 200 and BIO 290 or permission of department chair.

**BIO 482 - Mammalogy (4)**

Exploration of mammalian biology, ecology, taxonomy, systematics, and conservation. Includes lectures, laboratories, field work, and at least one field trip. Laboratory places heavy emphasis on identifying relevant characteristics of orders and families of mammals with special emphasis on those groups located in New England, and introduces field methods related to detecting presence/absence, identifying habitat use, and estimating population size and density. Three hours of lecture and one, three-hour laboratory per week. This is a link course with BIO 582.

Prerequisite: BIO 200 and BIO 290

**BIO 484 - Conservation Genetics (4)**

Application of genetic data to conservation-related issues and ecological questions. Topics include small population size, population structure and gene flow, inbreeding, conservation breeding, and genetic identification and monitoring. Lab portion includes field sampling to collect and store biological samples, methods for extracting DNA from different sources, amplifying DNA, and analysis of genetic data from ongoing projects. The course will provide students with essential laboratory skills to conduct future genetic research or that are necessary for some career some positions in wildlife and conservation biology. Three hours of lecture and one, three-hour laboratory per week. This is a link course with BIO 584.

Prerequisite: BIO 200 and BIO 290

Cross-Listed as: BIO 584

**BIO 486 - Conservation Biology (3)**

Conservation biology is an integrated discipline that emphasizes the protection of biodiversity at all different scales. Topics include biodiversity, ethics and valuation, ecological economics, habitat fragmentation, conservation genetics, invasive species, ex situ conservation, landscape

ecology, and reserve design. Students in the course will be introduced to modeling, complete assignments, readings, and a poster project. This is a link course with BIO 586.

Prerequisite: BIO 200 and BIO 290

#### **BIO 487 - Wildlife Techniques (4)**

Prepares students with essential field skills for conducting future research or entering a career in wildlife and conservation biology. The course has a lecture component but heavy emphasis is placed on the lab portion with substantial field component. Topics include GPS, mapping and orienteering, camera surveys, telemetry, mist netting, vegetation sampling, stream sampling, and a small amount of live-trapping. Three hours of lecture and one, three-hour laboratory per week. This is a link course with BIO 587.

Prerequisite: BIO 200 and BIO 290

#### **BIO 489 - Vertebrate Dissection (2)**

The anatomy of representative vertebrates, with emphasis on the muscular, digestive, circulatory, reproductive, excretory, and other soft tissue systems. Laboratory work will include dissection of specimens. One hour of lecture and three hours of laboratory per week.

Prerequisite: BIO 200 and BIO 290, or permission of department chair.

#### **BIO 490 - Topics in Biology (3 TO 4)**

For advanced undergraduates. Selected studies in the biological sciences. Lectures, seminars, discussions, independent readings, reports and laboratory work appropriate for the topic will be utilized. Four credit hour offerings will include one three-hour laboratory per week. May be repeated with different topics.

Prerequisite: BIO 200 and BIO 290 or permission of department chair; minimum of junior status required.

#### **BIO 491 - Advanced Studies in Biology (1 TO 3)**

Advanced projects in biology under the supervision of one or more department members. It is expected that this research will be a continuation of, or closely related to research begun in BIO 390. Written report or poster presentation, and portfolio review required. May be repeated for a maximum of five credits.

Prerequisite: BIO 390, written permission of instructor and department chair.

#### **BIO 499 - Undergraduate Thesis in Biology (1)**

Student must submit thesis proposal based on project done in BIO 491, to the Biology Department and complete the undergraduate thesis under the supervision of the thesis adviser. The same BIO 491 project may not be the subject of both a HON 491 thesis and a BIO 499 thesis.

Prerequisite: BIO 491 (may be taken concurrently), written permission of thesis adviser and department chair.

#### **BIO 500 - Seminar in Biology (1 TO 2)**

Study of contemporary topics in biology through individual readings, discussions and presentations.

Prerequisite: Admission to the graduate school or permission of department chair.

#### **BIO 503 - Advanced Human Reproductive Biology (3)**

Human reproductive anatomy and physiology, including fertilization, embryonic/fetal development and pregnancy, contraception, and assisted reproductive technologies. In addition, non-human species will be briefly examined. Will also include analysis of topics related to human reproduction reported in the media and in scientific literature. This is a link course with BIO 403. No credit given for students with credit for BIO 403.

Prerequisite: Admission to a Biological Sciences graduate program or permission of department chair.

#### **BIO 504 - Advanced Epigenetics in Development and Disease (4)**

Epigenetic mechanisms and epigenetic research methods will be thoroughly examined. In-depth analysis and discussion of primary literature through in-class group work will demonstrate the roles of epigenetic regulation in mammalian development and human disease.

Laboratory component will expose students to several widely used epigenetic research methods, such as bisulfite conversion of DNA, chromatin immunoprecipitation, methylated DNA enrichment and quantitative PCR. Three hours of lecture and one, three-hour laboratory per week. This is a link course with BIO 404. No credit given for students with credit for BIO 404.

Prerequisite: Admission to a Biological Sciences graduate program or permission of department chair

#### **BIO 507 - Advanced Stream Ecology (4)**

Stream Ecology is a study of flowing fresh waters emphasizing interactions between stream organisms and the physical and chemical environment; as well as stream-watershed processes and human effects on stream



ecosystems. The laboratory will include field observations and laboratory analyses of stream ecosystems, including measurement of physical and chemical parameters, stream biota, and a synthetic study of a local stream-watershed system. Three hours of lecture and one, three-hour laboratory per week. Some Saturday field trips required. This is a link course with BIO 407. No credit given for students with credit for BIO 407.

Prerequisite: Admission to a Biological Sciences graduate program or permission of department chair.

### **BIO 508 - Coastal Ecology (3)**

Introduction to northeastern coastal ecology. Emphasis will be upon intertidal and shallow estuarine systems with a comparative ecosystems perspective. Three hours of lecture.

Prerequisite: Admission to the graduate school or permission of the department chair.

### **BIO 509 - Coastal Ecology Laboratory (1)**

Laboratory to accompany BIO 508. One three-hour laboratory per week. Some Saturday field trips required.

Prerequisite: BIO 508, may be taken concurrently, or permission of department chair.

### **BIO 511 - Advanced Embryo Biotechnology (1)**

The fundamentals of pre-implantation, mammalian, embryonic development in select species and analysis of the techniques used in embryo biotechnology, such as cloning, human assisted reproductive technologies, transgenesis, genome editing, and regenerative medicine. Includes discussion of applications and ethical issues surrounding embryo manipulation.

Cross-listed with BIO 411. No credit for this course if you have credit for the cross-listed equivalent.

Prerequisite: Admission to a Biological Sciences graduate program or permission of department chair.

Cross-Listed as: BIO 411 Embryology and Biotechnology

### **BIO 512 - Advanced Personalized Medicine (3)**

Exploration of cutting-edge “omics” analyses, such as genomics, transcriptomics, epigenomics, proteomics, microbiomics, etc. and how they promote individualized medical care, including diagnosis, treatment, monitoring, and prognosis. Examples of medical applications are provided through analysis of scientific articles. Also includes discussion of policy and ethics.

Prerequisite: Admission to a Biological Sciences graduate program or permission of department chair.

Cross-Listed as: Cross-listed with BIO 406. No credit for this course if you have credit for the cross-listed equivalent.

### **BIO 515 - Foundations of Ecology (3)**

Introduction to the ecological primary literature through review of classic theoretical papers and manipulative experimental tests. This will include mathematical approaches, models, experimental design, and field experimental methodology regarding questions in population biology, community ecology and ecosystems ecology. Three hours of lecture.

Prerequisite: Admission to graduate school or permission of department chair.

### **BIO 516 - Advanced Biology of Marine and Freshwater Algae (1)**

Ecology and classification of micro- and macroalgae from marine, estuarine, and freshwater environments. Laboratories and field trips include collection and identification of algae from Connecticut aquatic habitats. Three hours of lecture and one three-hour laboratory per week. Some Saturday field trips required.

Prerequisite: Admission to a Biological Sciences graduate program or permission of department chair.

Cross-Listed as: Cross-listed with BIO 425. No credit for this course if you have credit for the cross-listed equivalent.

### **BIO 517 - Advanced Human Anatomy, Physiology, and Pathophysiology (6)**

For students in the Biological Sciences: Anesthesia (M.S.) and Biological Sciences: Health Sciences Specialization (M.S.) programs. Functional anatomy, physiology and pathophysiology of man. Review of cell physiology is followed by in-depth study analysis of muscular, circulatory, nervous, respiratory, excretory and endocrine systems with special applications to the health sciences.

Prerequisite: CHEM 210 and CHEM 211 or CHEM 550, or permission of department chair.

### **BIO 518 - Advanced Pathophysiology and Applied Physiology (3)**

Human diseases caused by pathogenic organisms, environmental factors, and physiological and immunological disturbances. Review of normal functions

and homeostasis followed by discussion of altered function. Three hours of lecture per week.

Prerequisite: BIO 412 or BMS 412. Admission to the M.S. Health Sciences program or permission of department chair.

Cross-Listed as: This is a link course with BIO 414. No credit given for students with credit for BIO 414.

### **BIO 519 - Advanced Neuroscience (3)**

Prereq.: BIO 517 or BIO 412 or BMS 412, or permission of department chair. Study of the function of the human nervous system, including relation of neuroanatomy, membrane biophysics, synaptic transmission, and neural systems to human cognitive function in health and disease. Neuroanatomical and neurophysiological substrates of consciousness, arousal, sleep, perception, memory, pain, and analgesia with emphasis on their relation to anesthesia.

Prerequisite: None

### **BIO 530 - Immunology (3)**

Cells and organs of the immune system, immunoglobulin structure and genes, antigen-antibody interactions, major histocompatibility genes and molecules, complement, humoral and cell-mediated immunities, hypersensitivities, immunodeficiencies, transplants, and autoimmunity. Three hours of lecture per week.

Prerequisite: Admission to graduate program or permission of department chair.

### **BIO 538 - Advanced Aquatic Pollution ( )**

Study of the various types of aquatic pollutants, their sources and control/treatment, and the effects of water pollution upon aquatic ecosystems, as well as Federal and State water pollution regulatory programs. Laboratory will include field collection of water samples and measurement of indicators of water quality. Three hours of lecture and one three-hour laboratory per week. Some Saturday field trips required. This is a link course with BIO 438. No credit is given for students with credit for BIO 438.

Prerequisite: Admission to a Biological Sciences graduate program or permission of department chair.

Cross-Listed as: Cross-listed with BIO 438. No credit for this course if you have credit for the cross-listed equivalent.

### **BIO 540 - Topics in Advanced Biology (3 TO 4)**

Selected topics in the biological sciences. Lectures, seminars, discussions, independent readings, reports, and laboratory work as appropriate for the topic will be utilized. Four credit hour offerings will include one three-hour laboratory per week. May be repeated with different topics.

Prerequisite: Permission of department chair.

### **BIO 571 - Advanced Field Studies in Biology (1 TO 4)**

Interview with instructor required for courses outside the U.S. Travel-based field study experience. Advanced students will develop their abilities to identify biological questions, design and conduct observations and/or experiments that address those questions, and analyze their data and reach valid conclusions. May be repeated at different field sites.

Prerequisite: Admission to graduate program or permission of depart chair.

### **BIO 582 - Advanced Mammalogy (4)**

Exploration of mammalian biology, ecology, taxonomy, systematics, and conservation. Includes lectures, laboratories, field work, and at least one field trip. Laboratory places heavy emphasis on identifying relevant characteristics of orders and families of mammals with special emphasis on those groups located in New England, and introduces field methods related to detecting presence/absence, identifying habitat use, and estimating population size and density. Three hours of lecture and one, three-hour laboratory per week. This is a link course with BIO 482. No credit given for students with credit for BIO 482.

Prerequisite: Admission to a Biological Sciences graduate program or permission of department chair

### **BIO 584 - Advanced Conservation Genetics (4)**

Application of genetic data to conservation-related issues and ecological questions. Topics include small population size, population structure and gene flow, inbreeding, conservation breeding, and genetic identification and monitoring. Lab portion includes field sampling to collect and store biological samples, methods for extracting DNA from different sources, amplifying DNA, and analysis of genetic data from ongoing projects. The course will provide students with essential laboratory skills to conduct future genetic research or that are necessary for some career some positions in wildlife and conservation biology. Three hours of lecture and one, three-hour

laboratory per week. This is a link course with BIO 484. No credit given for students with credit for BIO 484

Prerequisite: Admission to a Biological Sciences graduate program or permission of department chair

### **BIO 586 - Advanced Conservation Biology (3)**

Conservation biology is an integrated discipline that emphasizes the protection of biodiversity at all different scales. Topics include biodiversity, ethics and valuation, ecological economics, habitat fragmentation, conservation genetics, invasive species, ex situ conservation, landscape ecology, and reserve design. Students in the course will be introduced to modeling, complete assignments, readings, and a poster project. This is a link course with BIO 486. No credit given for students with credit for BIO 486.

Prerequisite: Admission to a Biological Sciences graduate program or permission of department chair

### **BIO 587 - Advanced Wildlife Techniques (4)**

Prepares students with essential field skills for conducting future research or entering a career in wildlife and conservation biology. The course has a lecture component but heavy emphasis is placed on the lab portion with substantial field component. Topics include GPS, mapping and orienteering, camera surveys, telemetry, mist netting, vegetation sampling, stream sampling, and a small amount of live-trapping. Three hours of lecture and one, three-hour laboratory per week. This is a link course with BIO 487. No credit given for students with credit for BIO 487.

Prerequisite: Admission to a Biological Sciences graduate program or permission of department chair

### **BIO 590 - Focused Study in Advanced Biology (1 TO 4)**

Advanced project in biology under the supervision of one or more department members selected by the student and the graduate advisor. Written and oral research report required. May be repeated under a different topic no more than three times, for a maximum of 8 credits.

Prerequisite: Written permission of instructor(s) and department chair.

### **BIO 591 - Independent Research Project in Advanced Biology (1 TO 4)**

Individual student research in biology. Laboratory and/or field study under the supervision of faculty chosen consultation with the graduate advisor. Written research report required. May be repeated for a maximum of six credits.

Prerequisite: Written permission of instructor and department chair.

### **BIO 598 - Research in Biology (3)**

Designed to familiarize student with techniques and resources associated with research in the specialization. Opportunity for practical application will be provided. Three hours of lecture per week.

Prerequisite: Admission to the graduate school or permission of department chair.

### **BIO 599 - Thesis (3 OR 6)**

Preparation of the thesis under the supervision of the thesis advisor.

Prerequisite: BIO 598, permission of thesis advisor, and a 3.00 overall GPA.

## **BMS - Biomolecular Sciences**

### **BMS 101 - Search in Biomolecular Sciences with Lab (3)**

Examination of various topics, contemporary issues, and problems in biomolecular sciences. Sections include two lectures and one, two-hour laboratory per week. No credit given toward life sciences majors or minors. Course may be repeated one time with a different topic.

Prerequisite: None

### **BMS 102 - Introduction to Biomolecular Science (3)**

An introduction to cell physiology and basic metabolism (including the fundamentals of molecular genetics) and the organization, structure and function of animal tissues and organ systems. Designed for Biomolecular Science majors.

Prerequisite: None

### **BMS 103 - Introduction to Biomolecular Science Laboratory (1)**

Laboratory course to accompany BMS 102. One, three-hour lab per week.

Prerequisite: BMS 102 (may be taken concurrently).

### **BMS 113 - Laboratory Experience in Biomolecular Science (1)**

Laboratory experiences in biomolecular sciences, with a strong emphasis on hypothesis development, experimentation, data analysis and written reports. One, two-hour laboratory per week.

Prerequisite: BMS 100 or BMS 102 or BMS 111 or BIO 100 or BIO 111 (any of these may be taken concurrently).

**BMS 190 - Friday Seminar in Biomolecular Sciences I (.5)**

Introduction to research opportunities in Biomolecular Sciences at CCSU. Includes seminars and poster presentations by faculty and students currently engaged in independent research projects. Introduction to career opportunities for BMS majors in health professions and in research through alumni panels and guest speakers. Students develop a portfolio, including resumes and personal statements, and receive course advising. One lecture hour per week.

Prerequisite: BMS 102 (may be taken concurrently).

**BMS 201 - Principles of Cell and Molecular Biology (4)**

Introduction to the major principles of cell biology including cell compartmentalization; flow of genetic information; protein structure, synthesis, and trafficking; signal transduction; and molecular responses resulting in changes in cell activity, cell division, or apoptosis. Three hours of lecture and one, three-hour laboratory per week.

Prerequisite: BMS 102 and BMS 103 or BIO 121; or permission of department chair.

**BMS 216 - Microbiology for Nursing (3)**

Introduction to bacteriology, virology, mycology, immunology, and parasitology. Course will focus on the interactions between humans and the microbial world that influence health and disease. The laboratory exercises will give students significant experience with basic techniques for studying and manipulating microorganisms, including microscopy, culturing of bacteria, and biochemical and behavioral testing of known and unknown samples. Cannot be used to satisfy the requirements for a major in biomolecular science or biology. Two, one-hour lectures and one, two-hour laboratory per week.

Prerequisite: BMS 102, or BMS 111, or BIO 111, and CHEM 161, or permission of department chair.

**BMS 290 - Friday Seminar in Biomolecular Sciences II (.5)**

Discussion of research opportunities in Biomolecular Sciences at CCSU. Includes seminars and poster presentations by faculty and students currently engaged in independent research projects. Introduction to career opportunities for BMS majors in health professions and in research through alumni panels and guest speakers. Students develop a portfolio, including resumes and personal statements, receive course advising, and present their own research. One lecture hour per week.

Prerequisite: BMS 390 (may be taken concurrently) and BMS 190; or permission of department chair.

**BMS 306 - Genetics (3)**

Historical development of basic principles and modern concepts of genetics. Integrated survey of each of the major fields of genetics is presented.

Prerequisite: BMS 201 (C- or better) or BIO 200 or permission of the department chair, and CHEM 161 and CHEM 162

**BMS 307 - Genomics (4)**

Covers foundational material regarding genome structure and introduces modern analytical techniques for comparative genome studies. Topics include proteomics and molecular systems. Labs emphasize modern nucleic acid-based techniques and bioinformatics approaches. Three hours of lecture and one, 3-hour laboratory per week.

Prerequisite: BMS 201 (C- or better) and CHEM 161 and CHEM 162, or permission of department chair.

**BMS 308 - Genetics Laboratory (1)**

Laboratory to accompany BMS 306. One, three-hour lab per week.

Prerequisite: BMS 306 (may be taken concurrently).

**BMS 311 - Cell Biology (4)**

Cellular structure and function in terms of chemical composition, physiochemical, and functional organization of cells and organelles, including basic cellular metabolism. Membrane transport phenomena, excitation, contraction, trafficking, cell interactions, and other specialized cellular functions. Three hours of lecture and one three-hour laboratory per week.

Prerequisite: BMS 201 (C- or better) or permission of the department chair, and CHEM 161 and CHEM 162.

**BMS 316 - Microbiology (4)**

Genetics and metabolism of bacteria, focusing on microorganisms that affect human health and the environment. Discussion areas include biochemistry, molecular genetics, immunology, biotechnology, infectious diseases, and environmental microbiology. Laboratory exercises deal with bacterial growth and control, diagnostic identification, bacterial genetics, and the roles of bacteria in humans and the world. Three-hours of lecture and one, three-hour laboratory per week.

Prerequisite: BMS 201 (C- or better) or permission of the department chair and CHEM 161 and CHEM 162.

#### **BMS 318 - Anatomy and Physiology I (4)**

Human gross morphology, histology, and physiology of the skeletal, integument, muscular, nervous, and respiratory systems, including effects of aging. Three hours of lecture and one, three-hour laboratory per week.

Prerequisite: BIO 122 or BMS 201 (or for Nursing students only: BMS 102/103, Chem 210, NRSE 150, NRSE 150 may be taken concurrently), or permission of department chair.

Cross-Listed as: Cross listed as BIO 318. No credit given to students with credit for BIO 318.

#### **BMS 319 - Anatomy and Physiology II (4)**

Human gross morphology, histology, and physiology of the endocrine, cardiovascular, lymphatic, renal, digestive, and reproductive systems. Nutrition, metabolism, fetal development and aging will also be covered. Three hours of lecture and one, three-hour laboratory per week.

Prerequisite: BIO 122 or BMS 201 or (for Nursing students only: BMS 102 and BMS 103, and CHEM 210, and NRSE 150), or permission of department chair.

Cross-Listed as: Cross listed as BIO 319. No credit given to students with credit for BIO 319.

#### **BMS 321 - Experimental Developmental Biology (2)**

Laboratory-based course introducing students to the techniques biologists use to understand fundamental processes of embryonic development. Investigations will include gene and protein expression, morphogenetic processes that shape embryos, genetic manipulations of development and effects of environmental toxicants on development. Two two-hour laboratories per week.

Prerequisite: BMS 201 (C- or better) or permission of department chair.

#### **BMS 322 - Comparative Animal Physiology (4)**

Basic animal physiology course comparing strategies used by different organisms. Topics may include: respiration, oxygen delivery, metabolism, excretion of wastes, motion, temperature regulation and osmotic balance. Topics will be studied on tissue, cellular and molecular levels. The laboratory component (3 hours, one day per week) will be student designed experiments assisted by faculty. In addition, there will be several longer experiments that will be done over the entire semester.

Prerequisite: BMS 201 (C- or better)

#### **BMS 340 - Biomolecular Techniques (2)**

Laboratory-based course building on molecular-genetic concepts introduced in BMS 201. Methods covered will include basic techniques of molecular biology including DNA restriction, cloning, and transformation along with procedures for assessment of gene expression and genome analysis. Two, two-hour laboratories per week.

Prerequisite: BMS 201 (C- or better) or permission of department chair.

#### **BMS 362 - Developmental Biology (3)**

Study of processes that transform a single-celled embryo into a multi-cellular organism. Emphasizes the molecular and cellular mechanisms underlying embryonic development. Covers vertebrate (chick, mouse, frog, fish) and invertebrate (fly, urchin, worm) model systems. Topics include pattern formation, morphogenesis, organogenesis, cell type determination, and fertilization. Three hours of lecture per week.

Prerequisite: BMS 201 (C- or better)

#### **BMS 363 - Developmental Biology Laboratory (1)**

Laboratory to accompany BMS 362. One, three-hour lab per week.

Prerequisite: BMS 362 (may be taken concurrently)

#### **BMS 380 - Emergency Medical Technician (EMT) (6)**

Recognition of illnesses and injuries; training in the administering of appropriate emergency medical care. Classes will include demonstrations, practice sessions, and 10 hours of in-hospital practicum.

Prerequisite: None

Notes:

Credit will be given automatically upon proof of current EMT certification as issued by the Office of Emergency Medical Service, State of Connecticut. Cannot be counted towards a major in biology.

#### **BMS 390 - Independent Research in Biomolecular Science (1)**

Laboratory research under the guidance of one or more department members. Written report or presentation, portfolio review, and attendance at research seminars required. May be repeated with a different instructor for a maximum of two credits.

Prerequisite: BMS 290 and written permission of instructor and department chair.

**BMS 391 - Internship in Biomolecular Science (1 TO 3)**

Projects in biomolecular science under the supervision of one or more department members. Projects generally involve work with associated organizations off campus. Written report or poster presentation, and portfolio review required.

Prerequisite: Written permission of instructor and department chair.

**BMS 411 - Molecular and Cellular Immunology (3)**

This course introduces the student to molecular and cellular aspects of the human immune system. Topics examined include both innate and adaptive immunity as well as principles of vaccination, immunodeficiency disorders, and mechanisms of pathogen evasion and resistance. The molecular and cellular immunology course entails both interactive lectures and discussion-type seminars based upon research publications.

Prerequisite: BMS 311 (C- or better) or BMS 316 (C- or better) or permission of department chair

**BMS 412 - Human Physiology (3)**

Study of human body and its reactions to internal and external environmental changes. Physiology of the musculoskeletal, nervous, circulatory, respiratory, excretory and endocrine systems is considered. Integrative mechanisms of the system are emphasized.

Prerequisite: BIO 122, or BMS 201; or BIO 318 or BMS 318 or BIO 319 or BMS 319; or permission of department chair.

Cross-Listed as: Cross listed as BIO 412.

**BMS 413 - Human Physiology Laboratory (1)**

Laboratory course to accompany BMS 412. One three-hour laboratory per week.

Prerequisite: BMS 412 or BIO 412 (either may be taken concurrently).

Cross-Listed as: Cross listed as BIO 413.

**BMS 416 - Experimental Microbiology (2)**

Laboratory-based course which builds on the concepts and skills learned in BMS 316: Microbiology. Topics will include microbial genetics and physiology, and behavior and interactions between microorganisms. Two, two-hour laboratories per week.

Prerequisite: BMS 316, or permission of department chair.

**BMS 430 - Virology (3)**

This course will be a broad introduction to viruses, covering structure and nomenclature, viral life cycles and gene expression in varied hosts, viral pathogenesis and host defenses, epidemiology, and new emerging viruses. Specific examples will be addressed in depth, such as influenza, HIV, smallpox, and (bacteriophage) lambda. The assigned textbook will be supplemented with readings and class discussion of relevant primary literature.

Prerequisite: BMS 316 (C- or better) OR BIO 315 (C- or better) or permission of department chair

**BMS 450 - Epigenetics of Clinical and Model Systems (3)**

Covers material regarding epigenetic advances in human clinical studies and in model organismal systems. Topics will include methods of quantifying gene expression. Critical analysis of primary research papers will be featured.

Prerequisite: BMS 306 or BMS 307

**BMS 460 - Pharmacogenetics ( )**

This course will cover material regarding advances in pharmacology related to gene sequencing. Topics will include methods of detecting sequence variation and using this knowledge to direct pharmaceutical interventions. Critical analysis of primary research papers will be featured.

Prerequisite: BMS 306 or BMS 307 or permission of Chair

Cross-Listed as: Linked course with graduate BMS 560.

**BMS 490 - Topics in Biomolecular Sciences (1 to 4)**

Selected studies in the biomolecular sciences. Lectures, seminars, discussions, independent readings, reports, and laboratory work appropriate for the topic will be utilized. Four credit hour offerings will include one, three-hour laboratory per week. May be repeated with different topics.

Prerequisite: BMS 306 or BMS 307 or BMS 311 or BMS 316 or permission of department chair.

**BMS 491 - Advanced Independent Research in Biomolecular Science (1-3)**

Advanced laboratory research under the guidance of one or more department members. Continuation of research begun in BMS 390. Written report or presentation, portfolio review, and attendance at research seminars required. May be repeated. A maximum of five credits may be counted in the major.

Prerequisite: BMS 390 and written permission of instructor and department chair.

### **BMS 492 - Mentorship in Biomolecular Science (1)**

Faculty-supervised mentorship by an advanced undergraduate of one or two high-school interns on a research project in biomolecular science. Student meets for 1 hour weekly with faculty advisor for planning and evaluation, and works with intern(s) for 3 hours per week during a regular semester (40 hours research mentoring expected). Poster presentation (with interns), written report, and portfolio review required. May be repeated for a maximum of two credits.

Prerequisite: BMS 491, and written permission of instructor and department chair.

### **BMS 495 - Capstone in Molecular Biology (4)**

For advanced undergraduates. Introduction to the structure and function of DNA. Emphasis on approaches currently being used to analyze the expression of genes. Examination of regulated gene expression and its relationship to cellular growth and differentiation. Three hours of lecture and one three-hour laboratory per week.

Prerequisite: BMS 306 or permission of the department chair.

### **BMS 496 - Capstone in Cellular Metabolism and Energetics (3)**

For advanced undergraduates. Study of the biochemical reactions that sustain life in connection to their role in biological systems. Structure and function of biomolecules. Bioenergetic principles involved in the synthesis and degradation of biological macromolecules. Integration and regulation of metabolic pathways will be discussed.

Prerequisite: BMS 306 or BMS 307 or BMS 311 or BMS 316; and CHEM 210 and CHEM 211; or permission of department chair.

### **BMS 497 - Biosynthesis, Bioenergetics and Metabolic Regulation Laboratory (1)**

Laboratory to accompany BMS 496 or BMS 506. One three-hour laboratory per week.

Prerequisite: BMS 496 or BMS 506.

### **BMS 499 - Undergraduate Thesis in Biomolecular Sciences (1)**

Student must submit thesis proposal based on project done in BMS 491 to the biomolecular sciences department and complete the undergraduate thesis under the

supervision of the thesis advisor. The same BMS 491 project may not be the subject of both an HON 441 thesis and a BMS 499 thesis.

Prerequisite: BMS 491 (may be taken concurrently) and written permission of thesis advisor.

### **BMS 500 - Seminar in Biomolecular Science (1 to 3)**

Study of contemporary topics in biomolecular sciences through individual readings, discussions, and presentations. May be repeated under a different topic

Prerequisite: Admission to the MA in BMS program or permission of the department chair

### **BMS 501 - Fundamentals of Biomolecular Science (2)**

Examination of fundamental concepts, skills, and research, with an emphasis on their application of these within the fields of Cell, Development, Molecular and Physiological sciences.

Prerequisite: Admission to MA in BMS program.

### **BMS 505 - Molecular Biology (4)**

For entering graduate students. Introduction to the structure and function of DNA. Emphasis on approaches currently being used to analyze the expression of genes. Examination of regulated gene expression and its relationship to cellular growth and differentiation. Three hours of lecture and one three-hour laboratory per week. This is a bridge course with BMS 495. No credit given to students with previous credit for BMS 495.

Prerequisite: BMS 306 or BMS 307 or permission of the department chair.

### **BMS 506 - Cellular Metabolism and Energetics (3)**

For entering graduate students. Study of the biochemical reactions that sustain life in connection to their role in biological systems. Structure and function of biomolecules. Integration and regulation of metabolic pathways will be discussed. This is a bridge course with BMS 496. No credit given to students with previous credit for BMS 496.

Prerequisite: BMS 306 or BMS 307 or BMS 311, or BMS 316; and CHEM 210 and CHEM 211, or permission of department chair.

### **BMS 516 - Medical Microbiology (3)**

Course will focus on interactions between humans and microorganisms that lead to health and disease. Topics will include microbial pathogenesis and human defenses.

Prerequisite: Admission to a BMS program, or permission of the department chair.

**BMS 540 - Advanced Topics in Biomolecular Science (1 to 4)**

Selected topics in the biomolecular sciences. Lectures, seminars, discussions, independent readings, reports, and laboratory work as appropriate for the topic will be utilized. Four credit hour offerings will include one, three-hour laboratory per week. May be repeated with different topics. This is a link course with BMS 490.

Prerequisite: None

**BMS 550 - Advanced Epigenetics of Clinical and Model Systems (3)**

Covers advanced material regarding epigenetic advances in human clinical studies and in model organismal systems. Topics will include methods of quantifying gene expression. Critical analysis of primary research papers will be featured. This is a linked course with BMS 450. No credit given for students who took BMS 450.

Prerequisite: Admissions to the MA in BMS program or permission of the department chair

**BMS 560 - Advanced Pharmacogenetics ( )**

This course will cover material regarding advances in pharmacology related to gene sequencing. Topics will include methods of detecting sequence variation and using this knowledge to direct pharmaceutical interventions. Critical analysis of primary research papers will be featured.

Prerequisite: BMS 501 or permission of Chair

Cross-Listed as: BMS 460

**BMS 562 - Advanced Developmental Biology (3)**

Advanced studies of the structural and functional aspects of development of organisms. Covers a breadth of topics in Developmental Biology, while emphasizing studies of the primary literature.

Prerequisite: BMS 306 or BMS 307 or permission of department chair.

**BMS 590 - Focused Study in Advanced Biomolecular Sciences (1 - 4)**

Advanced project in biomolecular sciences under the supervision of one or more department members selected by the student and the graduate advisor. Written and oral research report required. May be repeated under a

different topic no more than three times, for a maximum of 8 credits.

Prerequisite: Written permission of instructor(s) and department chair.

**BMS 591 - Independent Research Project in Biomolecular Sciences (1-4)**

Individual student research. Laboratory study under the supervision of faculty chosen in consultation with faculty advisor. Written research report required. May be repeated for a maximum of 6 credits.

Prerequisite: Written permission of instructor and department chair.

**BMS 592 - Advanced Mentorship in Biomolecular Science (1)**

Faculty-supervised mentorship by a graduate student of one or two high-school interns on a research project in biomolecular science. Student meets for 1 hour weekly with faculty advisor, for planning and evaluation, and works with intern(s) for 3 hours per week during a regular semester (40 hours research mentoring expected). Poster presentation (with interns), written report, and portfolio review required. May be repeated for a maximum of two credits.

Prerequisite: BMS 591, and written permission of instructor and department chair.

**BMS 599 - Thesis (3)**

Preparation of the thesis under the supervision of the thesis advisor.

Prerequisite: Permission of thesis advisor; approval of thesis plan by departmental thesis committee; 3.00 overall GPA.

**BUS - Business**

**BUS 250 - Introduction to Business Analytics and Skills (3)**

This course expands on the foundation of statistical analysis and applies the use of statistical methods and technologies to analyze and transform data into useful information, identify and anticipate trends and outcomes, and ultimately make smarter, data-driven decisions for organizations. Students develop skills to distinguish between descriptive, predictive, and prescriptive analytics utilizing spreadsheet software and data visualization tools. Emphasis is placed on application and interpretation of results using analytics tools including Excel. The course includes group work and application of skills from the School of Business learning objectives.



Prerequisite: STAT 201(with C- or higher)

### **BUS 270 - Data Visualization (3)**

Data Visualization comprises data wrangling showing how to prepare raw data and get it ready for visualization. Students learn to clean, structure, and prepare data for analysis and visualization. Creating visualizations consists of the process of creating visual representations of data to communicate insights and findings effectively.

Prerequisite: BUS 250 (C- or higher)

### **BUS 350 - Intermediate Business Skills (3)**

An integrated business course focusing on business problem solving through projects and cases. Emphasis placed on personal branding, teamwork, critical thinking, and ethics. Intensive application of Excel skills will be required.

Prerequisite: MIS 201, LAW 250 (may be taken concurrently), MGT 295 (may be taken concurrently) (All with C- or higher), and admission to the upper division of the Business School

Corequisite: AC 212, FIN 295, MGT 295, MIS 201, MKT 295, LAW 250

### **BUS 370 - Business Analytics and Decision Support (3)**

The course covers methodologies, tools, and processes that support business decisions and performance management. Topics include decision-making processes, visualization, descriptive analytics, predictive analytics, etc.

Prerequisite: MIS 315 (C- or higher)

Cross-Listed as: This course is cross-listed with MIS 399. No credit given to students who have received credit for MIS 399.

### **BUS 470 - Business Analytics Capstone (3)**

Students make data-driven decisions on real-world complex business challenges. The course requires students to draw on the knowledge acquired through the program to solve real-life business analytics problems using actual industry data, modern data science platforms, and analytical tools. Includes tasks such as collecting and cleaning data, performing statistical analysis, creating data visualizations, and developing recommendations based on the data.

Prerequisite: Grades of at least C- in BUS 250, FIN 295, LAW 250, MIS 201, MGT 295, MKT 295, STAT 201, the eight pre-major courses, and at least 70% of the Business Analytics major courses; acceptance into upper-division of

School of Business; meeting upper-division Business School GPA requirements; and a minimum of 100 credits.

### **BUS 480 - Capstone Seminar (0)**

Activities measuring the degree to which students have mastered the material relevant to the School of Business Learning Goals and Objective. Linked to MGT 480 Strategic Management and counts toward the capstone requirement in each undergraduate business degree program.

Prerequisite: Grades of at least C- in FIN 295, LAW 250, MC 207, MIS 201, MGT 295, MKT 295, and the 8 pre-major courses; acceptance into upper-division of School of Business; meeting upper-division Business School GPA requirements; and a minimum of 90 credits.

Corequisite: MGT 480

### **BUS 505 - Quantitative Methods For Business (3)**

Basics of statistical techniques for the MBA candidate. The course provides a framework, concepts, and tools for statistical analysis and decision making inferences. Topics include data analysis; probability distributions; random, discrete, and continuous distribution analysis; sampling distribution; hypothesis testing; analysis of variance; and introduction to regression analysis.

Prerequisite: Admission to the MBA program or permission of MBA Director.

### **BUS 538 - Business Quantitative Analytics (3)**

Application of statistical concepts including exploratory data analysis, probability theory, statistical inference, ANOVA, and regression. Students will learn how to apply appropriate modeling to fit the circumstances and interpret results. Computer software used for calculations will be introduced.

Prerequisite: Admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs.

### **BUS 540 - Business Intelligence and Analytics (3)**

Transforming enterprise-wide data into meaningful and useful information for business decision making using business intelligence (BI) and business analytics (BA) tools and technologies. Examining industry use of BI/BA to achieve competitive edge.

Prerequisite: BUS 538, or Admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs.

**BUS 542 - Web Analytics (3)**

Exploring key concepts and best practices of web analysis. Using web analytic tools and techniques to learn how web analytics can drive higher profits, improve customer experience, and create measurable value for businesses.

Prerequisite: BUS 538, or Admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs.

**BUS 544 - Business Process Modeling (3)**

Enterprise wide perspective on business processes. Modeling of business processes: analyzing, documenting, and assessing the efficiency and effectiveness of business processes. Improvement of business processes to minimize cost and maximize value creation.

Prerequisite: BUS 538 (may be taken concurrently), or Admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs.

**BUS 546 - Applications of Business Analytics (3)**

Business application of data mining. Understanding the importance of data mining in business and how to make business decisions using data mining results. Study of companies creating value through data mining.

Prerequisite: BUS 538, or Admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs.

**BUS 548 - Business Decision Models (3)**

Analyzing business data for managerial decision making and solving business problems. Topics include optimization (linear and non-linear models), queuing, Monte Carlo simulation, spreadsheet modeling.

Prerequisite: BUS 538 (may be taken concurrently), or Admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs.

**BUS 580 - Applied Business Research (3)**

Requires students to use business knowledge and leadership skills to tackle an important challenge facing a company or organization. Students should form teams of 3-4 and identify a company and faculty advisor(s). With faculty advisor(s) permission, students may work individually.

Prerequisite: Completion of core requirements; at least three specialization courses or permission of the Associate Director of Graduate Programs.

**BUS 581 - Graduate Special Project (3)**

Capstone Experience. Students will identify a topic, conduct a literature review, formulate an appropriate research design plan, and submit a final report with discussion and limitations of study.

Prerequisite: Completion of core requirements; at least three specialization courses or permission of the Associate Director of Graduate Programs

**BUS 582 - Graduate Capstone Seminar (0)**

Activities measuring the degree to which students have mastered the material for the relevant School of Business graduate program's Learning Goals and Objectives. Linked to BUS 580 or BUS 581 and counts toward the capstone requirement in the MBA program.

Prerequisite: Completion of core requirements; at least three specialization courses or permission of the Associate Director of Graduate Programs.

**BUS 594 - Independent Study In Business (3)**

Special study or research projects. Progress and performance are monitored and evaluated by a qualified business faculty adviser. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: Admission to a School of Business graduate program, permission of the Associate Director of Graduate Programs or permission of appropriate Business Department Chair. Preq: Completion of the core courses for the School of Business graduate program in which the student is enrolled in (is admitted into).

**BUS 598 - Special Topics in Business (3)**

Current topics and developments in business. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: Admission to a School of Business graduate program, permission of the Associate Director of Graduate Programs or permission of appropriate Business Department Chair. Preq: Completion of the core courses for the School of Business graduate program in which the student is enrolled in (is admitted into) .

**CCSU - Central Connecticut State University****CCSU 103 - First Year Career Exploration (2)**

CCSU 103 is a class designed to assist students in the transition from high school to college and allow them to explore and Identify skills through career and educational exploration. An emphasis will be placed on exploring

careers and associated majors across campus. The class will allow students to reflect on their own identity and experiences, understand the university and its resources, explore their curiosity, embrace change and failure, and begin to pave a pathway to their future.

## **CE - Civil Engineering**

### **CE 222 - CAD Applications in Civil Engineering (2)**

Computer-aided drafting and design applied to the preparation of civil engineering drawings. Emphasis on preparation of site plans, survey maps, topographic maps, linear and circular curve alignments, vertical profiles and vertical curves, cross sections and civil engineering detailing. Use of CAD software applicable for Civil Engineering practice. One hour lecture and two hours laboratory per week.

### **CE 253 - Introduction to Engineering Surveying (3)**

Application of survey instruments to perform measurements for design and construction. Use of survey instruments to measure elevations, distances, and angles; and application of survey mathematics to calculate locations, areas, earthwork, and roadway curves. Two hours of lecture and two hours of laboratory per week.

Prerequisite: ENGR 150 (C- or higher) and MATH 152 (C- or higher)

### **CE 301 - CE Fundamental Computations (1)**

Review of the fundamental mathematics, chemistry, physics, and engineering knowledge attained in the first-year and sophomore level of Civil Engineering studies. The course reinforces fundamental knowledge required for junior and senior year civil engineering studies, and measures student performance. Course is conducted as one hour lecture per week for full semester, or two hours lecture per week for 8 weeks.

Prerequisite: ENGR 240, ENGR 251, and CHEM 161 (all with C- or higher); and ENGR 357 and MATH 226 (Both may be taken concurrently or C- or higher)

### **CE 354 - Fluid Mechanics (3)**

This course begins with the basic principles of fluid mechanics. This includes hydrostatic forces, kinematics of fluid motion, integral descriptions and the differential representation of the conservation of mass, momentum, and energy equations. It then concludes with examinations of Bernoulli's equation, dimensional analysis, viscous flow, frictional losses, and pipeline network analysis. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: ENGR 251 (C- or higher), CE 376 (may be taken concurrently or C- or higher), and MATH 355 (C- or higher)

Cross-Listed as: ME 354

### **CE 356 - Civil Engineering Materials (3)**

Study of composition, properties, and characteristics of metallic materials, and materials used for construction of civil engineering infrastructure including timber, asphalt, and Portland cement concrete. Laboratory includes use of standard apparatus for testing civil engineering materials. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CHEM 161, CHEM 162; ENGR 251. All prerequisites require C- or higher.

### **CE 357 - Advanced Surveying (3)**

Advanced topics in surveying including horizontal and vertical curve layout, traversing earthwork, and computational geometrics. Computer applications and effective total station usage is stressed. Two hours of lecture and two hours of lab per week.

Prerequisite: MATH 152 (C- or higher) and CE 253 (C- or higher).

### **CE 360 - Traffic Engineering (3)**

Engineering for the planning, design, and operations of surface transportation. Driver and vehicle characteristics, fundamental principles of traffic flow, transportation safety, traffic engineering studies are covered. Intersection design and control and signal timing design are also considered. Travel demand forecasting models and techniques are introduced. 2-hour lecture and 2-hour laboratory per week.

Prerequisite: ENGR 240 and MATH 226 (both may be taken concurrently or C- or higher)

### **CE 375 - Hydraulic Engineering (3)**

Engineering topics pertaining to the hydrological cycle, including the application of basic fluid mechanics and incompressible flow in conduits, pipe system analysis and design. Dimensional analysis, and hydraulic similitude are covered. Analysis of subcritical and supercritical conditions as well as natural and constructed open channel flows are analyzed. Also included are flow measurement, analysis, and design of pumps systems and surge waves.

Prerequisite: CE 354 (C- or higher).

**CE 376 - Environmental Engineering (3)**

Engineering analysis of environmental conditions including air, surface and groundwater pollution. Evaluation of water and wastewater treatment systems, environmental monitoring and assessment, and groundwater characterization and treatment methods. Thermodynamic evaluation of environmental conditions, and thermo-environmental processes. Two hours of lecture and two hours of lab per week.

Prerequisite: CHEM 161, CHEM 162, PHYS 125 , MATH 221. All prerequisites require C- or higher.

**CE 397 - Structural Analysis I (3)**

Analysis of statically determinate structures; moving loads and influence lines for determinate structures; deflection analysis of trusses, beams and frames; evaluation of cables and arches; application of dead, live, wind, and earthquake loads and load combinations for design of structures.

Prerequisite: MATH 221 (C- or higher) and ENGR 357 (C- or higher)

**CE 402 - Inquiry and Research in Civil Engineering (1)**

Individualized inquiry or research requiring a comprehensive study into a civil engineering technical area. The student may examine procedures and processes, or developmental aspects of professional civil engineering practice. Open only to Civil Engineering majors. Course may be repeated for a maximum of 3 credits, with a maximum of one credit applied as a CE Directed Technical Elective.

Prerequisite: ENGR 357 (C- or higher) and permission of the Department of Engineering Chair.

**CE 407 - Structural Analysis II (3)**

Analysis of statically indeterminate structures by slope and flexibility methods; deflection analysis by the work-energy methods; influence lines for indeterminate structures; approximate analysis of complex structures; and analysis of statically indeterminate trusses, beams, and frames by the direct stiffness method. 2-hour lecture and 2-hour laboratory per week.

Prerequisite: CE 397 (C- or higher).

**CE 451 - Soil Mechanics (3)**

Fundamentals of the physical and mechanical properties of soils. Application of solid mechanics and fluid mechanics to describe strength, permeability and consolidation. Evaluation of earth slope stability.

Laboratory measurement of soil properties. Two hours lecture and two hours laboratory per week.

Prerequisite: ENGR 357 (C- or higher)

**CE 452 - Foundation Engineering (3)**

A study of the methods of the subsoil investigation and in-situ geotechnical testing applied to the design of foundations. Analysis and design of shallow and deep foundations, and gravity and cantilever retaining walls.

Prerequisite: CE 451 (C- or higher).

**CE 458 - Introduction to GPS for Engineering (3)**

An exploration of Geodesy and world coordinate systems, GPS signals, GPS global framework, code and carrier wave based GPS equipment, GPS errors, and field operations for GIS mapping and cm level positioning. Includes hands-on field use of GPS equipment and lab processing of GPS data into GIS software. Two hours lecture and two hours lab per week.

Prerequisite: CE 253 (C- or higher) or GEOG 378 (C- or higher)

**CE 460 - Highway Design and Construction (3)**

Engineering for the planning, design, and construction of highway projects. Principles of diversity, equity, justice, and inclusion in highway planning and design. Horizontal alignment design, vertical alignment design, and cross-section design. Highway construction practices and methods.

Prerequisite: CE 222 (C- or higher), CE 253 (C- or higher), and CE 360 (C- or higher).

**CE 470 - Structural Steel Design (3)**

Introduction to the analysis of steel structures using load and resistance factor design. Analysis of beams, columns, bolted and welded connections, trusses, and frames. Application of national/international codes for the design of steel structures.

Prerequisite: CE 397 (C- or higher).

**CE 471 - Reinforced Concrete Design (3)**

Analysis and design of reinforced concrete members subjected to flexure, shear, and axial loads. Beams, columns, slabs, footings, retaining walls, and pre-stressed concrete. Application of national/international codes for design of reinforced concrete.

Prerequisite: ENGR 357 (C- or higher) and CE 397 (May be taken concurrently or C- or higher).

**CE 472 - Timber Structures (3)**

Application of the physical properties of wood for the design of structures using allowable stress design and load/resistance factor design. Analysis of beams, columns and shear diaphragms, selection of species and grades, and glue-laminated timber. Application of national/international codes for the design of timber structures.

Prerequisite: CE 397 (C- or higher).

**CE 473 - Reinforced Concrete Design II (3)**

This course covers the analysis and design of reinforced concrete components and systems with emphasis on fundamental theories necessary for a thorough understanding of concrete structures. Topics include development and anchorage of rebars, torsion, columns, two-way slabs, and footings.

Prerequisite: CE 471 (C- or higher)

**CE 474 - Prestressed Concrete Design (3)**

This course covers the analysis and design of prestressed concrete beams. Topics include PCI and ACI design criteria, flexural analysis, prestress bond, draping and debonding, allowable stresses, shear analysis and design, camber prediction, and prestress losses.

Prerequisite: CE 471 (C- or higher)

**CE 475 - Hydrology & Storm Drainage (3)**

Application of surface water hydrology for evaluation of floods and the design of surface runoff facilities. Groundwater Hydrology, watershed characteristics, probabilistic methods, design storms, infiltration methods, unit hydrographs, and hydrologic modeling are covered. Laboratory sessions apply computer methods and physical models for analysis and design. Two hours lecture and two hours laboratory per week.

Prerequisite: CE 375 (may be taken concurrently or C- or higher).

**CE 477 - Environmental Engineering Treatment Processes (3)**

Engineering design of environmental engineering treatment processes and methods. Evaluation of water and waste water treatment systems and facilities to reduce pollutant discharge to rivers, lakes, and estuaries. Two hours lecture and two hours laboratory per week.

Prerequisite: CE 354 and CE 376 (both may be taken concurrently or C- or higher)

**CE 490 - NCEES Fundamental Civil Engineering Subjects (2)**

Basic preparation for subjects included in the Civil Engineering portion of the Fundamentals of Engineering (FE) exam. The course will focus on mathematics, science and engineering subjects generally completed in the first 3 years of engineering studies. 2 hours of lecture per week.

Prerequisite: CE 497 (may be taken concurrently or C- or higher) or permission of the Department Chair.

**CE 491 - NCEES Advanced Civil Engineering Subjects (1)**

Advanced preparation for subjects included in the Civil Engineering portion of the NCEES FE exam. Course meets for 1 hour of lecture per week, but may meet for a portion of a semester, with 2 hours of lecture per week for 50% of a semester, or 3 lecture hours per week for 33% of a semester. Friday and Saturday class times are expected.

Prerequisite: CE 497 (C- or higher) or CE 490 (C- or higher) or ENGR 490 (C- or higher) or permission of the Department Chair

**CE 495 - Topics in Civil Engineering (3)**

Study of special topics in civil engineering. Course will further develop students' knowledge and skills in one of the following civil engineering subject areas: geotechnical, transportation, environmental, water resources, and structural engineering. Three hours lecture, course meets three hours per week

Prerequisite: ENGR 357 (C- or higher)

**CE 497 - CE Professional Practice and Senior Project Research (2)**

First of two-course design sequence. Students work in teams in an environment appropriate to a professional engineering setting. Teams propose and begin the development of a capstone design project. Class presentations include communication, engineering project management, the design function, ethics, professional liability, and qualifications-based selection. Oral and written communication skills are emphasized. One hour of lecture and two hours of laboratory per week.

Prerequisite: ENGR 290, CE 253, CE 360, CE 376, CE 397 (all require C- or higher); CE 452 and CE 475 (both may be taken concurrently or C- or higher)

**CE 498 - Civil Engineering Senior Design Project (Capstone) (3)**

Second course in capstone design sequence. A culminating experience for civil engineering majors

involving a substantive project that demonstrates a synthesis of accumulated learning. Students must work in design teams to finalize capstone projects. Oral and written presentations are required. Projects may originate from student, instructor, and/or industrial partner. Students must take the NCEES FE exam.

Prerequisite: CE 497 (C- or higher).

#### **CE 552 - Advanced Foundation Engineering ( )**

A study of the methods for subsoil investigations and in-situ testing to determine soil characteristics, analysis and design of shallow and deep foundations, and gravity and cantilever retaining walls.

Prerequisite: Admission to the MSCE program, or permission of Engineering Department chair.

#### **CE 570 - Advanced Steel Structure Design ( )**

The objective of this course is to develop an understanding of behavior and design methodology for the structural steel topics of column design and behavior considering residual stresses, lateral torsional buckling of beams, beams with web holes, torsional design of beams, composite design of beams, plate buckling & plate girders, bracing requirements for compression members, and frame stability.

Prerequisite: Admission to the MSCE program, or permission of Engineering Department chair.

#### **CE 571 - Advanced Concrete Design ( )**

The objective of this course is to learn advanced topics related to the behavior and design of reinforced concrete. Topics include flexural behavior of reinforced concrete, the behavior and design of slender columns and two-way slab systems, and the use of strut and tie modeling for design of structural components, frame joints, and torsion.

Prerequisite: Admission to the MSCE program, or permission of Engineering Department chair.

#### **CE 572 - Design of Prestressed Concrete Structures ( )**

This course is intended to provide the student with the basic tools required to design and build prestressed concrete structures. Emphasis will be placed on the behavior of prestressed concrete under load along with potential failure mechanisms.

Prerequisite: CE 571 (C or better) or permission of Engineering department chair

#### **CE 573 - Plastic Design of Steel Structures ( )**

The objective of this course is to understand the behavior of steel structures beyond the elastic limit and up to the point of collapse. This course extends the student's knowledge and understanding of the theory of steel structures to include plastic behavior and collapse mechanisms.

Prerequisite: CE 570 (C or better) or permission of Engineering department chair

#### **CE 574 - Finite Element Method for CE Structures ( )**

This course is an introduction to FEM as applied to elasticity problems in solid and structural mechanics. The mathematical equations are developed using the virtual work basis of FEM and this is used to develop equations for one, two- and three-dimensional elements. As FEM is a computational tool this course includes practical exercises using the commercial package. A number of tutorials involving hand calculations are provided to aid understanding of the technique.

Prerequisite: ENGR 557 (C or better) or permission of Engineering department chair

#### **CE 575 - Dynamics of Structures ( )**

Structures are often subjected to dynamic forces of one form or the other during their lifetime. This course introduces the theory of dynamic response of structures. This course includes free and forced vibration response of single and multi-degree of freedom systems to learn the fundamentals of modeling and analyzing dynamic behavior of civil engineering structure.

Prerequisite: Admission to the MSCE program, or permission of Engineering Department chair.

#### **CE 576 - Bridge Engineering ( )**

The objective of this course is to understand general considerations for design and load capacity evaluation of highway bridges. Topics of this course are introduction to load and resistance factor design (LRFD) philosophy, bridge loads, Influence lines, and introduction to seismic analysis and design.

Prerequisite: Admission to the MSCE program, or permission of Engineering Department chair.

#### **CE 577 - Earthquake Engineering ( )**

The objective of this course is to give students an overview of both the theory and the practice of earthquake engineering. The course deals with aspects of engineering seismology and earthquake structural

engineering. Topics covered in the course include ground motion characterization, response spectra, and inelastic structural analysis.

Prerequisite: CE 575 (C or better) or permission of Engineering department chair

### **CE 578 - Loads for Civil Structures ( )**

Covers the computation of loads on buildings and other civil structures using the International Building Code (IBC) and ASCE 7, *Minimum Design Loads for Buildings and Other Structures*. The loads presented will include gravity loading analysis, occupancy loads, vehicle loads, roof live, wind, ice, and ponding loads, flood and tsunami loads, and wind loads. Lateral seismic loading of buildings will be introduced. Free standing structure loading and probable combinations of loads will be covered.

Prerequisite: Admission to the MSCE program, or permission of Engineering Department chair.

### **CE 597 - Thesis I ( )**

Initiation of the thesis creation process, under guidance of a thesis advisor, for students working towards fulfilling the requirements for the degree of Master's of Science in Civil Engineering.

Prerequisite: ENGR 592 (C or better)

### **CE 599 - Thesis II ( )**

Completion of the thesis creation process, under guidance of a thesis advisor, for students working towards fulfilling the requirements for the degree of Master's of Science in Civil Engineering.

Prerequisite: CE 597 (C or better)

## **CEGT-Computer-Electronics-Graphics-Technology**

### **CEGT 200 - Seminar (1)**

Review of mathematical operations, software and applications. Emphasis placed on written/oral communication for technical reports and assignment within the major courses.

Prerequisite: CET 113 with grade of C- or higher.

### **CEGT 400 - Internship and Senior Seminar (3)**

This course is designed to provide students an opportunity to observe, participate and work in an environment directly related to their technical specialization. The internship is a program of experiences tailored for each

intern within a specific cooperating company. Students must be employed during the semester they enroll.

Prerequisite: Completion of 75 credits in the degree or Permission of Department Chairperson.

## **CEN - Community Engagement**

### **CEN 200 - Introduction to Community and Civic Engagement (3)**

Introduction to the skills, knowledge, and theory for students to solve problems in their own communities, and develop a sense of self and collective efficacy. Emphasis on civic agency, interpersonal, leadership and advocacy skills, critical analysis appreciation for diversity and an enhanced understanding of community issues and challenges. Required for Community Engagement minors.

Prerequisite: None

### **CEN 201 - Practicum in Community and Civic Engagement (1)**

This one-credit course is the community-engagement component of the CEN 200 class, and provides the platform for the students, working in groups, to carry out a community-based project.

Prerequisite: This is a co-requisite course with CEN 200 Introduction to Community and Civic Engagement, in other words, taken at the same time.

Corequisite: CEN 200

### **CEN 300**

#### **CEN 300 - Global Community Engagement (3)**

CEN 300 Global Community Engagement aims to help students understand the important concepts in community engagement beyond the local community and in the wider world. This course examines the major organizations seeking to impact and develop communities globally, and considers the dynamics of that engagement on political, economic, and humanitarian levels. Critical questions about our own role in global development and responsible engagement in cultures different from our own are explored. This is a service-learning course that engages with international residents of our own community, and when possible includes a field trip to the United Nations Headquarters in New York City.

Prerequisite: None

Corequisite: None

Cross-Listed as: Cross-listed with IS 300

**CEN 402 - Community Engagement Internship Seminar (4)**

The purpose of the Community Engagement Internship program is to first allow students to gain experience in an area of interest, and second, to apply what they have learned from their community engagement curriculum to real life experiences. Essentially, this course will allow each student to apply skills and knowledge in the context of providing community service work. Although each student will serve in different locations and programs, there will be various overlapping and common themes that will emerge for all students.

Prerequisite: CEN 200 and CEN 201

**CET - Computer Electronics Technology****CET 113 - Introduction to Information Processing (3)**

Emphasis placed on the computer as a productivity tool. Topics include enterprise applications, software integration, data analysis, and basic programming for information processing. Laboratory assignments are related to technical applications and problem solving. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: None

**CET 119 - Cloud Computing Technologies and Services (3)**

Introduction to concepts and foundational skills required for understanding the characteristics, types, infrastructure, deployment, and service models of cloud computing technologies from both enterprise and practice perspectives. Two hours lecture and two hours laboratory.

Prerequisite: None

**CET 179 - Basic Network Administration (3)**

Introduction to techniques and skills essential for electronic and computer systems, network provision, administration, control, and management that involves GUI and CLI with programming logics, scripting, network data collection, analysis and management. Two hour lecture and two hour laboratory, course meets four hours per week.

Prerequisite: None

**CET 201 - Photonics Principles (3)**

Exploration of light, the laws of reflection and refraction and how they apply to several devices. Examination of wavelike behavior of light. An overview of fiber optics and

optical image is presented. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: MATH 115 or higher with a grade of C- or higher.

**CET 223 - Basic Electrical Circuits (3)**

Operation of DC circuits including voltage, current, resistance, power, electromagnetism, capacitance, inductance, and basic theorems. Laboratory experiments involve building circuits and using instruments to measure quantities. Two hours lecture and three hours laboratory, course meets five hours per week. No credit given to those with credit for CET 236.

Prerequisite: PHYS 111 and either MATH 115 or MATH 119 or math placement exam. All with a grade of C- or higher.

**CET 229 - Computer Hardware Architecture (3)**

Laboratory based course emphasizing the computer architecture and related components. Analyzing and troubleshooting the interrelationships between the operating system, computer hardware, and peripheral devices. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: None

**CET 233 - Advanced Electrical Circuits (3)**

Reactance and power concepts in AC. Phasor analysis of RC, RL and RCL circuits, resonance, and filters. Laboratory experiments involve building circuits, using instruments to measure quantities, and observing phenomena. Two hours lecture and three hours laboratory, course meets five hours per week. No credit given to those with credit for CET 236.

Prerequisite: CET 223; PHYS 111 or PHYS 122 or PHYS 126. All with a grade of C- or higher.

**CET 236 - Circuit Analysis (3)**

Basic concepts and laws, methods of analysis and circuit theorems in DC and AC circuits. Topics include voltage, current, power, resistance, capacitance, inductance, node analysis, mesh analysis, Thevenin's theorem, Norton's theorem, phasors, transfer functions, steady state and transient analysis. Laboratory experiments involve building circuits, using instruments to measure quantities and observe phenomena. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: ENGR 150 or ROBO 110 (C- or higher), and either MATH 135 or MATH 152 (C- or higher), and either



PHYS 122 or PHYS 126 (may be taken concurrently or C- or higher).

**CET 239 - Introduction to Internet of Things and Embedded Systems (3)**

IoT introduction and its importance to the society. IoT devices as embedded systems. The technology used to build IoT systems including hardware and software. Network communication, internet protocols, and distributed systems needed to support IoT. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CET 179 or CS 121 or permission of the instructor.

**CET 243 - Analog Electronics I (3)**

Semiconductor and p-n junction theory. Structure, parameters, performance characteristics of diodes, bipolar and field effect transistors, operational amplifiers and special semiconductor devices. Basic circuit analysis, synthesis, and laboratory experiments, emphasize building circuits, troubleshooting, and using instruments to measure quantities, and observe phenomena. Two hours lecture and three hours laboratory per week.

Prerequisite: CET 233 or CET 236 with a grade of C- or higher.

**CET 246 - Electronic Design Automation (3)**

Introduction to military/industry standard electronic schematic preparation and standards. Bill of material/netlist management techniques and software are reviewed. Printed circuit board design and manufacturing techniques including effects on circuit performance are introduced and employed. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CET 236 or CET 233

**CET 249 - Introduction to Networking Technology (3)**

Introduction to the OSI model concentrating on the network, data link and physical layers. Emphasis on IP addressing (IPv4 & IPv6), Ethernet technologies and copper and fiber optic cabling. Lab includes troubleshooting and testing Layer One devices. Two hours lecture and two hours laboratory, course meets four hours per week.

**CET 270 - Electronic Circuits and Devices for Robotics (3)**

Study of the design concepts, principles, and operational characteristics of electronic devices and circuits. Frequency domain characterization and Time

domain models of electronic circuits, small signal analysis, transfer function realization. Stability and feedback circuits. Two hours of lecture and two hours of lab per week.

Prerequisite: MATH 221 and CET 236

**CET 301 - Fiber-Optics Communications (3)**

Introduction to fiber-optic communication systems. Optical detectors and receivers. Coherent light wave systems. WDM communication systems and optical amplifiers. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: CET 201 with a grade of C- or higher.

**CET 323 - Analog Electronics II (3)**

Discrete and linear integrated circuits and their applications. Topics include multistage and power amplifiers, operational amplifiers, oscillators, voltage and current regulators, passive and active filters. Analysis, synthesis, and laboratory experiments emphasize building circuits, simulation, troubleshooting, and using instruments to measure quantities and observe phenomena. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: CET 243 with a grade of C- or higher.

**CET 339 - Computer System Administration (3)**

Laboratory course emphasizing concepts, tools, and application of technologies related to computer system administration. Includes the design, implementation, management, and maintenance of a state-of-the-art network operating system. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CET 229 with a grade of C- or higher.

**CET 346 - Electrical System Analysis (3)**

Phasor circuit analysis is performed in computational software. Gain is discussed as an introduction to the decibel scale and Bode plots. Resonant and filter circuits are analyzed and designed. Stimulus of electrical systems is examined through singularity functions and Fourier Series. Resonant and filter circuit response to that stimulus is investigated. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: CET 236, and either MATH 136 or MATH 221 (C- or better in these courses)

**CET 349 - Network Design and Implementation (3)**

Major emphasis on routing and switching and how to use the technologies to support a wide range of applications and improve efficiency and security. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CET 249 with a grade of C- or higher.

**CET 363 - Digital Circuits (3)**

Principles and applications of digital circuits, number systems, Boolean Algebra, combinatorial and sequential logic circuits, arithmetic circuits, and MSI logic circuits. Laboratory experiments focus on circuit building and troubleshooting using TTL integrated circuits. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: CET 223 or CET 236 with a grade of C- or higher.

**CET 402 - Topics in Computer Electronics Technology (1-3)**

An individualized inquiry of comprehensive study into a selected technical area. The students may elect to examine processes, products or developmental aspects of networking, telecommunications or electronics. May be used as an elective on a graduate student's planned program advisor. Course may be repeated for a maximum of 6 credits for different topics.

Prerequisite: Permission of department chair.

**CET 405 - Applied Topics in Computer Electronics Technology (3)**

A laboratory oriented course providing comprehensive study of a selected technological topic. May be used as an elective on a graduate student's planned program of study with the permission of the program advisor. Course may be repeated for a maximum of 6 credits for different topics. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: Permission of department chair.

**CET 407 - IT Topics in Cybersecurity (3)**

Comprehensive study of a specialized or emerging cybersecurity topic in IT. Course may be repeated for a maximum of 6 credits for different topics. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CET 349 with a grade of C- or higher or permission of department chair; Graduate students must obtain permission of department chair.

Cross-Listed as: Cross listed with CYS 407. No credit given to students with credit for CYS 407

**CET 429 - Internet of Things (IoT) with Embedded Intelligence and Security (3)**

This course develops students' understanding of Internet of Things (IoT) with a variety of real-world application scenarios, technologies, architectures, communication protocols, cybersecurity issues, and emerging embedded intelligence with machine learning capabilities. It also discusses societal and environmental impacts, and how to apply these technologies to real-world problems. Two hours lecture and two hours laboratory; course meets four hours per week.

Prerequisite: CET 239 or CET 229, all with C- or higher grades, or permission of instructor

Cross-Listed as: Cross-listed with CYS 429 and linked with CYS 529 and CET 529. No credit for CET 429 granted to students with credit for any of these other courses.

**CET 439 - Enterprise Messaging Systems (3)**

Laboratory course emphasizing knowledge and skills related to enterprise-level messaging environment. Topics include concepts, guidelines, protocols, best practices, and considerations when implementing, managing, and optimizing the messaging server deployment. Two hour lecture and two hour laboratory, course meets four hour per week.

Prerequisite: CET 339 with a grade of C- or higher.

**CET 443 - Electronic Communications (3)**

Radio Frequency transmitting and receiving circuits, modulation and detection techniques, noise in circuits and systems, transmission lines, antennas analog and digital communications. Analysis and synthesis laboratory experiments emphasize building circuits, troubleshooting, and using instruments to measure quantities and observe phenomena. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: CET 323 with a grade of C- or higher or acceptance to the Graduate MSCIT or MSTM programs.

**CET 449 - Advanced Networking (3)**

Advanced network switching and routing implementation and protocols. Focus on wide area networking, network fault-tolerance, reliability, enterprise networks, Internet

of Things and programming for network management. Also involves intensive hands-on hardware devices and controller configuration, data collection and analysis. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: CET 349 with a grade of C- or higher or acceptance to the Graduate MSCIT or MSTM programs.

### **CET 453 - Microcomputers (3)**

Microcontroller architecture including basic memory design, address decoding and internal register structure, and assembly language programming including addressing modes and instruction set. Laboratory work consists of programming and interfacing experiments. Projects focus on solving real world problems following a standard development process. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: CS 121 or ROBO 110, and CET 363 all with a grade of C- or higher; or acceptance to the Graduate MSCIT or MSTM programs.

### **CET 459 - Network Security Technologies (3)**

Practical techniques of network security and how the field is related to information technology. Topics include general security concepts, communication security, infrastructure security, cryptography basics, and operational security.

Prerequisite: CET 349 with a grade of C- or higher.

Cross-Listed as: Cross-listed with CYS 459. No credit given to students with credit for CYS 459

### **CET 461 - Discrete Event Simulation for Manufacturing Systems (3)**

Principles of Discrete Event Simulation (DES) modeling and analysis, data collection and preparation, verification and validation of models, design of simulation experiments, output analysis, and using software to simulate manufacturing facilities, materials handling systems, and transportation systems for a lean manufacturing environment.

Prerequisite: MATH 355

### **CET 463 - Advanced Microcomputers (3)**

Focus on real world applications of microcontrollers and theory behind building robust real time systems. Covers building software components that interact with microcontroller hardware to produce functionality. Students will solve larger, more complex problems with individual and group development projects. Two hour

lecture and three hour laboratory, course meets five hours per week.

Prerequisite: CET 453 with a grade of C- or higher.

### **CET 466 - Logic Design (3)**

Use of hardware design languages to implement digital design, including modular combinational circuits, flip-flops, latches, counter and synchronous sequential circuits in programmable devices such as FPGA. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: CET 363 with a grade of C- or higher.

### **CET 468 - Blockchain Technology and Applications (3)**

This course introduces concepts of distributed ledgers, blockchains, smart contracts, and decentralized apps. It reviews different types of network applications, from centralized to distributed, and finally to decentralized; and covers topics on platforms and tools to set up blockchain environment and implement DApps, including deployment, testing, and security of the blockchain and DApps. This course is linked to CET 568. Two hours of lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CYS 227 Introduction to Cybersecurity (C- or higher) or CET 459 Network Security Technologies (C- or higher)

Cross-Listed as: CET 568. No credit given to students with credit for CET 568.

### **CET 469 - Wireless Networks and Security (3)**

Principles, concepts, architectures, standards, technologies, and applications of wireless networks with emphasis on cellular and WiFi systems. Security issues, services, and threat mitigations in the wireless systems.

Prerequisite: CET 459 (C- or higher in both)

### **CET 479 - Network Administration (3)**

Advanced network administration using network operating system. Emphasizes internet-related protocols and server configurations, including the planning, design, building, and management of internet name server, web server, mail server, and file server. Two hour lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CET 339 with a grade of C- or higher or acceptance to the Graduate MSCIT or MSTM programs.

**CET 487 - Network Forensics (3)**

Forensic science principles and practices for collecting, preserving, examining, analyzing and presenting digital evidence in network systems. Understanding of the rules, laws, policies, and procedures that affect network forensics. Two hour lecture and two hour laboratory, course meets four hours per week. Cross listed as CYS 487. No credit given to students for CET 487 with credit for CYS 487 or vice versa.

Prerequisite: CET 459 (C- or higher) or CYS 459 (C- or higher)

Cross-Listed as: Cross listed as CYS 487. No credit given to students for CET 487 with credit for CYS 487 or vice versa.

**CET 489 - Web Application Administration and Security (3)**

Installation, administration, and security of web applications. Topics include web server, application server, and database server setup, web services deployment, common attacks, and security mechanisms to protect the services. This course is linked to CET 589. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CET 479 Network Administration (C- or higher)

Cross-Listed as: CET 589. No credit given to students with credit CET 589.

**CET 497 - Capstone Project I (2)**

Identification, investigation, research, and proposal of an implementation approach to a selected solution for a problem. Social, environmental, ethical, economic, and legal factors are considered. A detailed concept and design proposal is presented.

Prerequisite: CET 346, CET 349 with grades of C- or higher.

**CET 498 - Capstone Project II (2)**

implementation of the proposed solution in the developed Report in CET 497. A functional prototype is simulated, build, measured, and evaluated. A final Report is presented and the project demonstrated.

Prerequisite: CET 497 with a grade of C- or higher.

**CET 501 - Applied Networking Technology I (3)**

Functions and capacities of LAN/WAN networks, emphasis on TCP/IP network model. Credit not given to students who have completed CET 249 as an undergraduate student.

Prerequisite: Acceptance to the Graduate MSCIT or MSTM programs.

**CET 502 - Applied Networking Technology II (3)**

Router configurations, router algorithms and protocols, switching terminology. Design, implementation and troubleshooting of interconnected networks. IP and data link addressing. Credit not given to students who have completed CET 349 as an undergraduate student.

Prerequisite: CET 501.

**CET 503 - Applied Networking Technology III (3)**

Enterprise knowledge and skills through a series of in-depth hands-on experiences that reinforce the learning. Core networking, advanced routing technologies and services, infrastructure security, services, and automation are included. Two hour lecture and three hour laboratory, course meets five hours per week.

Prerequisite: CET 502

Cross-Listed as: Cross listed as CYS 503. No credit given to students for CET 503 with credit for CYS 503.

**CET 507 - Advanced Topics in IT Cybersecurity (3)**

Advanced topics in the field of IT cybersecurity. Course may be repeated for a maximum of 6 credits for different topics. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CET 501 or Permission of department chair.

**CET 513 - Computer Applications for the Professional (3)**

Designed for business professionals who need to expand their knowledge of application software. Includes the in-depth application and interrelationship of state-of-the-art managerial software packages.

Prerequisite: Admission to the School of Graduate Studies.

**CET 529 - Internet of Things (IoT) with Embedded Intelligence and Security (3)**

This course develops students' understanding of Internet of Things (IoT) with a variety of real-world application scenarios, technologies, architectures, communication protocols, cybersecurity issues, and emerging embedded intelligence with machine learning capabilities. It also discusses societal and environmental impacts, and how to apply these technologies to real-world problems. Two hours lecture and two hours laboratory; course meets four hours per week.

Prerequisite: CET 239 or CET 229, all with C- or higher grades, or permission of instructor

Cross-Listed as: Cross-listed with CYS 529 and linked with CYS 429 and CET 429. No credit for CET 529 granted to students with credit for any of these other courses.

### **CET 533 - Digital Transmission in Telecommunications (3)**

Digital transmission techniques including signals, coding, decoding, modulation, multiplexing, and switching in telecommunications networks. Also covers fundamental principles, system architectures and services.

Prerequisite: Acceptance to the Graduate MSCIT or MSTM programs.

### **CET 543 - Telecommunications Systems (3)**

Radio and optical transmission systems, electromagnetic waves propagation, reflection, refraction and diffraction. Covers satellite communication related to broadcasting, telephony and data transmission. Introduction to characteristics and applications of antennas, cellular phones, fiber optics cables.

Prerequisite: CET 533 or permission of department chair.

### **CET 549 - Health Information Network (3)**

An in-depth understanding of principles and practicalities needed for information technology professionals specializing in healthcare network implementations and management. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CET 502

### **CET 559 - Applied Network Security (3)**

Practical techniques of network security. Current applied research project presentation is expected. Topics include general security concepts, communication security, infrastructure security, cryptography basics, and operational security. This is a link course with CET 459.

Prerequisite: CET 501.

### **CET 568 - Applied Blockchain Technology (3)**

This course introduces concepts and network applications of distributed ledgers, blockchains, smart contracts, and decentralized apps. Topics include platforms and tools to set up blockchain environment and implement DApps, deployment, testing, and security of the blockchain and DApps. This course is linked to CET 468; no credit given to students who have taken CET 468. Two hours of lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CET 559 Applied Network Security

Cross-Listed as: CET 468

### **CET 569 - Network Security Management (3)**

In-depth understanding of the core security concepts and skills needed for the design, implementation, and management of network devices to maintain the integrity, confidentiality, and availability of data and devices. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CET 502

### **CET 577 - Advanced Ethical Hacking & Penetration Testing (3)**

Ethical hacking techniques and tactics currently used in modern penetration testing or "red team" operations. Students will learn concepts and methodologies, as well as advanced hands-on skills and tools to penetrate most popular operating systems. Two hour lecture and two hour laboratory, course meets four hours per week.

Prerequisite: CET 559 or CYS 559

Cross-Listed as: Cross listed with CYS 577. No credit given to students for CET 577 with credit for CYS 577.

### **CET 579 - Linux System Administration (3)**

Bottom-up network administration in a GNU/Linux-based server environment. Linux system parts, administration, security, and services. Two hour lecture and two hour laboratory, course meets four hours per week.

Prerequisite: Acceptance to the Graduate MSCIT or MSTM programs

Cross-Listed as: Cross listed with CYS 579. No credit given to students for CET 579 with credit for CYS 579

### **CET 589 - Web Services and Security (3)**

Practical aspects of Web applications including introduction, installation, testing and security mechanisms of web server, application server, and database server. This course is linked to CET 489; no credit given to students who have taken CET 489. Two hours lecture and two hours laboratory, course meets four hours per week

Prerequisite: CET 479 Network Administration

Cross-Listed as: CET 489. No credit given to students with credit for CET 489.

### **CET 594 - Research Design (3)**

This course will prepare students to develop and implement applied research designs and methods associated within the computer information technology (CIT) field.

Prerequisite: Admission into M.S. in Computer Information Technology (CIT)

### **CET 596 - Technological Problems and Issues (1-3)**

Extensive study of selected technological issues and problems. Course may be repeated with different topics for a maximum of 6 credits.

Prerequisite: Admission to graduate program.

## **CHEM - Chemistry**

### **CHEM 100 - Chemistry in Context (3)**

Examination of various topics, contemporary issues, and problems related to chemistry and biochemistry. Three hours of lecture per week. No credit given toward a major or minor in the sciences.

Prerequisite: None

### **CHEM 101 - Search in Chemistry and Biochemistry Laboratory (1)**

Laboratory complement to CHEM 100 (Search in Chemistry). Introduction to basic quantitative and qualitative laboratory techniques in chemistry. Two hours of laboratory per week. No credit given toward a major or minor in the sciences.

Prerequisite: CHEM 100 (may be taken concurrently)

### **CHEM 105 - International Field Studies in Chemistry & Biochemistry (1)**

Travel-based international field experience. Non-major students will learn to identify chemical questions, design and conduct observations and/or experiments, analyze data, and reach valid conclusions. May be taken for Study Area IV lab credit. May be repeated at different international field sites. Cannot be applied to Chemistry minor or major.

Prerequisite: Permission of Instructor

### **CHEM 161 - General Chemistry (3)**

The fundamental principles, theories, and laws of chemistry are studied. Topics include atomic theory and the structure of the atom, the states of matter, kinetic molecular theory, chemical bonding, stoichiometry, periodicity, solutions, and thermodynamics. Three hours of lecture per week.

Prerequisite: MATH 103 (C- or better) or OR MATH 102 (B- or better) OR placement exam.

### **CHEM 162 - General Chemistry Laboratory (1)**

Basic techniques of chemical synthesis and analysis. One three-hour laboratory per week. CSUS Common Course.

Prerequisite: CHEM 161 (may be taken concurrently).

### **CHEM 200 - Foundations of Analytical Chemistry (3)**

Theory of gravimetric and volumetric quantitative analysis, introduction to colorimetric analysis, and methods of separation. Three hours of lecture per week.

Prerequisite: Grade of C- or better in CHEM 161 and CHEM 162. MATH (115 and 116) or MATH 119 or MATH 124 or MATH (115 and 125). MATH 116, MATH 119, MATH 124 or MATH 125 may be taken concurrently.

### **CHEM 201 - Foundations of Analytical Chemistry Laboratory (1)**

Practice of gravimetric and volumetric quantitative analysis, introduction to colorimetric analysis, equilibrium, acid-base chemistry, and methods of separation. Three hours of laboratory per week.

Prerequisite: CHEM 161 and CHEM 162 and CHEM 200 or CHEM 260 (May be taken concurrently).

### **CHEM 210 - Organic Chemistry I - Foundations (3)**

Structure, nomenclature, and general reactivity of the principal classes of carbon compounds will be introduced. Spectroscopy and biologically relevant molecules are also considered. Three hours of lecture per week.

Prerequisite: Grade C- or better in CHEM 161 and CHEM 162.

### **CHEM 211 - Organic Chemistry I Laboratory - Foundations (1)**

Basic techniques used in organic synthesis. Determination of physical constants, separation techniques, and spectroscopy will be introduced. Three hours of laboratory per week.

Prerequisite: CHEM 161 and CHEM 162 and CHEM 210 (may be taken concurrently).

### **CHEM 212 - Organic Synthesis (3)**

Principles of organic synthesis emphasizing retrosynthetic analysis and the role of synthons, synthetic equivalents, and functional group interconversions in multistep syntheses. Three hours of lecture per week.

Prerequisite: C- or better in CHEM 210 and CHEM 211.

**CHEM 213 - Organic Chemistry II Laboratory - Synthesis (1)**

Synthesis and reactions of organic functional groups will be performed. Spectral analysis of organic compounds also emphasized. Three hours of laboratory per week.

Prerequisite: CHEM 210 and CHEM 211 and CHEM 212 (may be taken concurrently).

**CHEM 238 - Introduction to Research (1-6)**

Research experience for first-year students to juniors under faculty supervision. May be repeated for a maximum of 6 credits.

Prerequisite: CHEM 162 and permission of instructor.

**CHEM 260 - Foundations of Inorganic Chemistry (3)**

Survey of the periodic table with special emphasis on bonding modes and mechanisms, reactivity, and properties of inorganic compounds. Topics from CHEM 161 as applied to inorganic reactions will be explored.

Prerequisite: Grade of C- or better in CHEM 161 and CHEM 162. MATH (115 and 116) or MATH 119 or MATH 124 or MATH (115 and 125). MATH 116, MATH 119, MATH 124 or MATH 125 may be taken concurrently.

**CHEM 316 - Spectrometric Identification of Organic Compounds (3)**

A study of physical methods of structure determination, with emphasis on infrared, ultraviolet, nuclear magnetic resonance and mass spectrometry. Two hours of lecture and one, three-hour laboratories per week.

Prerequisite: CHEM 212 and CHEM 213.

**CHEM 320 - Biophysical Chemistry (3)**

Principles of physical chemistry emphasizing those areas of critical importance to biological equilibria. Topics include thermodynamics, solution equilibria, molecular transport, and enzyme kinetics. Three hours of lecture per week.

Prerequisite: PHYS 122 or PHYS 126 (either may be taken concurrently), CHEM 212, MATH 152.

**CHEM 321 - Physical Chemistry of Thermodynamics & Kinetics (3)**

In-depth examination of solid, liquid, and gas behavior, including thermodynamics and kinetics as applied to chemical processes. Three hours of lecture per week.

Prerequisite: PHYS 126 (may be taken concurrently), CHEM 200, and CHEM 212, MATH 221.

**CHEM 322 - Physical Chemistry of Quantum & Statistical Mechanics (3)**

Quantum mechanics as applied to atomic and molecular structure. Introduction to symmetry concepts. Theory of rotational, vibrational, electronic, and magnetic resonance spectroscopies. Statistical foundations of thermodynamics. Three hours of lecture per week.

Prerequisite: PHYS 126 (may be taken concurrently), CHEM 212, CHEM 260, MATH 221.

**CHEM 323 - Physical Chemistry Laboratory (1)**

Physical chemistry methods in laboratory including spectroscopic methods, computational methods, thermochemical analysis, vacuum system methods and instrumentation construction.

Prerequisite: CHEM 201 and CHEM 321 or CHEM 322 (either may be taken concurrently).

**CHEM 332 - Chemical Literature (1)**

Introduction to the use of primary literature and searching procedures in chemical research. Students will prepare poster presentations on research topics.

Prerequisite: Minimum of 22 credits in chemistry, including CHEM 238, (may be taken concurrently).

**CHEM 354 - Foundations of Biochemistry (3)**

General principles of biochemistry, chemical constituents of cells, metabolic pathways, energies, and biochemical regulators. Three hours of lecture per week.

Prerequisite: CHEM 210. MATH (115 and 116) or MATH 119 or MATH 124 or MATH (115 and 125). MATH 116, MATH 119, MATH 124 or MATH 125 may be taken concurrently.

**CHEM 402 - Instrumental Methods in Analytical Chemistry (4)**

Theoretical and practical aspects of the most important instrumental techniques used in chemical analysis, including potentiometry, coulometry, voltammetry, UV/Visible absorption spectrophotometry, fluorescence spectrophotometry, atomic spectrometry, gas chromatography, and high-performance liquid chromatography. Three hours of lecture and one four-hour laboratory per week.

Prerequisite: CHEM 200 and CHEM 201 and CHEM 322 or CHEM 320; or admission to graduate studies.

**CHEM 406 - Environmental Chemistry (3)**

Nature and properties of pollutants, their interaction with each other and the environment, preventative and remedial methods of control. Laboratory concerned with sampling and analysis of pollutants. Two hours of lecture and one two-hour laboratory period per week.

Prerequisite: CHEM 201 and CHEM 210 and CHEM 211.

**CHEM 432 - Chemistry Seminar (1)**

CAPSTONE Students will learn professional writing and referencing and will prepare oral presentations on research topics. Students may be required to attend seminars by faculty or outside speakers.

Prerequisite: CHEM 332; CHEM 438 (may be taken concurrently)

**CHEM 438 - Undergraduate Research (1-6)**

Research participation for sophomore to senior students under faculty supervision. May be repeated for a maximum of 6 credits.

Prerequisite: CHEM 213 and permission of instructor.

**CHEM 455 - Biochemistry Laboratory (1)**

Experimental work in Biochemistry. One three-hour laboratory period per week.

Prerequisite: CHEM 213 and either CHEM 354 or BMS 496.

**CHEM 456 - Toxicology (3)**

Classes of toxic chemicals, their biotransformation and mechanisms of toxicity in humans. Includes natural and man-made chemicals, methods of risk assessment, environmental, and occupational regulatory standards.

Prerequisite: CHEM 210.

**CHEM 458 - Advanced Biochemistry (3)**

Advanced consideration of biochemistry topics including biophysical concepts in the action of proteins and nucleic acids; enzyme catalysis and regulation, and cell-cell communication. Current experimental methodologies will be emphasized.

Prerequisite: CHEM 354 or BMS 496.

**CHEM 460 - Inorganic Symmetry & Spectroscopy (3)**

Electronic structure and theories of bonding as they relate to the molecular structures, properties, and spectroscopy of inorganic compounds. Primary focus will be on the compounds of the d-block elements. Three hours of lecture per week.

Prerequisite: CHEM 260 and CHEM 320 or CHEM 321 or CHEM 322.

**CHEM 462 - Inorganic Chemistry Laboratory (1)**

Laboratory course concerned with the synthesis and characterization of inorganic compounds. Topics include air-sensitive manipulation, coordination chemistry and chemistry of materials. One three-hour laboratory periods per week.

Prerequisite: CHEM 260 and CHEM 316.

**CHEM 485 - Topics in Chemistry (3)**

Advanced treatment of chemistry topics in analytical chemistry, inorganic chemistry, organic chemistry and physical chemistry. Three lectures or two lectures and one two-hour laboratory period per week depending on topic. May be repeated with different topics for a maximum of 9 credits.

Prerequisite: CHEM 320 or CHEM 321 or CHEM 322.

**CHEM 490 - Independent Study in Chemistry (1-3)**

Special topics of interest in chemistry. May be repeated under different topics for a maximum of 6 credits.

Prerequisite: Permission of instructor.

**CHEM 550 - Basic Organic and Biological Chemistry (3)**

Fundamentals of organic and biological chemistry in relation to human health including chemical and physical properties of organic molecules occurring in living systems. Topics include structure-function and acid-base concepts, overview of cellular metabolism, and enzyme kinetics. For nurse anesthesia and health science specialization students only.

Prerequisite: None

**CHEM 590 - Topics in Advanced Chemistry (3)**

Selected topics in analytical, biochemistry, inorganic, organic, and physical chemistry. May be taken once in each field of chemistry.

Prerequisite: None

**CHIN - Chinese****CHIN 111 - Elementary Chinese I (3)**

Open only to students with one year or less of high school study. Basic sounds and structure patterns of Mandarin-Chinese are established through a direct audio-lingual approach. CSUS Common Course.

Prerequisite: None



**CHIN 112 - Elementary Chinese II (3)**

No credit given to students with previous credit for more advanced course work in Chinese except by permission of the department chair. A continuation of CHIN 111. CSUS Common Course.

Prerequisite: CHIN 111 or equivalent (normally, two years high school study).

**CHIN 125 - Intermediate Chinese I (3)**

Further work on the patterns of Chinese structure with readings and conversation in the language. No credit will be given to students with previous credit for more advanced course work in Chinese except by permission of the department chair.

Prerequisite: One year of college Chinese or equivalent.

**CHIN 126 - Intermediate Chinese II (3)**

A continuation of CHIN 125. No credit will be given to students with previous credit for more advanced course work in Chinese except by permission of the department chair.

Prerequisite: CHIN 125.

**CHIN 225 - Intermediate Chinese III (3)**

Designed to help students improve speaking skills through discussion of Chinese contemporary texts. Taught in Chinese.

Prerequisite: CHIN 125 or CHIN 126, or permission of instructor.

Distribution: Skill Area I. Course meets International Requirement.

Offered: Fall.

**CHIN 226 - Intermediate Chinese IV (3)**

Designed to help students improve writing skills by means of frequent composition in Chinese. Taught in Chinese.

Prerequisite: CHIN 125 or CHIN 126, or permission of instructor.

Distribution: Skill Area I. Course meets International Requirement.

Offered: Spring.

**CHIN 261 - Business Chinese (3)**

Development of oral and written skills needed for conducting business in the Chinese language. Study of cultural attitudes of Chinese business people. Taught in Chinese.

Prerequisite: CHIN 126 or permission of instructor.

**CHIN 304 - Topics in Chinese Literature (3)**

Representative selections from modern Chinese authors. Taught in Chinese. May be repeated for up to 9 credits with different topics.

Prerequisite: CHIN 225 or CHIN 226 (either may be taken concurrently), or permission of instructor.

Distribution: Study Area I. Course meets International Requirement. Course meets Literature Requirement.

Offered: Irregular.

**CHIN 315 - Topics in Chinese Culture (3)**

Aspects of Chinese cultural development. Taught in Chinese. May be repeated for up to 9 credits with different topics.

Prerequisite: CHIN 225 or CHIN 226 (either may be taken concurrently), or permission of instructor.

**CINE - Cinema Studies****CINE 201 - The Language of Film (3)**

Development of visual terminology analogous to literary terminology in order to understand better the intentions of the author of the film. The qualities of picture, movement, and editing are discussed in an effort to develop critical interpretation and judgment. Outside film screenings required.

Prerequisite: ENG 110.

**CINE 220 - Introduction to History of Film (3)**

Survey of 100 years of movies from all over the world. Emphasizes the development of film as a narrative art, using films that are breakthroughs in creative expression and audience involvement.

Prerequisite: None

Cross-Listed as: Cross-listed with COMM 220. No credit may be received by students who have received credit for COMM 220.

**CINE 270 - Studies of World Culture Through Cinema (3)**

Introduction to the cultures of other lands through the medium of film. Emphasis on the history and the structures of contemporary society of other lands, and on the cultural meaning of film. Use of basic tools of film analysis and analysis of the specific aesthetic qualities of a film. Offered in English. Area or topic may vary from

semester to semester. May be taken for up to 6 credits with a different topic.

Prerequisite: None

Cross-Listed as: Cross-listed with HUM 270. No credit may be received by students who have received credit for HUM 270.

#### **CINE 319 - Filmic Narrative (4)**

Explores the most relevant elements used in filmic narrative to create meaning. The course further helps students identify ideological contents behind and beyond the audiovisual discourse. Cross-listed with COMM 319. No credit may be received by students who have received credit for COMM 319.

Prerequisite: None

Cross-Listed as: Cross-listed with COMM 319. No credit may be received by students who have received credit for COMM 319.

#### **CINE 350 - Laughter, Blood, and Tears: Studies in Film Genre (3)**

Considers the primary genres of narrative film, and asks how they reflect and comment on the history and culture of which they are a part. The emphasis of the course may change from semester to semester and may include: the western, melodrama, horror, comedy, science fiction, and film noir. Outside screenings required.

Prerequisite: ENG 110.

#### **CINE 365 - Nonfiction and Documentary Film (3)**

Investigates the history and theory of nonfiction and documentary film. Outside screenings required.

Prerequisite: ENG 110.

#### **CINE 380 - Women and Film (4)**

Examines selected films with regard to the representation of women on screen, women's filmmaking as a critical practice, and issues in feminist film theory and criticism. Includes perspectives on Hollywood and independent American and international cinema. Cross-listed with COMM 380 and WGSS 380. No credit may be received by students who have received credit for COMM 380 and WGSS 380.

Prerequisite: None

Cross-Listed as: Cross-listed with COMM 380. No credit may be received by students who have received credit for COMM 380.

#### **CINE 382 - American Cinema (4)**

Examines the film industry in the United States. The genres of Hollywood cinema and independent films will be studied as unique economic, industrial, aesthetic, and cultural institutions. Cross-listed with COMM 382. No credit may be received by students who have received credit for COMM 382.

Prerequisite: None

Cross-Listed as: Cross-listed with COMM 382. No credit may be received by students who have received credit for COMM 382.

#### **CINE 460 - Shakespeare and Film (3)**

Explores what film can teach us about Shakespeare and his role in our culture; what Shakespeare can teach us about the nature and history of film; and what the intersection of the two can teach us about the politics of literary forms and entertainment media and about the many forms and media of politics in contemporary society. We will read 3-4 plays and view 2-3 films based on each play. May require outside screenings.

Prerequisite: None

Cross-Listed as: Cross-listed with ENG 460. No credit may be received by students who have received credit for ENG 460.

#### **CINE 465 - Global Cinema (3)**

Surveys international cinema after World War II with an emphasis on the fiction feature films of Africa, Asia, and Latin America; also considers major film movements such as the European New Wave and Italian Neo-realism.

Prerequisite: ENG 110 or equivalent and junior or senior standing required; for non-English majors, permission of instructor recommended.

Cross-Listed as: Cross-listed with ENG 465. No credit may be received by students who have received credit for ENG 465.

#### **CINE 466 - American Cinema in the 60s and 70s (3)**

Examines the extraordinary changes in film culture in the United States during the time of the civil right movement, the countercultures of the 60s, and the war in Vietnam. Students are required to attend a weekly screening in addition to regular class meetings.

Prerequisite: ENG 110.

Cross-Listed as: Cross-listed with ENG 466. No credit may be received by students who have received credit for ENG 466.

### **CINE 467 - Hitchcock (3)**

Chronological survey of the films of Alfred Hitchcock. Analysis of secondary literature in conjunction with each film. Emphasis on both critical and cultural theory, including the work of Freud, Lacan and Zizek.

Prerequisite: ENG 110.

Cross-Listed as: Cross-listed with ENG 467. No credit given to students with credit for ENG 467.

### **CINE 480 - Topics in Cinema Studies (3)**

Selected topics. Students may take this course under different topics for a maximum of 6 credits.

Prerequisite: ENG 110.

### **CINE 489 - Studies in Film Adaptation (3)**

Examines how literary works such as novels, short stories, plays, and poems have been adapted to the screen. What can literary works do that films cannot, and conversely, what can films do that literature cannot? Includes regular film screenings, literary readings, and critical and theoretical readings on the topic of adaptation. May be taken under different topics for a maximum of 6 credits.

Prerequisite: ENG 110.

Cross-Listed as: Cross listed with ENG 489.

### **CINE 490 - Cinema Studies: Independent Study (3)**

Senior conference course for a student wishing to pursue a planned program of writing and study.

Prerequisite: Permission of program coordinator.

## **CIT - Computer Information Technology**

### **CIT 595 - Capstone in Computer Information Technology (3)**

Capstone integrative experience requiring analysis, design and implementation of an advanced team project of significant size and scope in an information technology-related topic. Deliverables include a research paper, oral presentation, and completed applied project. Students must have completed the CIT core and 3 specialization courses.

Prerequisite: Permission of advisor, CIT director, dean of the School of Graduate Studies, and a 3.00 overall GPA.

## **CJ - Criminal Justice**

### **CJ 501 - Nature of Crime (3)**

Overview of the nature of crime in America at both the individual and structural levels. Special consideration is given to the contextual nature of theory as well as research, policy implications, and critiques.

Prerequisite: Admission to the Criminal Justice Program or permission of department chair.

### **CJ 510 - Law, Criminal Justice, and Issues of Inequality (3)**

Law as a means of controlling behavior, including history and philosophy of American law, the interrelationship between law and other social institutions, and the effects of law and criminal justice policies on the preservation and promotion of inequalities based on social class, race, gender, and ethnic identity. Courses required as special condition for admission to the program must be completed or taken concurrently.

Prerequisite: Admission to the Criminal Justice program or permission of department chair.

### **CJ 520 - Effective Practices in the Administration of Justice (3)**

Overview of the criminal and juvenile justice systems centered on what policies and practices work best to decrease crime and recidivism. Emphasis is placed on determining and measuring success across criminal justice agencies.

Prerequisite: Admission to the Criminal Justice program or permission of department chair.

### **CJ 525 - Evaluation Strategies for Criminal Justice Programs and Policies (3)**

Strategies for determining effectiveness of criminal justice policies/programs. Emphasis on evaluation design, utilizing available data, identifying outcome measures, and communicating findings to stakeholders.

Prerequisite: Admission to the Criminal Justice program or permission of department chair.

### **CJ 530 - Offender Profiles (3)**

Overview of the behavior patterns, emotional reactions, and thinking styles of various offender groups. Conceptualizations of offender behavior from both psychological and criminological perspectives.

Prerequisite: Admission to the Criminal Justice program or permission of department chair.

**CJ 531 - Women and Criminal Behavior (3)**

The aim of this course is to introduce students to concepts and principles related to women as offenders and as victims. This course will address the growing number of women reentering society after a period of incarceration and those serving their sentence under community supervision.

Prerequisite: Admission to the Victim's Advocacy Certificate, admission to the M.A. in CJ Administration, or permission of the Graduate Program Director.

**CJ 532 - Domestic Violence (3)**

This course is an introduction to the issue of domestic violence in the United States. It provides a critical examination of different forms of domestic violence from a criminological/sociological perspective. The course will cover theory, research, and current policy on domestic violence. Patterns and trends of domestic violence, multi-disciplined theoretical explanations, and historic and contemporary criminal justice responses to domestic violence will also be critically analyzed. This course is linked with CRM 430. No credit will be given for linked equivalent.

Prerequisite: Admission to the Victim's Advocacy Certificate, admission to the M.A. in CJ Administration, or permission of the Graduate Program Director.

**CJ 533 - Criminal Justice Research Methods (4)**

Examines methods of scientific inquiry as used in criminal justice. Critical evaluation of empirical findings, design, and implementation of research studies, and assisting criminal justice agencies with their research methods. Courses required as special condition for admission to the program must be completed or taken concurrently.

Prerequisite: Admission to the Criminal Justice program or permission of department chair.

**CJ 534 - Data Analysis in Criminal Justice (4)**

Use of computer-based statistical techniques to analyze and interpret criminal justice data. Focuses on data management, data analysis, and interpretation of results in making evidence-based decisions.

Prerequisite: CJ 533 (with a grade of C or higher) and either admission to the Criminal Justice program or permission of department chair.

**CJ 535 - Forensic Counseling (3)**

Counseling skills applied in a variety of forensic settings. Emphasis on developing strategies to foster client

engagement and motivation for change; and learning fundamental cognitive and behavioral interventions to modify patterns of criminal thinking and behavior. Students will practice counseling skills and receive feedback.

Prerequisite: Admission to the Criminal Justice program or permission of department chair.

**CJ 537 - Mental Health and the Criminal Justice System (3)**

Empirical evidence supports that there are a disproportionate number of individuals with serious mental illness (e.g. schizophrenia, bipolar disorder) who are involved in the criminal justice system. The National Alliance on Mental Illness estimates that in the state of Connecticut, approximately 16% of the justice-involved population is diagnosed with a serious mental illness (NAMI, 2016). Such justice involvement includes interaction with and subsequent arrest by law enforcement, continued court involvement, lengthy periods of incarceration, and/or state supervision. Therefore, this course focuses on the manner in which individuals with serious mental illness are processed within the criminal justice system. Additionally, the course prepared criminal justice administrators for assisting community members experiencing mental health crisis, with a focus on available services and interventions in Connecticut. Further, students will develop the skills to compare and contrast the realities of mental illness and co-occurring disorders to typical criminal justice system responses. This course is linked with CRM 471. No credit will be given for linked equivalent.

Prerequisite: Admission to the Victim's Advocacy Certificate, admission to the M.A. in CJ Administration, or permission of the Graduate Program Director.

**CJ 538 - Victimization & The Criminal Justice System (3)**

Historically, criminologists have sought to explain crime by focusing exclusively on the role of the offender. Seeing the victim as an integral part of the crime equation is a relatively new focus. In this course you will be introduced to current theory and research to develop a greater understanding of the wider social context of victimology by examining the impact of crime on the victim and society.

Prerequisite: Admission to the Victim's Advocacy Certificate, admission to the M.A. in CJ Administration, or permission of the Graduate Program Director.

**CJ 539 - Delinquency: Causation and Intervention (3)**

Introduction to theory-based causes of delinquency and research-informed intervention. Understanding of local initiatives attempting to address delinquency and how each initiative relates to research-based causes of delinquency and delinquency intervention.

Prerequisite: Admission to the Criminal Justice program or permission of department chair.

**CJ 541 - Hate Crimes: Prevention & Advocacy (3)**

This course will provide an overview of hate acts known as Hate Crimes. The concepts of prejudice, discrimination, victim typologies and victim classes are addressed. A deeper understanding of prevention using case studies and community activism will be examined. Examination and analysis of case studies involving various protected classes such as race, religion, and sexual orientation will be thoroughly examined. Current legislation related to the prevention of this type of crime will be reviewed.

Prerequisite: Admission to the Victim's Advocacy Certificate, admission to the M.A. in CJ Administration, or permission of the Graduate Program Director.

**CJ 550 - Drugs and Society (3)**

Selected social issues relating to illegal drug use, including international and national drug trafficking, money laundering, drug enforcement, drug-related crimes, prevention strategies, and legalization.

Prerequisite: Admission to the M.S. Criminal Justice Program and in good standing; or permission of the department chair.

**CJ 555 - Controlling Anger and Aggression (3)**

Multi-disciplinary overview of theory and research on anger and aggression. Topics include the emotion of anger, theories of aggression, and intervention strategies.

Prerequisite: Admission to the M.S. Criminal Justice Program and in good standing; or permission of the department chair.

**CJ 560 - Sexual Offending (3)**

Exploration of the causes, assessment, and treatment of sexual aggression as well as criminal justice strategies to manage sex offenders in the community and reduce recidivism.

Prerequisite: Admission to the Criminal Justice program or permission of department chair.

**CJ 561 - Risk Assessment (3)**

The goal of this course is to introduce students to risk assessment practices in the criminal justice system. This includes 1) common risk instruments in the pretrial, institutional, and community corrections setting, 2) principles of effective information gathering with justice-involved clients, 3) best practices for selection of instruments and formulation of findings.

Prerequisite: Admission to the Forensic Counseling Certificate, admission to the M.A. in CJ Administration, or permission of the Graduate Program Director.

**CJ 571 - Applied Research and Data Interpretation (3)**

Examines the role of research in criminal justice agencies. Explores various methods of collecting and analyzing data. Focuses on developing skills to interpret and utilize empirical data to make decisions.

Prerequisite: Admission to the Criminal Justice Leadership Certificate, admission to the M.A. in CJ Administration, or permission of the Graduate Program Director.

**CJ 573 - Managing Criminal Justice Employees (3)**

Explores methods and strategies for managing human resources in criminal justice organizations. Students will learn how to effectively manage employees through exposure to a variety of topics (e.g., recruitment, selection, training, socialization, motivation, performance evaluation, conflict resolution).

Prerequisite: Admission to the Criminal Justice program or permission of department chair.

**CJ 574 - Effective Criminal Justice Leadership (3)**

Explores leadership concepts and principles within the context of criminal justice organizations. Reviews major leadership theories, skills relevant to effective leadership, and methods of identifying and developing successful leaders.

Prerequisite: Admission to the Criminal Justice Leadership Certificate, admission to the M.A. in CJ Administration, or permission of the Graduate Program Director.

**CJ 575 - Developing Criminal Justice Organizations (3)**

Introduction to theories and concepts pertaining to leadership and organizational development (e.g., structure, communication, culture, politics). Critical Analysis of leadership practices and organizational function to improve leadership and organization effectiveness.

Prerequisite: Admission to the Criminal Justice program or permission of department chair.

**CJ 577 - Advanced Independent Reading and Research in Criminal Justice (1- 3)**

Individual program of reading and research conducted under the supervision of a faculty member. May be repeated with different topics for up to 6 credits.

Prerequisite: Admission to the Criminal Justice Program or permission of department chair.

**CJ 578 - Special Topics in Criminal Justice (3)**

Study of a specialized area of research or theory in criminal justice. May be repeated with different topics for up to 6 credits.

Prerequisite: Admission to the Criminal Justice Program or permission of department chair.

**CJ 580 - Criminal Justice Policy Implementation and Effectiveness (3)**

Orientation to the policymaking process including policy development, implementation, and determining effectiveness. Includes factors shaping crime policy and its implementation, the use of law to promote social policies, and understanding the direct and indirect effects of social and organizational policies.

Prerequisite: Admission to the Criminal Justice Program or permission of department chair.

**CJ 581 - Sexual Assault Investigation (3)**

Overview of the detective's role and responsibilities during a sexual assault investigation including juvenile sexual assault. Students will gain a deep understanding of the policies, practices, roles, and responsibilities of detectives during a sexual assault investigation. This course is linked with CRM 481. No credit will be given for linked equivalent.

Prerequisite: Admission to the Advanced Detective Certificate program or permission of program coordinator.

**CJ 582 - Police Involved Shootings & Crime Scene Investigations (3)**

Overview of the detective's role and responsibilities during a police involved shooting and crime scene processing. Students will obtain an understanding of the philosophy, methodology, and techniques required for crime scene investigation and the policies, practices, and roles involved in the investigative process. This course is linked with CRM 482. No credit will be given for linked equivalent.

Prerequisite: Admission to the Advanced Detective Certificate program or permission of program coordinator.

**CJ 583 - Interview & Interrogation (3)**

Overview of the detective's role and responsibilities during the interview and interrogation process. Students will learn how to initiate an interview, build rapport, and identify physical signs of stress commonly associated with deceptive subjects. This course is linked with CRM 483. No credit will be given for linked equivalent.

Prerequisite: Admission to the Advanced Detective Certificate program or permission of program coordinator.

**CJ 584 - Expectation of Privacy (3)**

Overview of the detective's role and responsibilities during a search and seizure. Students will gain an understanding of the concept on expectation of privacy and the theory behind the plain view doctrine, as well as the role of the State's Attorney in case processing. This course is linked with CRM 484. No credit will be given for linked equivalent.

Prerequisite: Admission to the Advanced Detective Certificate program or permission of program coordinator.

**CJ 585 - Financial Crime Investigation (3)**

Overview of the detective's role and responsibilities during a financial crime investigation. Students will learn how to identify various types of financial crimes, understand resources available to investigate them, and gain the confidence conducting these types of investigations. This course is linked with CRM 485. No credit will be given for linked equivalent.

Prerequisite: Admission to the Advanced Detective Certificate program or permission of program coordinator.

**CJ 589 - Special Topics in Investigations (1-3)**

Study of investigative techniques, theories and best practices. May be repeated with different topics for up to 6 credits.

Prerequisite: Admission to the Advanced Detective Certificate program or permission of program coordinator.

Cross-Listed as: CRM 489. This course is linked with CRM 489. Students who have taken CRM 489 on the same topic will not be granted credit.

**CJ 594 - Capstone Seminar (1)**

This course is designed to support Criminal Justice graduate students to develop their capstone projects. The course will support students through the

capstone development process, such as choosing a project, developing a literature review, identifying appropriate methodology for assessing outcomes, and completion of the capstone proposal.

Prerequisite: CJ 597 or CJ 599 (either may be taken concurrently)

### **CJ 597 - Agency Collaborative Project (3)**

Research project (Plan C) within a criminal justice agency under the supervision of an agency and faculty advisor. Project may be initiated by the agency or the student, and may involve such activities as program development, program evaluation, and instrument validation. Major research paper required upon completion of the agency project.

Prerequisite: CJ 533, completion of 21 credits of approved graduate study (or permission of thesis advisor), and a 3.00 overall GPA.

### **CJ 599 - Thesis (3)**

Preparation of the thesis under the supervision of a thesis advisor.

Prerequisite: CJ 533, completion of 21 credits of approved graduate study (or permission of thesis advisor), and a 3.00 overall GPA.

## **CM - Construction Management**

### **CM 110 - The Built Environment and Global Society (3)**

Survey of construction materials, methods and management throughout history and across the planet and their relationship with societal development. Focus on understanding how societal needs and the construction process interact.

Prerequisite: None

### **CM 145 - CAD and BIM Tools for Construction (4)**

Introduction to Computer Aided Drafting (CAD) and Building Information Modeling (BIM) visualization and communication tools commonly used in construction, including AutoCAD, Sketch-Up, Revit Architecture, and Navisworks. Two hours lecture and 4 hours lab.

Prerequisite: None

### **CM 155 - Construction Documents (3)**

Examination of the role of the construction project administrator. Emphasis on interpretation of construction documents and administration of project-related

documents and reports associated with the construction process.

Prerequisite: None

### **CM 165 - Building Construction Systems (3)**

Introduces basic body of knowledge of construction, including job identification, terminology, and the use of equipment as used in light and heavy commercial construction. Covers construction methods and materials used in buildings.

Prerequisite: None

### **CM 245 - Heavy/Highway Construction Systems (3)**

Introduction to heavy and highway construction practices. Emphasis on construction equipment, labor, materials, and methods as they relate to field operations.

Prerequisite: MATH 103 (C- or higher) or MATH 115 (C- or higher) or MATH 119 (C- or higher) or MATH 125 (C- or higher) or Placement Exam

### **CM 265 - Print Reading/Quantity Take-Off (3)**

Understand and interpret drawing packages for building and heavy construction. Emphasis on analysis of architectural and structural drawings. Understand quantity take-off processes and conduct take-offs of sitework, concrete, masonry, steel, and rough carpentry. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: MATH 103 (C- or higher) or MATH 115 (C- or higher) or MATH 119 (C- or higher) or MATH 125 (C- or higher) or Placement Exam

### **CM 275 - Introduction of MEP Systems (3)**

Introduction to building mechanical, electrical and plumbing systems. Focus on how systems interact with other parts of the construction process. Identify major system components and understand how they operate.

Prerequisite: None

### **CM 290 - Field Studies in the Built Environment ( )**

Special topics course in the built environment. Focus on construction processes in different parts of the world. Specific topics will depend on course location. Involves study abroad travel. Can be used as a substitution for either CM345, CM435 or CM475.

### **CM 325 - Building Construction Estimating (3)**

Examination of the role of the construction estimator. Emphasis on pricing labor, material, and equipment costs

in the areas of sitework, concrete, masonry, steel, and carpentry. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CM 165 (C- or higher) and CM 265 (C- or higher).

### **CM 335 - Construction Safety (3)**

A study of safety problems in the construction environment with emphasis on the day-to-day activities of the construction safety coordinator.

Prerequisite: None

### **CM 345 - Heavy/Highway Construction Estimating (3)**

Examination of the role of the heavy and highway construction estimator. Emphasis on pricing labor, material, and equipment cost as they relate to civil construction projects. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CM 265 (C- or higher) and CM 245 (C- or higher).

### **CM 353 - Introduction to Surveying (4)**

Activities that will acquaint the student with instruments and tools of the surveyor including their use in the techniques of field surveying. Emphasis on actual layouts and areas and elevations as performed in the civil and construction discipline. Three hours lecture and two hours laboratory, course meets five hours per week.

Prerequisite: MATH 115 (C- or higher) or MATH 119 (C- or higher) or MATH 116 (C- or higher).

### **CM 355 - Construction Planning (3)**

Examination of the role of the construction planner/scheduler. Emphasis on CPM scheduling using arrow and precedence diagram techniques. Procedures associated with determining project completion dates, progress, schedule updating, and project time reduction. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CM 325 (C- or higher) or CM 345 (C- or higher).

### **CM 356 - Materials of Construction (4)**

Investigates the strength and other properties required of various materials used in construction. The testing, proper use, and application of aggregates, concrete, structural steel, and timber will be emphasized. Three hours lecture and two hours laboratory, course meets five hours per week.

Prerequisite: MATH 115 (C- or higher) or MATH 119 (C- or higher) and CM 165 (C- or higher) or ENGR 150 (C- or higher).

### **CM 405 - Topics in Construction (1-3)**

An individualized inquiry of comprehensive study into a selected construction area. The student may elect to examine materials, methods, or techniques in modern construction. Course may be repeated for a maximum of 6 credits in different topics.

Prerequisite: Permission of department chair.

### **CM 410 - Practicum in Construction Management (3)**

Students prepare for, and participate in, practical exercises in construction management. Skills utilized include estimating, scheduling, site development, safety planning and project administration. The course may require travel to off-campus locations over one weekend. This course may be substituted for CM 345, CM 435, or CM 475.

Prerequisite: Junior Standing and Permission of instructor

### **CM 415 - Introduction to Construction Law (3)**

Introduction to the basic concepts of construction law and its impact on the construction industry. Topics include basic legal principles, formation and interpretation of construction contracts and legal remedies for dispute resolution. This is a linked course with CM 515.

Prerequisite: None

### **CM 425 - Applied Structural Systems (3)**

Introduction to strength of materials, structural analysis and the structural design process for the construction manager or architect. Includes review of current structural steel and reinforced concrete design specifications and building code requirements. Cannot be used for credit in ET programs.

Prerequisite: ET 241 (C- or higher) or ET 251 (C- or higher), and CM 356 (C- or higher); or permission of instructor.

### **CM 435 - Construction Superintendency (3)**

Examination of the role of the construction supervisor. Emphasis on personnel scheduling, time keeping, trade unions, superintendents, and the duties of the project manager.

Prerequisite: Senior standing.



**CM 455 - Construction Project Management (3)**

Examination of the role of the construction project manager. Emphasis on project controls, quality control, financial and resource management and project communications. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: MGT 295 (C- or higher) and senior standing, or admission to M.S. in Construction Management or Technology Management, or permission of department chair.

**CM 465 - Construction Internship (3)**

Introduction to the Construction workplace. Emphasis on field operations and management applications as they apply to building and heavy/highway construction projects.

Prerequisite: Junior Standing and CM 335 (C- or higher)

**CM 475 - Construction Business Principles (3)**

Examination of the roles of the owner of a construction company. Emphasis on ethical, organizational, financial, legal, managerial, and personnel issues.

Prerequisite: CM 155 (C- or higher) and [AC 210 (C- or higher) or AC 211 (C- or higher)].

**CM 485 - Construction Management Senior Lab (2)**

Integrates all aspects of the construction management process. Employ knowledge and techniques acquired in the construction management program to manage a construction project. Emphasis on team interactions, project management, decision making, and problem solving utilizing current construction documents. One hour lecture and three hours laboratory, course meets four hours per week.

Prerequisite: CM 325 (C- or higher), CM 355 (C- or higher), and CM 455 (C- or higher) (CM 455 may be taken concurrently with CM 485.)

**CM 500 - Fundamentals of Construction Management (3)**

Introduces fundamental aspects of construction management to students without formal construction management backgrounds. Emphasis on creating familiarity with all aspects of construction projects. Topics covered include planning, scheduling, estimating, organizational forms, contracts and risk management. Will be used for conditional admission for students without appropriate background. Credit for this course may not be applied to the MS CM program.

Prerequisite: Permission of the department chair.

**CM 505 - Project Delivery and Risk Management (3)**

Examination of construction project delivery systems, related processes, and their impacts. Explanation of risk management principles and processes associated with different project delivery systems and other industry methods. A blend of theory and practice will clarify the impact of the selected delivery system and how to develop a risk management and control strategy.

Prerequisite: None

**CM 515 - Construction Law (3)**

Principles of the legal doctrines relating to owners, design professionals and contractors. Emphasis on the legal issues surrounding the formation and interpretation of contracts, contract clauses, and legal remedies available to all parties. This is a linked course with CM 415.

Prerequisite: None

**CM 520 - Construction Materials and Methods (3)**

Overview of construction methods, building systems, and material used in the construction of buildings, earthworks, bridges and roads. Principles of sustainability, foundations, wood, steel, and concrete erection methods that can be used for a project are presented.

Prerequisite: None

**CM 525 - Construction Equipment Operation & Management (3)**

Selection and management of construction equipment for efficient and effective construction operations. Focus on equipment fundamentals and integration of equipment into the construction process. Economic considerations associated with equipment acquisition, ownership and replacement also covered.

Prerequisite: None

**CM 530 - Structural Systems (3)**

Review of structural mechanics and the structural design process for the construction manager or architect. Topics in erecting and quality control of structural steel, reinforced concrete and timber structural members with corresponding drawings and code requirements.

Prerequisite: CM 520 Construction Materials and Methods

**CM 535 - Sustainable Buildings (3)**

Sustainable design and construction goals, processes, and strategies with a focus on larger commercial and

institutional buildings. Designing and constructing sustainable buildings not only benefits the environment, it also makes good business sense.

Prerequisite: None

### **CM 540 - Lean Construction (3)**

Compares the design and implementation of Lean Construction Management systems to traditional approaches used in the construction industry. Focuses on eliminating waste, reducing costs and improving customer value in construction processes using Lean principles, methods, and tools.

Prerequisite: None

### **CM 545 - Construction Risk Management (3)**

A study of procedures that may be used to identify and solve problems arising during the construction process. Field problems requiring systematic problem solving, decision matrices and other risk assessment and mitigation tools will be addressed.

Prerequisite: None

### **CM 550 - Automation and Emerging Technologies in Construction (3)**

Examines innovative automation, information technologies, emerging technologies and project management technologies in construction and maintenance of existing structures. Explanation of various automation and emerging technologies in construction industry. Automated construction equipment, innovative construction methods, mobile project management, cloud computing, sensor network, and visualization and simulation of construction process will be addressed.

Prerequisite: Basic knowledges of computers and information technology and construction project management

### **CM 555 - Construction Project Control (3)**

Application of software to control costs, quality and time as they apply to a construction project.

Prerequisite: Admission to M.S. Construction Management program.

### **CM 560 - Architecture for Construction Managers ( )**

To help constructors work more effectively with architects, this course covers topics that include design appreciation, professional practice issues for architects, collaborative project teams with a focus on design-build, and introductions to LEED, sustainability, and BIM.

### **CM 565 - Construction Labor Relations (3)**

Focus on collective representation, including the historical development of collective bargaining and employment laws. Emphasizes the unique aspects of the construction industry and addresses practical approaches to construction labor issues.

Prerequisite: None

### **CM 570 - Construction Accounting and Engineering Economics ( )**

This course provides an extensive overview of financial and managerial accounting concepts for non-financial managers. Students will learn the basic elements of accounting (Generally Accepted Accounting Practices). They will understand how typical financial records and financial statements are established for companies. Once the basics are understood, students will study how financial data is used for internal cost controlling, planning, and budgeting. Fundamental financial calculations associated with the time value of money, debt instruments, taxes, inflation, and cash flow estimates are emphasized. Students will be expected to demonstrate proficiency in the use of Excel business functions in solving financial problems.

### **CM 575 - Construction Financial Management (3)**

A study of various techniques used in the construction industry to improve company performance in financial areas. Topics include preparing and using financial statements, calculating revenue, cost and profit and allocating costs to contracts.

Prerequisite: None

### **CM 580 - Construction Safety Management (3)**

Development of organizational construction safety programs, such as fall protection hazardous materials handling. Management of safety training and education, including OSHA record keeping requirements.

### **CM 585 - Advanced Construction Law (3)**

Advanced concepts related to legal doctrine as applied to the construction industry. Focus on contract documents, dispute resolution and case law dealing with contractors, owners and design professionals.

Prerequisite: CM 515 or permission of instructor.

### **CM 590 - Advanced Field Studies in the Built Environment (3)**

Special topics course in the built environment. Focus on construction processes in different parts of the

world. Specific topics will depend on course location. Involves study abroad travel. Can be used as an elective in the MS CM program.

### **CM 594 - Research Methods in Construction Management (1)**

An overview of commonly used research methods in construction management studies. Includes the understanding of the research process in general, the planning of a successful research endeavor, the literature review process, qualitative and quantitative research, ethics in research; as well as specific research methodologies such as surveys, interviews, and case studies.

### **CM 595 - Applied Research in Construction Management (3)**

Completion of an advanced special project in construction under the supervision of a faculty member. Requirements include a paper and an oral presentation on the project. CM Applied Research Capstone Plan C.

Prerequisite: TM 594, permission of advisor, and a minimum 3.0 overall GPA.

### **CM 596 - Topics in Construction Management (3)**

Topics of interest in the construction management field not currently covered by the construction management curricula. Students may take this course under different topics for a maximum of 9 credits.

Prerequisite: None

## **CNSL - Counseling**

### **CNSL 299 - Human Service in the Residence Halls (3)**

Topics include competencies in personal development, student development theory and multicultural issues.

Prerequisite: Appointment to the staff (Department of Residence Life) and/or permission of instructor.

### **CNSL 500 - The Dynamics of Group Behavior (3)**

Experiential approach to more effective interpersonal communication. Opportunity is offered for personal growth in awareness and understanding both of self and others, and in the communication of that self-awareness and understanding. The orientation of this course is educational. Students enrolled in this course may be observed by students in CNSL 507.

Prerequisite: Admission to the graduate program and/or permission of department chair.

### **CNSL 501 - Theories and Techniques in Counseling (6)**

Investigation of theories and techniques in counseling, including research findings and skill development.

Prerequisite: Admission to M.S. in Counselor Education or Marriage and Family Therapy.

### **CNSL 503 - Supervised Clinical Professional Counseling Practicum (3)**

A minimum of 100 hours of supervised clinical experience in field setting. Includes direct service with clients, including experience in individual counseling and group work. Also includes on-campus group seminars. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check and health policies of the site and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: CNSL 500, CNSL 501, CNSL 504, CNSL 560, and CNSL 569

### **CNSL 504 - Professional Studies in Counseling (3)**

Areas of study include: professional socialization and the role of the professional organizations, licensure or certification legislation, legal responsibilities and liabilities, ethics and family law, confidentiality, independent practice and inter-professional cooperation.

Prerequisite: Matriculation into the graduate program.

### **CNSL 505 - Counseling and Human Development Across the Lifespan (3)**

The nature and needs of persons at all developmental levels with a focus on the physical, cognitive, emotional, and social aspects of growth. Psychosocial theories of development and counseling models will be addressed as they apply to the stages of the lifespan.

Prerequisite: None

Cross-Listed as: Cross listed with MFT 505. No credit given to students with credit for MFT 505.

### **CNSL 506 - Counseling Children & Adolescents (3)**

An examination of counseling theories and strategies for working with children and adolescents.

Prerequisite: CNSL 501 or permission of chair.

**CNSL 508 - Supervised School Counseling Practicum (3)**

A minimum of 100 hours of supervised clinical experience in field setting. Includes direct service with clients, including experience in individual counseling and group work. Also includes on-campus group seminars. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: CNSL 500, CNSL 501, CNSL 504, and CNSL 524

**CNSL 509 - Independent Study in Counseling (1-3)**

Students are guided in selection of topics for study. Can be taken more than once for a maximum of 6 credits.

Prerequisite: Permission of department chair Systematic study of problems of special interest in counseling.

**CNSL 510 - Intensive In-home Evidence-Based Models in Family Therapy (3)**

Introduction to definitions and competencies connected with Evidence-Based Practice (EBP); overview of the history, theoretical foundations, and implementation of several evidence-based in-home family treatment models. Training in the theory and practice of treatment models; and hands-on training exercises with specific treatment tools.

Prerequisite: MFT 541 or permission of instructor.

Cross-Listed as: Cross-listed with MFT 510. No credit given to students with credit for MFT 510.

**CNSL 511 - Supervised Student Development in Higher Education Practicum (3)**

A minimum of 100 hours of supervised experience in field setting. Includes direct service with clients, including experience in individual counseling and group work. Also includes on-campus group seminars. Students are required to follow the background check and health policies of the site in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: CNSL 500, CNSL 501, and CNSL 530

**CNSL 520 - Professional School Counseling I (3)**

This introductory course will focus on the history, foundation, and role of school counselors as advocates

and agents of systemic change in schools. We will focus on school counseling services, equitable practices, and basic concepts related to the organization and operation of school counseling programs, as well as the impact of current pressing educational concerns on the role of school counselors.

Prerequisite: Admission to the program in Counselor Education and Family Therapy

**CNSL 521 - Career Counseling and Development (3)**

Approaches to career counseling and development as it relates to agency and school settings. Includes relevant career theories, a survey of instruments utilized in assessing interests, values and career decision-making abilities, and relevant occupational information.

Prerequisite: CNSL 501.

**CNSL 522 - Appraisal Procedures in Counseling (3)**

Survey of standardized appraisal instruments utilized in assessing factors, such as aptitude, intelligence, achievement, and interest as it relates to human service agencies and school counseling.

Prerequisite: CNSL 501.

**CNSL 524 - Collaborative Consultation in Schools (3)**

Emphasis on the learning and practice of specific skills essential to consulting in the schools. The dynamics of child-parent relationships and their impact on consulting with parents will be included.

Prerequisite: CNSL 520, or permission of department chair.

**CNSL 525 - Multicultural Counseling (3)**

Study of the effects of culture on world view and various approaches to counseling. Emphasis placed on the development of culturally appropriate skills for use with diverse populations.

Prerequisite: CNSL 501.

**CNSL 526 - Professional School Counseling II (3)**

Overview of developmental guidance and counseling, and the role and function of the school counselor on the elementary, middle/JHS, and secondary levels. Includes the history, philosophy, trends, purposes, objectives, and roles within the schools at each of the three levels.

Prerequisite: Admission to the program in Counselor Education and Family Therapy.

**CNSL 530 - Student Development in Higher Education (3)**

Overview of college student development, including characteristics of contemporary students.

Prerequisite: Admission to the graduate program and/or permission of department chair.

**CNSL 531 - Student Services in Higher Education (3)**

Overview of student services in higher education including characteristics of special student populations.

Prerequisite: Admission to M.S. in Counselor Education or Marriage and Family Therapy.

**CNSL 532 - Program Design in Student Services (3)**

Design of experiential education for adults in higher education, including needs assessment, creation of developmental programs and learning communities, and program implementation and evaluation.

Prerequisite: CNSL 530.

**CNSL 533 - Legal, Financial, and Policy Issues in Student Affairs (3)**

Examination of policy formation, law, and financial issues as they pertain to student affairs administration in higher education.

Prerequisite: Admission to the Program in Student Development in Higher Education (Counseling).

**CNSL 560 - Introduction to Rehabilitation Counseling (3)**

Overview of the philosophy and practice of rehabilitation counseling. Emphasis on the rehabilitation client, types of disabilities, and the life adjustment that disability entails.

Prerequisite: Admission to department.

**CNSL 561 - Advanced Rehabilitation Counseling (3)**

Case management and service coordination services including independent living services, job development, and placement of individuals with disabilities.

Prerequisite: CNSL 560 or permission of the department chair.

**CNSL 563 - Medical Aspects of Rehabilitation Counseling (3)**

The rehabilitation counselor's role as a member of the health care team will be studied. General characteristics of various disability groups and identification of the medical specialists who serve these groups will be presented.

Prerequisite: Admission to the graduate program or permission of the department chair; CNSL 500 (may be taken concurrently).

**CNSL 564 - Rehabilitation and Disability Case Management Practices (3)**

Rehabilitation and disability case management process and community resources used in working with individuals with various disabilities. Principles and practices of private sector rehabilitation with individuals experiencing occupational and non-occupational injury and disability.

Prerequisite: CNSL 560.

**CNSL 566 - Community Resources, Systems, and Challenges in Counseling the Older Adult (3)**

This course applies a wellness and empowerment philosophy to the examination of community resources, systems, and challenges presented in counseling with older adults. This course explores the history, philosophy, and trends in gerontology counseling, roles, and functions of gerontology counselors, as well as community resources and services, ethical legal, policy, legislative and regulatory considerations relevant to older adults. The course will also examine the unique issues related to multicultural issues, substance abuse, process addictions, and co-occurring disorders with the ageing population.

Prerequisite: CNSL 501 or permission of program coordinator

**CNSL 568 - CNSL 568 Foundations of Addictions Counseling (3)**

This course provides an overview of the etiological models of addiction, classification of drugs, and diagnostic categories of substance use disorders. Psychotherapeutic treatment approaches, such as screening and assessment, motivational interviewing, psychopharmacology, and recovery and relapse prevention principles, will be discussed. A review of professional issues, family systems, and cross-cultural considerations will be included.

Prerequisite: CNSL 501 (minimum grade of B) or permission of department chairperson.

**CNSL 569 - Foundations of Clinical Mental Health Counseling (3)**

A study of the history, philosophy, administration, fiscal management, legal and ethical practices of the mental health counseling profession. The evaluation of mental health counseling programs in community settings will also be studied.

Prerequisite: Admission to the M.S. in Counseling program.

**CNSL 571 - Mindfulness-Based Mental Health Counseling (3)**

Advanced, empirically supported counseling approaches and techniques using mindfulness as an intervention for the treatment of mental health, with review of mindfulness origins and neurobiology. Familiarizes students with evidence-based strategies for using mindfulness to promote optimal mental health and well-being. Emphasizes 8-week mindfulness-based cognitive therapy (MBCT).

Prerequisite: CNSL 501

**CNSL 572 - Assessment, Treatment and Recovery in Counseling (3)**

Examines the clinical assessment and treatment of clients in recovery from mental health issues, and the use of the DSM V. Reviews mental health issues with emphasis on symptoms and implications for treatment and recovery.

Prerequisite: CNSL 503 (may be taken concurrently)

**CNSL 573 - Counseling Families (3)**

Study of the processes and theories of counseling families. Prepares students to think systematically and to learn about family concepts, dynamics, theories and techniques.

Prerequisite: CNSL 501 and CNSL 500.

**CNSL 575 - Counseling Individuals with Co-occurring Mental Health and Substance Use Disorders (3)**

Students are introduced to the complexities and unique treatment needs of clients who are diagnosed with co-occurring mental health and substance use disorders. An examination of the guiding principles for counseling individuals with co-occurring disorders will occur, as well as a review of assessment and diagnostic methods, treatment settings and interventions, special population considerations, and integrated care planning and recovery strategies.

Prerequisite: CNSL 568 and CNSL 572 (minimum grade of C) or permission of department chairperson.

**CNSL 580 - Topics in Counseling (1-3)**

Topics will vary each time the course is offered. Combination of lecture, discussion, inquiry sessions, and student presentation. May be taken more than once for credit under different topics.

Prerequisite: Degree candidacy or permission of instructor.

**CNSL 585 - Foundations of Career, Vocational, and Community Resources for Transition Services (3)**

Career and vocational exploration techniques and resources including vocational assessment and rehabilitation process, case management, community resources, and employer development for transition services.

Prerequisite: SPED 541 or concurrent

**CNSL 591 - Supervised School Counseling Internship (3)**

Series of supervised experiences in the public school setting is provided. Required for school counseling certification. Must be taken in Fall-Spring cycle. Plan B requires a 3.00 overall GPA; students may not apply to take the comprehensive examination until 75% of course work for the major has been completed. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: CNSL 508

**CNSL 592 - Supervised Internship in Higher Education (3)**

Professional experience to prepare persons to enter the student development field in higher education. Emphasis on actual practical experience, student/faculty/administrative interaction, and the special concerns which affect the conduct of student development services. Taken two semesters for a maximum of 6 credits. Plan B requires a 3.00 GPA; students may not apply to take the comprehensive examination until 75% of course work for the major has been completed.

Prerequisite: CNSL 511 and CNSL 532

**CNSL 594 - Supervised Clinical Professional Counseling Internship (3)**

A supervised 600 hour internship experience in community settings focusing on rehabilitation counseling, mental health counseling or substance abuse counseling. Must be taken in Fall-Spring cycle. Plan B requires a 3.00 overall GPA; students may not apply to take the comprehensive examination until 75% of course work for the major has been completed. Some practicum and

internship sites require students to complete physical examinations, drug testing, and/or background checks. CCSU does not cover the cost of these if the site does not offer these free of charge to practicum and intern students.

Prerequisite: CNSL 503

### **CNSL 598 - Research Methods in Counseling (3)**

Admission to M.S. in Counseling Education or permission of department chair. Quantitative and qualitative research design, data analysis, and interpretation for counseling and rehabilitation disciplines. Not open to students in specialization of School Counseling.

Prerequisite: None

### **CNSL 599 - Thesis (3)**

Preparation of the thesis under the supervision of the thesis advisor.

Prerequisite: Permission of advisor; ED 598 or equivalent as accepted by advisor; completion of 24 credits; and a 3.00 overall GPA.

## **COMM - Communication**

### **COMM 115 - Fundamentals of Communication (3)**

Basic course offering the student an opportunity to understand and improve communication skills. Performance, observation, and evaluation. May not be counted toward Communication major.

Prerequisite: None

### **COMM 127 - Vlog Studio Production (3)**

Use CCSU's state-of-the-art studio to create professional-looking vlogs. Learn to write scripts, create storyboards, and deliver your content on camera. Produce listicles, tutorials, testimonials, and more, and share them with the world.

### **COMM 140 - Public Speaking (3)**

Study of and practice in the principal forms of public address. Additional emphasis on the needs and expectations of persons preparing for business and professional careers. CSUS Common Course.

Prerequisite: None

### **COMM 215 - Introduction to Interpersonal Communication (3)**

Introductory survey of interpersonal communication theories and the application of these theories in dyadic, group and organizational contexts.

Prerequisite: None

### **COMM 216 - Introduction to Intercultural Communication (3)**

Study and discussion of models of intercultural communication in various contexts. This course was formerly COMM 344, and credit will not be granted for both COMM 344 and COMM 216.

Prerequisite: None

### **COMM 220 - Introduction to History of Film (3)**

Survey of 100 years of movies from all over the world. Emphasizes the development of film as a narrative art, using films that are breakthroughs in creative expression and audience involvement.

Prerequisite: None

Cross-Listed as: Cross-listed with CINE 220. No credit may be received by students who have received credit for CINE 220.

### **COMM 227 - Introduction to Television Production (3)**

Introduce students to the terminology and workings of visual communication and broadcasting. Become acquainted with the structures and organization of TV stations and production houses. Practice basic hands-on production and storytelling and work across different media platforms. Learn about new trends in social media, run a youtube site and contribute to blogs.

Prerequisite: None

### **COMM 228 - Introduction to Digital Film Production (3)**

This course introduces students to filmmaking processes, techniques and technologies as powerful and creative tools for communication. Image creation, audio acquisition and post-production practices, conceive and investigate ideas, engage in a creative/critical process and utilize new media technologies to construct simple messages. Hands-on workshops, viewing of films and creating media.

Prerequisite: None

**COMM 230 - Introduction to Mass Media (3)**

Study of the structure, roles and processes of the mass media. Primary emphasis is on radio, television and film. Examination of effects on society. CSUS Common Course.

Prerequisite: None

**COMM 231 - Communication Technologies (3)**

Hands-on introduction of new technologies within this evolving field, utilizing and exploring communication and publication technologies for print and/or online channels. Participation in the creative process while developing needed technical skills tied to design and content creation.

Prerequisite: None

**COMM 234 - Introduction to Public Relations (3)**

Survey all aspects of public relations including theories of image-making, events planning, publicity, promotion, media campaigning, and crisis management.

Prerequisite: None

**COMM 253 - Introduction to Organizational Communication (3)**

Introduction to the structure, function, and process of communication in organizational life and modern society.

Prerequisite: None

**COMM 255 - Visual Communication (3)**

Introduces the codes and conventions of visual communication through the study of photography, paintings, advertising campaigns, television, video, film and the web. Addresses the role of visual culture in a (multi)media immersed public domain.

Prerequisite: None

**COMM 280 - Business and Professional Speaking (3)**

Principles of Communication in report making, parliamentary processes, interpersonal conferences and related managerial functions. Emphasis on understanding and practicing patterns of Communication in various organized settings.

Prerequisite: None

**COMM 285 - Introductory Topics in Media Studies (3)**

Study of selected introductory topics in media studies and media production. May be repeated for up to 6 total credits.

Prerequisite: None

**COMM 286 - Introductory Topics in Communication (3)**

Study of selected introductory topics in public relations, organizational communication and other related communication skills. May be repeated for up to 6 total credits.

Prerequisite: None

**COMM 296 - Global Studies in Communication (3)**

On-site group studies in Communication. This topics course normally involves travel outside the United States.

Prerequisite: None

**COMM 301 - Critical Thinking (4)**

Development of critical thinking and debate skills as a basis for thoughtful and effective communication. Analysis of arguments and persuasive appeals.

Prerequisite: Sophomore standing (or higher).

**COMM 302 - Small Group and Team Communication (4)**

Introduction to small group interaction processes with an emphasis on group decision making and problem solving. Three hours class lectures and additional group work to develop and refine a research project.

Prerequisite: Sophomore standing (or higher).

**COMM 315 - Political Communication (4)**

Examines the symbolic nature and dimensions of American politics and the American political system. Emphasis placed on the role, processes and effects of communication in political contexts.

Prerequisite: None

**COMM 316 - Gender and Communication (3)**

Examines different theoretical approaches to gender and the implications these have for our understanding of communication theories and practices.

Prerequisite: Junior standing or higher.

Cross-Listed as: Cross listed with WGSS 316. No credit given to students with credit for WGSS 316.

**COMM 319 - Filmic Narrative (4)**

Explores the most relevant elements used in filmic narrative to create meaning. The course further helps students identify ideological contents behind and beyond the audiovisual discourse. Cross-listed with CINE 319. No credit may be received by students who have received credit for CINE 319



Prerequisite: None

Cross-Listed as: Cross-listed with CINE 319. No credit may be received by students who have received credit for CINE 319.

#### **COMM 327 - Studio Production I (4)**

This course offers an introduction to studio production. Students will receive hands-on instruction in the foundations of television studio production (use of equipment, lighting, audio, scripting, new media, pre-production, production, and post-production editing).

Prerequisite: COMM 227 or COMM 228 (C- or higher).

#### **COMM 328 - Digital Film Production 1 (4)**

Expands and explores the creation of ideas, characters and conflicts through the production process. Students advance their methods of visual coverage, engage in audio acquisition, while also testing and developing their ideas through the pre-production, production and post production process. This course is geared for those interested in documentary production, independent filmmaking and/or commercial advertising. Students may repeat the course once for a total of 8 credits.

Prerequisite: COMM 228 (C- or higher)

#### **COMM 329 - Screenwriting (4)**

Investigates fundamental elements of theme, structure, story, character, setting, conflict and rhythm through writing exercises, film screenings and readings. Culminates in the development and completion of an original short screenplay.

Prerequisite: None

#### **COMM 332 - Web Publishing (4)**

Theoretical and practical knowledge tied to using digital technologies to create messages for different target audiences. Focuses upon the radical novelties that the Web introduces in the field of Mass Communication and the implication in the creation of meaning.

Prerequisite: Majors only; COMM 231 (C- or better).

#### **COMM 334 - Public Relations Strategies and Techniques (4)**

Public relations strategies and techniques through analysis and practical applications. A writing-intensive course.

Prerequisite: COMM 234 (C- or higher).

#### **COMM 336 - Media Literacy (4)**

A review of current changes in philosophy, content, and processes in media use and application as this use affects society and its value system.

Prerequisite: COMM 230 (C- or higher).

#### **COMM 339 - Public Relations and Social Media (4)**

Explores the use of Public Relations strategies and techniques applied to social media platforms. Examines how brands are utilizing tools such as Facebook, Twitter, Instagram and YouTube, to effectively reach their audiences. Structured as a hands-on workshop, students work on a variety of assignments, case studies, readings, discussion boards and a final project where they will produce a social media consultancy report for a non-profit.

Prerequisite: COMM 234 (C- or better)

#### **COMM 341 - Signature Events: Public Relations and Media Relations (3)**

Explores public relations and media relations strategies and applications as they relate to events. Experiential learning involves attending and evaluating public events, networking with relevant professionals, and planning, executing, and evaluating a Communication department event.

Prerequisite: COMM 234 (C- or better) or COMM 253 (C- or better)

#### **COMM 343 - Communication and Social Influence (3)**

Principles and processes of influencing attitudes, beliefs and behavior. Practical illustrations drawn from advertising, speeches, and other communicative settings. This course was formerly COMM 443, and credit will not be granted for both COMM 443 and COMM 343.

Prerequisite: None

#### **COMM 345 - Writing for the Electronic Media (4)**

How to research, create, write, and produce news stories and narratives for broadcast and web-based media.

Prerequisite: COMM 230 and COMM 227 or COMM 228 (both with C- or higher)

#### **COMM 353 - Interviewing Theory and Practice (3)**

Study and practice of different interview formats (excluding counseling) as a unique context of communication. Special attention given to interviews for employment, appraisal, and information gathering.

Prerequisite: None

**COMM 356 - Professional Communication (4)**

Skills required to be a successful professional. Emphasizes understanding and becoming proficient in relationship management, presentational speaking, interpersonal communication, written communication and communication in small groups. This course was formerly COMM 256, and credit will not be granted for both COMM 256 and COMM 356.

Prerequisite: None

**COMM 380 - Women and Film (4)**

Examines selected films with regard to the representation of women on screen, women's filmmaking as a critical practice, and issues in feminist film theory and criticism. Includes perspectives on Hollywood and independent American and international cinema. Cross-listed with CINE 380 and WGSS 380. No credit may be received by students who have received credit for CINE 380 or WGSS 380.

Prerequisite: None

Cross-Listed as: Cross-listed with CINE 380 and WGSS 380. No credit may be received by students who have received credit for CINE 380 or WGSS 380.

**COMM 382 - American Cinema (4)**

Examines the film industry in the United States. The genres of Hollywood cinema and independent films will be studied as unique economic, industrial, aesthetic, and cultural institutions. Cross-listed with CINE 382. No credit may be received by students who have received credit for CINE 382.

Prerequisite: None

Cross-Listed as: Cross-listed with CINE 382. No credit may be received by students who have received credit for CINE 382.

**COMM 399 - Current Topics in Communication (1)**

Exploration of current topics, or development of cutting edge projects relevant to careers in communication. Course meets once a week. May be repeated with a different topic or project for a maximum of 2 credits.

Prerequisite: Junior or senior standing.

**COMM 406 - Case Studies in Public Relations (4)**

Case studies of public relations/promotions principles and practices in variety of internal and external, public and private, for-profit and non-profit contexts.

Prerequisite: COMM 234 (C- or higher), Junior or senior status.

**COMM 423 - Crisis Communication (4)**

This course provides students with details on key principles, processes, theories and practices of crisis communication. Topics include (1) concepts and principles of crisis communication, (2) theories and management processes that are used in crisis communication research and practices, and (3) crisis communication cases and examples.

**COMM 410 - Public Opinion (4)**

Dissects the social-psychological phenomenon of public opinion to understand its nature as well as to explore its social function. Furthermore, it studies the interrelation of public opinion with mass media and political and economic power. Three hours of class lectures and additional one-on-one work to develop a research paper.

Prerequisite: Junior or senior standing.

**COMM 411 - Public Opinion Research (4)**

The course introduces students to the application of survey research in the academic discipline of communication studies, as well as in the professional fields of strategic communication (e.g., political communication, public relations, organizational communication). The course covers three clearly differentiated areas: public opinion theory, public opinion structure and research methods, and data analysis and interpretation.

Prerequisite: Junior or senior standing.

**COMM 414 - Nonverbal Communication (4)**

Research-based class focused on understanding the various forms of nonverbal messages and their impact on perception, individuals, and communication. Three hours class lectures and additional one-on-one work to develop and refine a research project.

Prerequisite: Junior standing (or higher).

**COMM 418 - Relational Communication (4)**

This course is designed to examine the role of communication in various human relationships. Topics covered concepts, theories and research associated with interpersonal relationships (romantic, family, friend, work) and our interactions within these relationships.

Prerequisite: COMM 215 or permission of instructor

**COMM 420 - Principles of Digital Photography for Convergent Media (4)**

Overview of the concepts, skills, and foundations of digital photography and its relevance and utility for convergent technologies such as the world wide web, streaming, podcasting, television production. Further explores its integration into media industries.

Prerequisite: COMM 231 (C- or higher). Junior standing (or higher).

**COMM 427 - Studio Production II (4)**

This studio-based course enhances production skills in both the field and the studio with an emphasis on story conception, development, and scripting. Enhance skills in cinematography, directing, lighting design, non-linear editing, and audio acquisition.

Prerequisite: COMM 327 or COMM 328 (C- or higher).

**COMM 431 - Mass Media and Society (4)**

Examines the place of the mass media in society. Specifically, how the mass media affect and are affected by social, economic, cultural and political forces.

Prerequisite: COMM 230 and either COMM 227 or COMM 228 (both with C- or higher).

**COMM 432 - Media In Film (4)**

Using filmic fiction and theoretical works of mass communication, this course will analyze how advertising, public relations, television, and radio are portrayed in the media. We will combine critical movies with other stories that deal with the subject in a more positive or ideal way, and reflect on the power of new media to establish virtual relationships.

Prerequisite: COMM 230 (C- or better); Junior standing (or above)

**COMM 434 - Campaign Development Methods (4)**

Objectives and methods of archival, focus group and survey research, analysis of data using SPSS and report writing procedures in the context of designing an actual strategic public communication campaign. Three hours of class lecture and additional one-on-one work to develop and refine a research project.

Prerequisite: COMM 234 (C- or higher).

**COMM 435 - Images of Gender in the Media (4)**

Examines media constructions and representations of femininity and masculinity. Focus on popular forms of media including television, film, and advertising. Cross-

listed with WGSS 435. No credit may be received by students who have received credit for WGSS 435.

Prerequisite: Junior standing or higher.

Cross-Listed as: Cross listed with WGSS 435. No credit will be give to students with credit WS or WGSS 435.

**COMM 436 - Streaming Media in Web Publishing (4)**

Strategies and techniques for integrating audiovisual messages in Web-projects. Explores the potential of Internet to integrate different media formats and enhance the interactivity with the audiences. Further studies the current use of Web-publishing in specific professional fields, such as public relations, political communication, journalism, or education.

Prerequisite: COMM 332 (C- or higher) or permission of instructor.

**COMM 439 - Social Media Research & Big Data (4)**

Research methods of communication commonly used in social media research, including content analysis, surveys, experiments, and big data analysis. Topics include sampling, measurement, and data analysis within the context of social media. Students design and conduct a research project.

Prerequisite: Junior standing (or higher)

**COMM 450 - Communication Skills for Training and Development (3)**

For graduate students, COMM 500 (may be taken concurrently). Application of communication strategies for training and development in public and private corporate and institutional settings. Additional written work will be required for graduate students.

Prerequisite: Junior standing or higher.

**COMM 451 - Environmental Communication (3)**

Knowledge, attitude, and behavior-change strategies related to environmental and natural resource conservation issues. Coercive, incentive based, and communication-based change strategies will be contrasted. Additional written work will be required for graduate students.

Prerequisite: Junior standing or above.

**COMM 452 - Health Communication (4)**

Provides students with the capability to critique past campaigns through a theoretical communication lens, encompassing mass mediated, community-based, workspace-based, school-based, and interpersonal

approaches to public health interventions. Create a campaign proposal with supporting research methodology, and develop an appropriate health communication approach, within the context of a contemporary health issue.

Prerequisite: Junior standing (or higher)

#### **COMM 453 - Organizational Communication (4)**

Study of communication theory and processes within organizational contexts. Three hours class lectures and additional one-on-one work to develop and refine a research project.

Prerequisite: COMM 253 (C- or higher).

#### **COMM 454 - Communication and Social Change (3)**

Study of the relationship between communication and social change and the impact of socio-political and communication strategies on the achievement of effective community development and social change objectives. Additional written work will be required for graduate students. For graduate students, COMM 500 may be taken concurrently.

Prerequisite: Junior standing or above.

#### **COMM 455 - Global Visual Communication (4)**

Examines visual communication and culture as well as visual competence and media literacy within a global perspective. Studies the impact of globalization on the circulation of messages via new technologies, and the circulation of consumer goods, brand packaging and the significance of gender.

Prerequisite: None

#### **COMM 457 - Converging Media (4)**

The emergence of social media platforms in contemporary American and an increasingly global society. Understanding of the role, effect, and ubiquitous nature of current media in the context of the history of mass media technologies such as radio, television, print, film, and the Internet. Student will learn strategies to analyze the media and (popular) culture and will generate creative content to contribute to the online dialog that draws us closer together as a community of media producers.

Prerequisite: Junior standing or higher standing and COMM 230.

#### **COMM 458 - Sports Communication (4)**

Explores how existing communication skills can be utilized in the sports industry, specially the role of sports

information and/or media relations director. Examines sports communication history, best practices, and the role of social media in the industry.

Prerequisite: COMM 234 (C- or better)

#### **COMM 465 - Sports and Media: Images and Representations (4)**

Focuses primarily on the social and cultural values associated with sport in media. Examines both how sports become and are made meaningful in a variety of media and media texts and what these meanings in turn can tell us about how we understand our own values and identities.

Prerequisite: COMM 336 (C- or better) and Junior standing

#### **COMM 485 - Topics in Media and Culture (3 to 4)**

Study of selected topics using critical and interpretive approaches to Media. May be repeated once with a different topic.

Prerequisite: Junior standing (or higher).

#### **COMM 487 - Documentary Production (4)**

In this advanced production class, students will create original non-fiction short documentaries. Students will gain experience in advanced shooting and editing techniques, audio and sound recording, field lighting, interviewing methodologies, and documentary story structure.

Prerequisite: COMM 228 and COMM 327 (C- or higher)

#### **COMM 490 - Internship Study (1-6)**

Work in approved organization. Series of consultations and assigned readings and a final paper describing practical experiences in relation to theory are required. Majors and minors only.

Prerequisite: Permission of faculty advisor and department chair.

#### **COMM 491 - Independent Study (1-3)**

Reading and research in approved topic under guidance of a faculty member of the Communication Department. May be repeated with different topics for a maximum of 6 credits. Majors and minors only.

Prerequisite: Permission of advisor and department chair.

#### **COMM 493 - Seminar in Communication (4)**

This capstone course for majors provides students with a structured environment in which to complete an independent research and/or mediated project. Students

will engage in peer workshops, and reflect upon the knowledge they have acquired in the discipline while honing their research and/or communication skills. Students may take course twice for credit, for a maximum of 8 credits.

Prerequisite: Majors only; Junior standing (or higher).

**COMM 495 - Special Topics in Strategic Communication (3 to 4)**

Study of selected topics in Communication. May be repeated once with a different topic. Majors and minors only.

Prerequisite: Junior or senior standing or permission of instructor.

**COMM 496 - Field Studies in Communication (3)**

On-site group studies in communication. This course normally involves travel outside the United States. May be repeated for a maximum of nine credits.

Prerequisite: None.

**COMM 500 - Introduction to Graduate Studies in Communication (3)**

Introduction to the theoretical, mythological, and philosophical perspectives that constitute the study of organizational communication and public relations.

Prerequisite: None

**COMM 501 - Theories of Human Communication within an Organizational Context (3)**

Critical review of theoretical traditions in communication and information sciences with emphasis on major causal, systems, and rules approaches to the study of organizational and managerial communication. An examination of human communication from the perspective of the social and behavioral sciences, the natural sciences, and the humanistic traditions.

Prerequisite: COMM 500.

**COMM 503 - Research Methods in Communication (3)**

Quantitative and qualitative methodologies including survey, experimental, focus group, ethnographic, and contents analysis. Students develop a research proposal including a literature review and research questions/hypotheses.

Prerequisite: Completion of 15 credits in graduate courses.

**COMM 504 - Campaign Monitoring and Evaluation (3)**

Study of monitoring and summative evaluation techniques associated with public relations activities and communication campaigns.

Prerequisite: COMM 500 or permission of instructor

**COMM 505 - Persuasive Communication (3)**

Theories and empirical research related to the influence of audiences external to an organization.

Prerequisite: COMM 500 (may be taken concurrently) or permission of department chair.

**COMM 506 - Case Studies in Public Relations (3)**

Case studies of public relations/promotions principles and processes in variety of internal and external, public and private, for-profit and non-profit contexts.

Prerequisite: COMM 500 or permission of instructor.

**COMM 507 - Campaign Planning (3)**

Study of methods and procedures used to plan communication campaigns. Quantitative and qualitative methodologies are explored.

Prerequisite: COMM 500 or permission of instructor

**COMM 508 - Public Relations Writing Strategies (3)**

Critically examines most common writing tools and formats used in the professional practice of Public Relations. Techniques focus on developing press releases, feature stories, pitch letters, op-eds, and newsletters.

Prerequisite: COMM 500 or permission of department chair.

**COMM 510 - Public Opinion Research (3)**

Examines the effects of public opinion on the individual, as well as its social function. Students conduct two public opinion research projects, using opinion research techniques to find out tendency and direction of public attitudes on a particular issue.

Prerequisite: COMM 500

**COMM 511 - Social Media Research & Analytics (3)**

Research designs, sampling, measures, and statistical analysis pertaining to social media research.

Prerequisite: COMM 500 or permission of department chair

**COMM 522 - Corporate Communication (3)**

Communication of an organization with its investors, customers, and employees. Interpersonal communication, media campaigns, and training programs are among the strategies examined. Focus will be on the use of media in public relations and corporate advertising processes and related theoretic and empirical research.

Prerequisite: COMM 500.

**COMM 523 - Advanced Crisis Communication (3)**

We will primarily review and analyze how different organizations managed their crisis and/or how the public responded to the crisis. Through this course, students will be able to (1) understand crisis typologies, theoretical backgrounds and applications, and frameworks and methods of crisis communication in different settings and (2) apply this body of knowledge to develop your crisis communication research project that will be helpful in your future academic or professional career.

Prerequisite: COMM 500 or permission of instructor

**COMM 539 - Advanced Public Relations and Social Media (3)**

Examines how brands utilize social media tools to effectively reach their audience. Surveys the latest research on social media usage, audiences and trends. Students produce a social media consultancy report for a non-profit.

Prerequisite: COMM 500

**COMM 543 - Intercultural Communication (3)**

Study and critical examination of theories regarding how communication in and between multinational organizations must be modified to cope with cross-cultural differences. Such cross-cultural differences as those involved in conflict resolution, motivation, and managerial styles and their communication implications may be considered.

Prerequisite: None

**COMM 562 - Communication and Relationship Management (3)**

Reviews how communication and relationship management impact an organization's pursuit of its goals and the satisfaction of personal, interpersonal and organizational needs in a variety of social and cultural contexts.

Prerequisite: COMM 500 or permission of instructor

**COMM 585 - Special Topics (3)**

Study of selected topics in organizational and managerial communication. May be repeated once with different topic.

Prerequisite: COMM 500.

**COMM 586 - Graduate Field Studies in Communication (3)**

On-site group studies in communication. Involves travel outside the United States. May be repeated under different topics for a maximum of six credits.

Prerequisite: COMM 500 or permission of instructor.

**COMM 590 - Independent Study (1-3)**

Reading and research in an approved topic under the guidance of a faculty member in the Communication department. May be repeated with different topics for a maximum of six credits.

Prerequisite: Completion of Communication Core or permission of instructor.

**COMM 597 - Special Project (3)**

Preparation of a special project under the supervision of an advisor. Students must have 24 credits completed or in progress in the M.S. Communication program.

Prerequisite: COMM 500 and a 3.00 overall GPA.

**COMM 599 - Thesis (3)**

Preparation of the thesis under the supervision of the thesis advisor. Students must have 24 credits completed or in progress in the M.S. Communication program.

Prerequisite: COMM 500 and a 3.00 overall GPA.

**CRM - Criminology and Criminal Justice**

**CRM 110 - Introduction to the Criminal Justice System (3)**

Introduction to the structure and operation of the criminal justice system in the United States. Attention will be focused on the individual and institutional levels. Topics include entrance into the criminal justice system, differential treatment of offenders, and the enforcement, judicial, and penal subsystems.

Prerequisite: None

**CRM 202 - Prejudice, Harassment, and Bias Crime in the 21st Century (3)**

This course will provide a historical and contemporary overview of prejudice, harassment, and bias crimes in the

United States with a focus on the increase of hate attacks in the last 5 years. Legislation, offender typologies, and victim categories will also be addressed specifically attacks based on race/ethnicity, religion, sexual orientation/gender identity, and disability. No credit given to students with credit for CRM 302 or AAPI 202.

Cross-Listed as: This course is cross-listed with AAPI 202. No student will receive credit for both CRM 202 and AAPI 202. In addition to being offered in both the CRM major and the newly developed Asian American/Pacific Islander minor, this course addresses prejudice, harassment and bias and their impact on crimes in the United States. Parts of the course will specifically address crimes against those who identify as AAPI and the recent increase in bias attacks against them.

### **CRM 220 - Ideology & Violence (3)**

Examination of the causes and consequences of politically-motivated violent crime.

Prerequisite: None

### **CRM 230 - Law Enforcement & Society (3)**

Comprehensive examination of the function of law enforcement in society. Emphasis is placed on such areas as police operations, discretion, police community relations, due process, use of deadly force, and police corruption and deviance.

Prerequisite: CRM 110 (C- or higher).

### **CRM 231 - Criminal Procedure and the Courts (3)**

Organization and function of American courts, trial procedures, pre- and post-trial motions; legal procedures regarding arrest, interrogation, search and seizure; constitutional protections for the accused.

Prerequisite: CRM 110 (with a grade of C- or higher).

### **CRM 238 - Corrections (3)**

Overview of corrections in America to include sentencing, probation, classification, incarceration, community corrections, and parole. Critical analysis of goals of sentencing, correctional organization and management, alternatives to incarceration, and theories of behavioral change.

Prerequisite: CRM 110 (with a grade of C- or higher).

### **CRM 240 - Gender, Crime and Criminal Justice (3)**

Examines how gender is related to crime and criminal justice, with a particular focus on the experience for females. Topics to be covered include patterns of

victimization and offending by gender, and women in the criminal justice system as offenders and workers. Theories to explain differences in victimization and offending by gender will be explored.

Prerequisite: None

### **CRM 245 - Diversity and Criminal Justice (3)**

Impact of race, ethnicity, and/or gender on the commission of criminal offenses, the likelihood of criminal victimization, and the treatment of criminal offenders. Also examined is the impact of race, ethnicity, and/or gender on those working in the criminal justice system.

Prerequisite: None

### **CRM 260 - Criminology (3)**

Historical and contemporary overview of the nature of crime and causes of criminal behavior. Examination of the relationship between criminological theory and criminal justice policy and practice.

Prerequisite: CRM 110 (C- or higher).

### **CRM 302 - Hate Crimes (3)**

Provides an historical and contemporary overview of hate crimes, hate speech, hate acts, and hate crimes legislation. Focuses on case studies involving crimes against protected classes such as race, gender, religion, ethnicity, disability, and sexual orientation. Students who have taken CRM 401 cannot take this course for credit. No credit given to students with credit for CRM 202 or AAPI 202.

Prerequisite: CRM 230, CRM 231, CRM 238, CRM 260 (all with a grade of C- or higher).

### **CRM 303 - Juvenile Offending: Origins and Interventions (3)**

Introduces students to the theory and research-based causes of juvenile offending and evidence-based intervention. Students who have taken CRM 403 cannot take this course for credit.

Prerequisite: CRM 230, CRM 231, CRM 238, CRM 260 (all with a grade of C- or higher).

### **CRM 305 - Police Crisis Response and Officer Resiliency (3)**

Examines critical incident response and officer resiliency. Topics include crisis intervention models, police operations, stress and trauma, line of duty deaths, persons in crisis, officer-involved shootings, officer health

and well-being, organizational resiliency, and special considerations for police families

Prerequisite: CRM 230, CRM 231, CRM 238, and CRM 260 (all with a grade of C- or higher).

### **CRM 310 - Victimless Crime (3)**

Examines causes, characteristics, and policy relating to so-called victimless crimes like drugs, gambling, prostitution, and pornography. Provides a comprehensive analysis of historical and contemporary legal approaches including prohibition, decriminalization, and regulation. Focuses on strategies that are applied across the world to address these controversial behaviors. Students who have taken CRM 410 cannot take this course for credit.

Prerequisite: CRM 230, CRM 231, CRM 238, CRM 260 (all with a grade of C- or higher).

### **CRM 311 - Community Corrections (3)**

Examination of the use of community corrections in the United States. Topics will include pre-trial and post-sentencing programs such as bail administration, diversion programs, parole, and alternatives to corrections. Students who have taken CRM 411 cannot take this course for credit.

Prerequisite: CRM 230, CRM 231, CRM 238, CRM 260 (all with a grade of C- or higher).

### **CRM 320 - Current Issues in Criminal Justice Policy (3)**

Major issues and ethical considerations related to criminal justice policy and practices. Topics may include gun control, mandatory sentencing, death penalty, drug legalization and privatization. Students who have taken CRM 420 cannot take this course for credit.

Prerequisite: CRM 110, CRM 230, CRM 231, CRM 238, CRM 260 (all with a grade of C- or higher).

### **CRM 321 - Sexual Predators (3)**

Formerly CRM 460. Traces sexually aggressive behavior from its etiology to its manifestation in offering to its impact on the victim to criminal justice system responses to the offender. Topics include profiles of various sex crimes, community supervision of sex offenders, and registration and community notification laws. Students who have taken CRM 460 cannot take this course for credit.

Prerequisite: CRM 230, CRM 231, CRM 238, CRM 260 (all with a grade of C- or higher).

### **CRM 322 - Research Methods in Criminal Justice (4)**

Overview of the methods of inquiry used in criminal justice research, principles of research design, knowledge of research strategies, conducting literature reviews, writing and presenting research ideas, and reading empirical reports.

Prerequisite: CRM 230, CRM 231, CRM 238, and CRM 260 (all with grades of C- or higher).

### **CRM 326 - Racism and Bias in Criminal Justice Settings (3)**

Examines the presence and effects of racism and bias in criminal justice settings such as police interactions, courtrooms, correctional settings, and broader society. Includes historic factors that contribute to the present situation. Considers steps criminal justice professionals can take to reduce disparate treatment and improve outcomes for all groups, especially people of color.

Prerequisite: CRM 230, CRM 231, CRM 238, CRM 260 (all with a grade of C- or higher).

### **CRM 360 - Victimology (3)**

Current theory and research regarding the victims of crime. Topics include victim vulnerability and culpability, restitution, mediation, treatment, and compensation.

Prerequisite: CRM 230, CRM 231, CRM 238, and CRM 260 (all with grades of C- or higher).

### **CRM 362 - Crime and Capitalism (3)**

Critical examination of capitalism in crimes against humanity; white collar, corporate, transnational, and government crime; and the creation of a criminal underclass.

Prerequisite: CRM 230, CRM 231, CRM 238, and CRM 260 (all with grades of C- or higher).

### **CRM 364 - Criminal Justice Risk and Resilience (3)**

Introduction to risk and protective factors related to juvenile crime; factors that encourage or discourage continued involvement in crime as adults (the life-course perspective); and prevention and treatment approaches.

Prerequisite: CRM 230, CRM 231, and CRM 238 and CRM 260 (all with C- or higher).

### **CRM 365 - Criminal Law and Legal Writing (3)**

Sources of criminal law, limitations of criminal laws, the elements of criminal law, criminal law and the



Constitution, criminal defense, and criminal offenses. Fundamental principles of legal writing including memoranda and briefs.

Prerequisite: CRM 230, CRM 231, CRM 238, and CRM 260 (all with grades of C- or higher).

#### **CRM 378 - Current Topics in Criminal Justice (1-3)**

Analysis and evaluation of special topics in the general field of criminology and criminal justice. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: CRM 230, CRM 231, CRM 238, CRM 260 (all with a grade of C- or higher).

#### **CRM 405 - The Death Penalty (4)**

Explores the history and current status of capital punishment in the United States and abroad. The course will dissect the different arguments proposed by supporters and critics of this form of punishment. Contemporary challenges surrounding court processes, death row conditions, and methods of execution are also covered.

Prerequisite: CRM 322 (with a grade of C- or higher)

#### **CRM 407 - Gangs in America (4)**

Provides students with a historical perspective as well as identifying some of the challenges in defining and understanding gangs. Examines theories on gang membership, types of gangs, as well as causes of gang formation. Reviews research on law enforcement tactics, prevention programs, and intervention strategies for reducing gang activity.

Prerequisite: CRM 322 (with a grade of C- or higher)

#### **CRM 409 - Exploring Criminal Justice Through Film (1)**

This is a writing-intensive course designed to explore the criminal justice system through its portrayal in both documentaries and feature films. Students will be asked to apply their understanding of criminology and criminal justice concepts, and their interpretation of scholarly readings, to critically analyze issues that emerge through such films. Students will be expected to formulate and share educated opinions on a variety of topics pertaining to law enforcement, courts, and corrections, including controversial issues such as excessive force, wrongful conviction, and prison corruption.

Prerequisite: CRM 230, CRM 231, CRM 238, CRM 260, and CRM 322 (each completed with a C- or better)

#### **CRM 412 - Crime Prevention (4)**

Explores the theoretical basis and application of crime prevention techniques with a particular focus on environmental criminology and situational crime prevention. Ideological foundations of various crime prevention efforts are examined through case studies and limited fieldwork. Strong emphasis is placed on comparing and contrasting the situational/environmental crime prevention approach with traditional perspectives of crime. Strengths, weaknesses, practicality and policy difficulties of the situational/environmental approach are also examined.

Prerequisite: CRM 322 (with a grade of C- or higher).

#### **CRM 414 - Cybercrime (4)**

Explores the problem of computer-based crime and other deviant behaviors using the internet. Addresses the role of law enforcement and legislation crafted to facilitate the investigation and prosecution of these acts.

Prerequisite: CRM 322 (with a grade of C- or higher) or Cybersecurity majors with at least junior standing

#### **CRM 430 - Domestic Violence (4)**

FORMERLY 330. Theory, research, and current policy on domestic violence; patterns and trends, multi-disciplined theoretical explanations, historic and contemporary criminal justice response to domestic violence are critically analyzed. Majors only. Students who have taken CRM 330 cannot take this course for credit.

Prerequisite: CRM 322 (with grade of C- or higher).

#### **CRM 433 - Independent Study in Criminal Justice (1-3)**

Readings and research in selected areas of criminal justice. Student must present a written study proposal to the instructor directing the research prior to registering for the course. May be repeated for a maximum of 3 credits.

Prerequisite: CRM 322 (with a grade of C- or higher).

#### **CRM 435 - Supervised Field Studies in Criminal Justice I (3)**

Prerequisite: CRM 322 (with a grade of C- or higher), senior status and permission of internship coordinator.

#### **CRM 450 - Drugs and Society (4)**

Selected social issues relating to illegal drug use, including international and national drug trafficking, money laundering, drug enforcement, drug-related crimes, prevention strategies, and legalization.

Prerequisite: CRM 322 (with a grade of C- or higher).

**CRM 461 - Ethical Dilemmas & Decision Making in Criminal Justice (4)**

FORMERLY CRM 361. Explores ethical dilemmas encountered by criminal justice professionals in the fields of law enforcement, courts, and corrections. Analyzes different ethical frameworks that can be applied toward criminal justice decision making. Students who have taken CRM 361 cannot take this course for credit.

Prerequisite: CRM 322 (with grade of C- or higher).

**CRM 463 - Constitutional Law and the Criminal Justice System (4)**

FORMERLY CRM 363. Examines the various areas the Constitution affects. Topics include the concept of federalism, the incorporation clause, interstate commerce and the federal criminal code, limitations on civil liberties, and prisoners' rights. Students who took this course as CRM 363 cannot take this course for credit.

Prerequisite: CRM 322 (with grade of C- or higher).

**CRM 466 - Extreme Offending (4)**

Explores perpetrators whose crimes fall outside the realm of traditional patterns of offending. Topics include serial murder, cult murder/suicide, major corporate malfeasance, and terrorism. Students will analyze perpetrators through available scholarship and source material. Person and environmental factors that conceptually link different types of perpetrators will be explored. Students who have taken CRM 366 cannot take this course for credit.

Prerequisite: CRM 322 (with grade of C- or higher).

**CRM 469 - Contemporary Policing (4)**

Current issues in the field of law enforcement will be discussed with particular relevance on the impact of the role of police in society. Some topics may include issues on policing philosophies such as community policing, evidence based policing, intelligence led policing and emerging issues in the discipline. Students who have taken CRM 369 cannot take this course for credit.

Prerequisite: CRM 322 (with grade of C- or higher).

**CRM 470 - Media, Culture, & Crime (4)**

Examines, critiques, and explores how crime is represented in mass media in comparison to the reality of crime in our culture. The focus is on how crime and the criminal justice system are represented in the media versus the reality of crime and the criminal justice system,

what types of criminality are most pervasive, and a working knowledge of what may be done to prevent crime.

Prerequisite: CRM 322 (with grade of C- or higher)

**CRM 471 - Mental Health and the Criminal Justice System (4)**

Examines the manner in which individuals with serious mental illnesses are processed within the criminal justice system. Ultimately, students develop the requisite skills to compare and contrast the realities of mental illness and co-occurring disorders to typical criminal justice system responses and explore evidence-based practice associated with the topic.

Prerequisite: CRM 322 (with grade of C- or higher)

**CRM 472 - "Cults" and Conspiracies: From Belief to Destructive Action (4)**

Explores beliefs in conspiracy theories as well as membership in "cult" groups. Analyzes how these beliefs and affiliations are established and maintained and how some individuals come to take destructive action in response to those beliefs. Individually, and in relationship to each other, conspiracy theories and cults will be explored from the perspective of psychology and criminology.

Prerequisite: CRM 322 (with grade of C- or higher)

**CRM 473 - Criminal Justice Policy and Program Development (4)**

Provides a detailed understanding of planned change processes in criminal justice agencies. Specific attention will be given to introducing planned change models and applying these models to real world problems.

Prerequisite: CRM 322 (with grade of C- or higher)

**CRM 475 - Controlling Anger and Aggression (4)**

Multi-disciplinary overview of theory and research on anger and aggression. Topics include the emotion of anger, theories of aggression, and intervention strategies.

Prerequisite: CRM 322 (with a grade of C- or higher).

**CRM 478 - Current Topics in Criminal Justice (4)**

Analysis and evaluation of special topics in the general field of criminology and criminal justice. May be repeated with different topics for a maximum of 8 credits.

Prerequisite: CRM 322 (with a grade of C- or higher).

**CRM 480 - Death Investigations (3)**

Overview of the purpose of death investigations and the role of the Chief Medical Examiner. Students will learn about various types of death investigations and the important evidence and information needed in each type of crime scene.

Prerequisite: Admission to the Advanced Detective Certificate program or permission of program coordinator.

**CRM 481 - Sexual Assault Investigation (3)**

Overview of the detective's role and responsibilities during a sexual assault investigation including juvenile sexual assault. Students will gain a deep understanding of the policies, practices, roles, and responsibilities of detectives during a sexual assault investigation. This course is linked with CJ 581. No credit will be given for linked equivalent.

Prerequisite: Admission to the Detective Certificate program or permission of program coordinator.

**CRM 482 - Police Involved Shootings & Crime Scene Investigations (3)**

Overview of the detective's role and responsibilities during a police involved shooting and crime scene processing. Students will gain a deep understanding of the policies, practices, roles, and responsibilities of detectives in the investigative process. This course is linked with CJ 582. No credit will be given for linked equivalent.

Prerequisite: Admission to the Detective Certificate program or permission of program coordinator. This course is linked with CJ 582. No credit will be given for linked equivalent.

**CRM 483 - Interview & Interrogation (3)**

Overview of the detective's role and responsibilities during the interview and interrogation process. Students will learn how to initiate an interview, build rapport, and identify physical signs of stress commonly associated with deceptive subjects. This course is linked with CJ 583. No credit will be given for linked equivalent.

Prerequisite: Admission to the Detective Certificate program or permission of program coordinator.

**CRM 484 - Expectation of Privacy (3)**

Overview of the detective's role and responsibilities during a search and seizure. Students will gain a deep understanding of the policies, practices, roles, and responsibilities of detectives for search and seizure. This

course is linked with CJ 584. No credit will be given for linked equivalent.

Prerequisite: Admission to the Detective Certificate program or permission of program coordinator. This course is linked with CJ 584. No credit will be given for linked equivalent.

**CRM 485 - Financial Crime Investigation (3)**

Overview of the detective's role and responsibilities during a financial crime investigation. Students will learn how to identify various types of financial crimes, understand resources available to investigate them, and gain the confidence conducting these types of investigations. This course is linked with CJ 581. No credit will be given for linked equivalent.

Prerequisite: Admission to the Detective Certificate program or permission of program coordinator.

**CRM 489 - Special Topics in Investigations (1-3)**

Study of investigative techniques, theories and best practices. May be repeated with different topics for up to 6 credits.

Prerequisite: Admission to the Detective Certificate program or permission of program coordinator.

Cross-Listed as: CJ 589 . This course is linked to CJ 589. Students who have taken CJ 589 on the same topic will not be granted credit.

**CS - Computer Science****CS 110 - Introduction to Web Programming (3)**

This course provides a broad introduction to web programming and related technologies. Topics include the use of HTML for page layout, CSS for page styles, and JavaScript for creating interactive content. This course does not count towards the Computer Science major.

Prerequisite: None

**CS 113 - Introduction to Computer Programming (3)**

Introduction to computer programming together with the consideration of the impact of computers on society. Emphasis on logical problem-solving and algorithms. Does not count towards the Computer Science major.

Prerequisite: None

**CS 117 - Introduction to Coding and Game Development (3)**

Introduction to computer programming through basic game development and coding, using game development platform methods for graphics, animation, game mechanics, and user interface. Includes introduction to C# coding. Does not count towards the Computer Science major.

Prerequisite: Grade C- or better in MATH 102 or MATH 103

**CS 121 - C Programming Practicum for Engineers (3)**

Introduction to system-level and low-level programming with C language using GNU Compiler Collection (GCC). Special attention will be devoted to proficiency with memory management, pointers manipulation, bitwise operation, and debugging. This course emphasizes the importance of learning by doing in the form of assignments on a regular basis. Three-hour lecture per week.

Prerequisite: Grade C- or better in MATH 119 or MATH 115 or MATH 116.

**CS 122 - C++ Programming Practicum for Engineers (3)**

Leverages existing knowledge of C programming and covers all the essential capabilities of the most recent C++ standard, illustrating their specificities as well as how the language can be used to model object-oriented implementation of engineering problems in hierarchical approaches. Projects focus on solving real world problems following a standard development process. This course emphasizes the importance of learning by doing in the form of assignments on a regular basis. Three-hour lecture per week.

Prerequisite: Grade C- or better in CS 121 and (MATH 119 or MATH 115 or MATH 116).

**CS 140 - Survey of Computer Science (3)**

Introduction to foundational concepts of computer science including computational thinking, algorithms, data and information, the internet, programming, and social impacts.

Prerequisite: MATH 101 (C- or higher) or MATH 102 (C- or higher) or MATH 103 (C- or higher) or placement exam

**CS 151 - Computer Science I (3)**

First course in Computer Science. Introduces the fundamental concepts of computer programming with an object-oriented language with an emphasis on analysis

and design. Topics include data types, selection and iteration, instance variables and methods, arrays, files, and the mechanics of running, testing and debugging.

Prerequisite: May be taken concurrently or Grade C- or better in (MATH 135 or MATH 152 or MATH 217 or MATH 218) or placement test.

**CS 152 - Computer Science II (3)**

Further topics in object-oriented programming: inheritance, polymorphism, and Java interfaces. Event-driven programming. Elementary searching and sorting techniques. Recursion. Design with UML diagrams. Introduction to software engineering.

Prerequisite: Grade C- or better in CS 151 and (MATH 135 or MATH 152 or MATH 217 or MATH 218).

**CS 153 - Computer Science III (3)**

Study of a second programming language from an advanced standpoint, introduction to data structures, integrated development environments, and team software development.

Prerequisite: Grade C- or better in CS 152.

**CS 207 - Introduction to Computer Graphics (3)**

This course will use the computer facilities to produce abstract designs and images, with special emphasis on color forms, shapes, texture, and basic design.

Prerequisite: ART 110, ART 112 or ART 113 and either MATH 099 or placement test.

**CS 210 - Computing and Culture (3)**

Evolution of computing from early data processing to global networking. Examination of how society has accepted and transformed role of digital technology within its cultures and institutions. Emphasis on human-computer interaction, electronic communities, and examples of their applications. Online resources will be used. Does not count towards the Computer Science major.

Prerequisite: None

**CS 213 - Applications of Computing I (3)**

Focuses on the use of programming techniques to solve problems encountered in the areas of mathematics, life science, physical science, engineering, education, and social science. Does not count towards the Computer Science major.

Prerequisite: MATH 115 or MATH 116 or MATH 119 or MATH 125 or placement examination.

**CS 214 - Applications of Computing II (3)**

Advanced topics in object-oriented programming. Event-driven and recursive programming. Searching and sorting techniques. Introduction to software engineering issues.

Prerequisite: CS 213.

**CS 225 - Human-Computer Interaction (3)**

Introduction to human-computer interaction (HCI). Introduces tools, techniques, and sources of information about HCI and provides a systematic approach to designing working prototypes. Increases appreciation of good design through observation of existing technology, and teaches the basic skills of task analysis, and analytic and empirical evaluation methods.

Prerequisite: Grade C- or better in both CS 151, CS 152.

**CS 253 - Data Structures and Introduction to Algorithms (3)**

A software design course with emphasis on theory and techniques underlying the analysis of algorithms in terms of computational complexity and Abstract Data Types (ADTs). Topics include review of basic data structures, recursion, linear and hierarchical ADTs (trees, graphs), sorting and searching, and graph algorithms.

Prerequisite: Grade C- or better in CS 152 and (MATH 135 or MATH 152 or MATH 217 or MATH 218).

**CS 254 - Computer Organization and Assembly Language Programming (3)**

Concepts of assembly language, machine language, macro-instructions, subroutines, program checkout, interrupt structure of assemblers, and use of operating system.

Prerequisite: Grade C- or better in either CS 151 or MATH 471.

**CS 290 - Topics in Computer Science (1-3)**

This course will provide an opportunity to introduce into the curriculum elementary topics of current interest. May be repeated with different topics for up to 6 credits.

Prerequisite: Grade C- or better in CS 151 or equivalent, and permission of instructor.

**CS 291 - Introduction to Computer Forensics (3)**

An introduction to modern computer forensics. Topics include: tools and platforms for evidence collection, disk and file system analysis, operating systems and their artifacts, email investigations, file formats and data recovery, ethical and legal aspects.

Prerequisite: Grade of C- or better in CS 151

Cross-Listed as: Cross listed as CYS 291. No credit given to students with credit for CYS 291.

**CS 300 - Computer Science Work Experience (1-3)**

A one-semester employment experience relevant to the Computer Science program. Applying and augmenting student's current computer science knowledge, and observing the state-of-the-practice in the context of employment. May be repeated for up to 3 credits.

Prerequisite: Grade of C- or better in CS 253 and permission of department

**CS 354 - Digital Systems Design (3)**

PHYS 338 must be taken concurrently by those students whose program requires PHYS 338. An introduction to the analysis and design of digital systems in terms of logical and sequential networks. Various minimization techniques are studied.

Prerequisite: Grade C- or better in both CS 254 and either MATH 217 or MATH 218.

**CS 355 - Systems Programming (3)**

Design and development of systems software. Topics include machine and operating system organization, operating systems concepts, hardware/software interfaces, hardware-specific constraints on software applications, and using application programming interfaces and system libraries for the design and development of systems applications.

Prerequisite: Grade C- or better in both CS 253 and (CS 254 or CET 229)

**CS 385 - Computer Architecture (3)**

The architecture of the computer is explored by studying its various levels: physical level, operating system level, conventional machine level and higher levels. An introduction to microprogramming and computer networking is provided.

Prerequisite: CS 354.

**CS 398 - Independent Study in Computer Science (1-3)**

Special independent work to meet individual interest in areas not covered by regular curriculum. Work will be under the supervision of a faculty member and in an area and for an amount of credit agreed upon prior to registration for the course.

Prerequisite: CS 152 and CS 254.

**CS 407 - Advanced Topics in Computer Science (1-3)**

This course provides an opportunity to introduce into the curriculum topics of interest and new courses on an experimental basis. May be repeated with different topics for up to 6 credits.

Prerequisite: Grade C- or better in both CS 253 and CS 254 and permission of instructor. Graduate students must obtain permission of instructor.

**CS 409 - Advanced CS Topics in Cybersecurity (3)**

This course provides an opportunity to introduce into the curriculum computer science related cybersecurity topics of interest and new courses on an experimental basis. May be repeated with different topics for up to 6 credits.

Prerequisite: Grade C- or better in both CS 253 and (CS 254 or CET 229) and permission of instructor. Graduate students must obtain permission of instructor.

Cross-Listed as: Cross listed as CYS 409. No credit given to students with credit for CYS 409.

**CS 410 - Software Engineering (3)**

An examination of the software development process from the initial requirement analysis to the operation and maintenance of the final system. The scope of the course includes the organization of software development projects, the verification and validation of systems, the problems of security and privacy, and the legal aspects of software development, including software protection and software liability.

Prerequisite: Grade C- or better in 6 credits of CS courses 400 level or higher, or permission of instructor

Cross-Listed as: CS 510

**CS 414 - Mobile App Development (3)**

This course provides an introduction to mobile application development. The course focuses on the fundamentals of mobile app development using modern application architecture and industry best practices. With a hands-on approach, students build a variety of mobile apps incorporating layouts, multimedia, APIs, database, sensors and background processes.

Prerequisite: C- or better in CS 253

**CS 415 - Computer Game Development (3)**

An introduction to the fundamental concepts of computer game programming. Students design and develop original computer games applying proven game design and software engineering principles. Topics include computer

graphics and animation, elements of artificial intelligence, game-specific algorithms, human-computer interaction, as well as principles of physics and mathematics for collision detection and object interaction.

Prerequisite: Grade C- or better in CS 253.

**CS 416 - Web Programming (3)**

An examination of client and server side programming to achieve advanced data-driven web applications. The course will examine key concepts of both the client and server side processing of a data-driven web applications, as well as, other topics including web architecture patterns, and security considerations. The course will focus on the foundations of these topics in terms of their relevance in making theoretical design choices as well as how they can be implemented in practice.

Prerequisite: Grade C- or better in CS 253.

**CS 417 - Design Patterns (3)**

An in-depth study of understanding how to apply and implement advanced object oriented design patterns. Students will be introduced to a broad array of proven design patterns, when they should be used, and how to implement them in practice.

Prerequisite: Grade of C- or better in CS 253

**CS 418 - Principles of Software Testing and Quality Assurance (3)**

An examination of the processes, principles, and techniques of software testing and analysis. Topics include test life cycle planning, test design and coverage analysis, complexity, and levels and types of testing. Students will become acquainted with both the strengths and limitations of various functional and structural testing methods.

Prerequisite: C- or better in CS 253

Cross-Listed as: CS 506

**CS 419 - Usable Security and Privacy (3)**

The role of human factors in securing cyber-systems is increasingly seen as a crucial factor. This course introduces students to the implications of human factors on security and privacy of cybersystems. The goal of this course is to teach students the methods of identifying usability, security and privacy issues in a given cyber-system and designing secure cyber-systems with a human-centric focus. To this end, students will learn fundamental principles of authentication, risk communication, privacy, human-computer interaction (HCI), designing user studies,

and qualitative and quantitative data analysis techniques. No prior experience in security, privacy, or human-computer interaction is required.

Prerequisite: Grade C- or better in both CS 253 and CS 254

Cross-Listed as: CYS 419

### **CS 423 - Computer Graphics (3)**

Wire frame and solid graphics in two and three dimensions, data structure for computer graphics, geometrical transformations in computer graphics, raster, and vector display device technologies.

Prerequisite: Grade C- or better in CS 253 or (for graduates) CS 501.

### **CS 425 - Image Processing (3)**

Theory and algorithms of image processing and their implementation in computer programs. Image representation, sampling theory, image transforms, image enhancement, texture analysis, feature extraction, and computer vision.

Prerequisite: Grade C- or better in CS 253.

### **CS 430 - Big Data Programming (3)**

This course will familiarize students with the most important information technologies and programming techniques used in manipulating, storing, visualizing, and processing big data. The emphasis of the course will be on programming tools, machine learning algorithms, and using these to initiate and design highly scalable systems that can accept, store, and process large volumes of data in batch mode and/or real time.

Prerequisite: C- or higher in both CS 253 and (MATH 226 or MATH 228)

### **CS 445 - Machine Learning (3)**

Machine Learning is the study of algorithms and computational paradigms that allow computers to find patterns and regularities in data, perform prediction and forecasting, and generally improve performance through interaction with data. The course covers fundamental machine learning methods for data preprocessing, knowledge representation and visualization, classification, prediction, and clustering, as well as Deep Learning methods. Important applications of Machine Learning as Data Mining, Text and Web Mining are also discussed. Students will use current machine learning software for hands-on exercises and projects.

Prerequisite: C- or better in both CS 253 and (MATH 217 or MATH 218)

### **CS 446 - Introduction to Machine learning for Cybersecurity (3)**

This course provides an exploration of the application of advanced machine learning (ML) techniques in the context of cybersecurity. Students will delve into the theoretical foundations and practical methodologies of leveraging ML to tackle complex cybersecurity challenges. The course emphasizes hands-on experience through practical exercises, case studies, and real-world applications.

Prerequisite: C- or better in CS 253 and (CS 492 or CYS 492) or permission of instructor.

Cross-Listed as: CYS 446. No credit granted to students with credit for CYS 446

### **CS 455 - Principles of Secure Software Development (3)**

This course introduces a variety of topics on implementing secure software using different programming languages. The primary focus is given to design and development techniques used to avoid the most common software errors by using defensive coding techniques, managing resources securely, and creating secure interaction between components.

Prerequisite: Grade C- or better in CS 355

Cross-Listed as: Cross listed with CS 455. No credit given to students with credit for CYS 455 or CS 515.

### **CS 460 - Database Concepts (3)**

Data base systems are considered from both the designer's and user's point of view. Physical implementation and data access techniques are studied.

Prerequisite: Grade C- or better in CS 253 or (for graduates) CS 501.

### **CS 462 - Artificial Intelligence (3)**

Presentation of artificial intelligence as a coherent body of ideas and methods to acquaint the student with the classic programs in the field and their underlying theory. Students will explore this through problem-solving paradigms, logic and theorem proving, language and image understanding, search and control methods, and learning.

Prerequisite: Grade C- or better in CS 253 or (for graduates) CS 501.

### **CS 463 - Algorithms (3)**

Topics include asymptotic analysis of algorithms, brute force, divide and conquer, dynamic programming, greedy algorithms, graph and network algorithms, parallel and

distributed algorithms. Theory of computational complexity is also considered.

Prerequisite: Grade C- or better in CS 253 or (for graduates) CS 501.

### **CS 464 - Programming Languages (3)**

Emphasis on programming languages as one of many tools in the software development effort. Comparison of different language usages of data types, information hiding, control structures, block structure, sub-programs, re-entrance, and recursion.

Prerequisite: Grade C- or better in CS 253 or (for graduates) CS 501.

### **CS 465 - Compiler Design (3)**

Current techniques of compiler writing. Introduction to formal grammar and parsing techniques is given. Problems of semantic phase are discussed and some solutions are given. Optimization techniques are discussed.

Prerequisite: Grade C- or better in CS 355.

### **CS 473 - Simulation Techniques (3)**

Basic principles of simulation methods using digital computers. Topics covered include random number generators, stochastic variate generators, computer models, and simulation languages.

Prerequisite: Grade C- or better in either CS 152 or CS 213, and a grade of C- or better in STAT 315.

### **CS 474 - Semantic Web (3)**

This course provides an introduction to the field of Semantic Web. It will cover key ideas, languages, and technologies of the Semantic Web, including RDF and its serializations, OWL, and SPARQL.

Prerequisite: C- or better in CS 253 or permission of instructor.

### **CS 475 - Linked Data Engineering (3)**

Study of the foundations of Linked Data, Knowledge Graphs and ontological engineering. The course covers modelling paradigms for linked data including RDF and RDF Schema, Web Ontology Language (OWL), SPARQL query language, and SHACL, as well as various vocabularies for building Linked Data applications.

Prerequisite: C- or better in CS 462 (may be taken concurrently)

### **CS 481 - Operating Systems Design (3)**

Theory and design of computer operating systems. Topics include machine and interrupt structure, memory, processor, device, and information management.

Prerequisite: Grade C- or better in CS 253 and either CS 153 or CS 355; or CS 501 for graduate students.

### **CS 483 - Theory of Computation (3)**

The concept of algorithm, correctness and efficiency of algorithm, decidable vs. undecidable problems, recursion, halting problem, formal languages, context free and context-sensitive grammars, and introduction to automata and parallel algorithms.

Prerequisite: Grade C- or better in both CS 253 and either MATH 217 or MATH 218.

### **CS 490 - Computer Communications Networks & Distributed Processing (3)**

Study of networks of interacting computers. The problems, rationale, and possible solution for both distributed processing and distributed data bases will be examined.

Prerequisite: Grade C- or better in both CS 253 and CS 254. CS 501 and CS 502 are prerequisites for graduate students.

### **CS 491 - Wireless Communication Networks (3)**

Theory and analysis of wireless and mobile computing, and wireless communication networks. Topics include wireless network architectures, mobile Internet protocols, mobility management algorithms, performance and optimization issues, and emerging technologies.

Prerequisite: Grade C- or better in both CS 253 and CS 254.

### **CS 492 - Computer Security (3)**

The fundamentals of computer and network security issues are explored. Topics include classical and modern techniques of conventional encryption; algorithms; public-key encryption, hash functions, and quantum resilience; software reverse engineering; and system security intruders, viruses, worms, and firewalls.

Prerequisite: Grade C- or better in both CS 253 and either CS 254 or CET 229, or Permission of Department Chair, or admission to a graduate program in CIT. CS 501 and CS 502 are prerequisites for graduate students.

Cross-Listed as: Cross listed as CYS 492. No credit given to students with credit for CYS 492.



**CS 493 - Secure Software Designs (3)**

Study of the approaches, mechanisms, and tools used to make software systems more secure. We will motivate the study by discussing common software security threats. The majority of the course will be divided into four main modules: architectural approaches to building secure software (e.g., confinement, virtual machines, trusted computing); software analysis (e.g., static analysis and testing, model checking); language-based approaches to building secure software (e.g., type systems, proof-carrying code); and run-time enforcement of security policies (e.g., dynamic taint analysis).

Prerequisite: C- or better in CS 253 and either CS 254 or CET 229

Cross-Listed as: Cross listed as CYS 493. No credit given to students with credit for CYS 493.

**CS 494 - Cryptographic Systems (3)**

An introduction to modern cryptography as used in software systems. Topics include: block and stream ciphers, symmetric-key encryption, one-way functions, computational complexity, public key encryption, key management, hash functions, digital signatures, digital certificates, and authentication protocols.

Prerequisite: C- or better in either CS 254 or CET 349, and MATH 217 or MATH 218.

Cross-Listed as: Cross listed as CYS 494. No credit given to students with credit for CYS 494.

**CS 495 - Legal, Social, Ethical, and Economic Issues in Computing (3)**

Topics include privacy, security, law of torts in computing, and legal protection of software.

Prerequisite: Permission of instructor.

**CS 496 - Software Reverse Engineering (3)**

This course is designed to provide students with an understanding of Software Reverse Engineering (SRE) techniques, emphasizing hands-on lab exercises. The discipline of reverse engineering plays a crucial role in deducing the design of software components, understanding how software works, recovering software specifications, discovering data used by software, and aiding in the analysis of software through disassembly and decompilation. This skill is particularly essential in the cyber operations field for tasks such as malware analysis and auditing closed- source software.

Prerequisite: C- or better in both CS 253 and CS 254.

Cross-Listed as: CYS 496. No credit granted to students with credit for CYS 496.

**CS 498 - Senior Project (3)**

Opportunity for students to participate in design and implementation of a large project by a small team. Project chosen in consultation with instructor will help analyze the impact of computing on individuals, organizations, and society, including ethical, legal, security, and global policy issues. All software projects will include information management, networking and communication, and user interaction components. Includes lectures and seminars reflecting on professional, ethical, and social responsibilities of computing professionals, as well as the need for professional development and life-long learning.

Prerequisite: Senior standing, 21 credits toward major including a grade C- or better in CS 410.

**CS 499 - Seminar in Computer Science (3)**

Opportunity for student to explore topics of current interest not covered in normal curriculum. Majors only.

Prerequisite: None

**CS 500 - Computer Science for Computer Information Technology (3)**

I.T. program coordinator. Concepts of computer science, including software analysis and design, inheritance, polymorphism, recursion, elementary sorting, and programming using arrays, sequential files, and linked lists.

Prerequisite: Permission of department chair or CIT Program Coordinator.

**CS 501 - Foundations of Computer Science (3)**

Software design for structuring and manipulating data. Topics include stacks, queues, hash tables, trees, graphs, advanced sorting, and analysis of algorithms.

Prerequisite: CS 500 or permission of instructor.

**CS 502 - Computing and Communications Technology (3)**

Comprehensive coverage of the concepts of computer networking, and computer architecture and organization required to enable students to understand and efficiently utilize computing and communication resources. Development of distributed computer applications.

Prerequisite: Admission to the CIT program or permission of the program director.

**CS 505 - Design Patterns (3)**

An in-depth study of designing and implementing complex systems using proven architectural patterns for structuring, creating, and manipulating object orientated systems. Students will learn how to apply and implement a broad array of proven design patterns, when they should be used, and how to implement them in practice.

Prerequisite: CS 501 or admission to Software Engineering MS program

**CS 506 - Software Testing and Quality Assurance (3)**

An examination of the processes, principles, and techniques of software testing and analysis. Topics include test life cycle planning, test design and coverage analysis, complexity, and levels and types of testing. Students will become acquainted with both the strengths and limitations of various functional and structural testing methods, as well as techniques for proving the functional correctness.

Prerequisite: CS 501 or admission to Software Engineering MS program

**CS 507 - Advanced Mobile App Development (3)**

The course focuses on the fundamentals of mobile app development using modern application architecture and industry best practices. With a hands-on approach, students build a variety of mobile apps incorporating layouts, multimedia, APIs, database, sensors and background processes. No credit given to students with CS 414

Prerequisite: CS 501 or admission to Software Engineering MS program

**CS 508 - Distributed Computing (3)**

The course covers the history of distributed computing, network basics, inter-process communications, distributed computing paradigms, the socket API, The client-server paradigm, group communication, distributed objects, internet applications, advanced distributed computing paradigms.

Prerequisite: CS 501 or admission to the Software Engineering MS program

**CS 510 - Fundamentals of Software Engineering (3)**

An examination of the software development process from the initial requirement analysis to the operation and maintenance of the final system. The scope of the course includes the organization of software development projects, the verification and validation of systems, the

problems of security and privacy, and the legal aspects of software development, including software protection and software liability. No credit given to students with CS 410.

Prerequisite: CS 501 or admission to Software Engineering MS program

Cross-Listed as: CS 410 Software Engineering

**CS 511 - Advanced Software Reverse Engineering (3)**

This course is designed to provide students with a comprehensive understanding of Software Reverse Engineering (SRE) techniques, emphasizing hands-on lab exercises. The discipline of reverse engineering plays a crucial role in deducing the design of software components, understanding how software works, recovering software specifications, discovering data used by software, and aiding in the analysis of software through disassembly and decompilation. This skill is particularly essential in the cyber operations field for tasks such as malware analysis and auditing closed-source software.

Prerequisite: CS 501 and CS 502 or admission to Software Engineering MS program or permission of Department Chair.

Cross-Listed as: CYS 511. No credit granted to students with credit for CYS 511.

**CS 515 - Secure Software Development (3)**

This course examines a range of topics concerning secure software development using different programming languages including: software design and development techniques used to avoid the most common software errors, defensive software construction techniques, secure resource management, secure component interaction.

Prerequisite: CS 501 or Admission to MS Software Engineering

Cross-Listed as: No credit granted to students who have already completed CYS 455 or CS 455.

**CS 525 - Advanced Algorithms (3)**

Advanced topics in the design and analysis of algorithms such as amortized analysis, linear programming, network flows, randomized algorithms, NP-completeness, approximation algorithms, online algorithms, and parallel algorithms. Students should have completed Calculus I and Discrete Mathematics before enrolling in this course.

Prerequisite: CS 501 or admissions to the Software Engineering MS program

**CS 530 - Advanced Software Engineering (3)**

Study of the software lifecycle including requirements analysis, specification, design, coding, testing, and maintenance. Includes proofs of correctness and techniques of formal specification.

Prerequisite: CS 510

**CS 540 - CS Topics in Cybersecurity (3)**

Current computer science topics in the field of cybersecurity pertaining to research, development, practice, industry, professionalism, ethics, and society. No credit given to students with CS 409.

Prerequisite: CS 410 (C- or better), or CS 510, or CS 530, or permission of instructor.

**CS 545 - Machine Learning for Data Mining (3)**

Study of algorithms and computational paradigms that allow computers to find patterns and regularities in data, perform prediction and forecasting, and generally improve performance through interaction with data. The course covers fundamental Data Mining and Machine Learning methods for data preprocessing, knowledge representation and visualization, classification, prediction and clustering. Important applications such as Data Warehousing, Association Mining, Text and Web Mining are also discussed. The students use current Data Mining software.

Prerequisite: CS 501 or admission to the Data Mining or Software Engineering MS program.

**CS 546 - Machine Learning in Cybersecurity (3)**

This course provides an in-depth exploration of the application of advanced machine learning (ML) techniques in the context of cybersecurity. Students will delve into the theoretical foundations and practical methodologies of leveraging ML to tackle complex cybersecurity challenges. The course emphasizes hands-on experience through practical exercises, case studies, and real-world applications.

Prerequisite: CS 501 and (CS 592 or CYS 592) or permission of instructor.

Cross-Listed as: CYS 546. No credit granted to students with credit for CYS 546.

**CS 550 - Topics in Human-Computer Interaction (3)**

Study of the design, evaluation and implementation of interactive computing systems for the joint performances of tasks by humans and machines, algorithms and programming of the interface, and engineering concerns

and design tradeoffs. Topics include computer-supported cooperative work, modeling intelligence, multimedia systems, and user interface design.

Prerequisite: CS 501, CS 502.

**CS 560 - Topics in Software Engineering (3)**

Current topics in the field of software engineering pertaining to research, development, practice, industry, professionalism, ethics, and society.

Corequisite: C- or better in CS 410, or CS 510, or CS 530, or permission of instructor

**CS 565 - Introduction to Bioinformatics (3)**

An introduction to algorithms used in computational analysis of molecular biology. Techniques will include primer, greedy algorithms and genome rearrangements, dynamic programming algorithms, divide and conquer algorithms, sequence alignment (global alignment, scoring matrices, local alignment and alignment with affine gap penalties), combinatorial pattern matching, hidden Markov Models, randomized algorithms and motif finding, and molecular evolution.

Prerequisite: CS 501 or admission to Software Engineering MS program

**CS 570 - Topics in Artificial Intelligence (3)**

Topics include advanced techniques for symbolic processing, knowledge engineering, and building problem solvers.

Prerequisite: CS 501, CS 502.

**CS 575 - Linked Data Engineering (3)**

Study of the foundations of Linked Data and the Semantic Web. Explores the evolution of the web of documents from a collection of big standalone data sets to a common interlinked collection of data that can be exchanged, reused, and integrated. The course covers Resource Description Framework (RDF), RDF serializations, RDFS-based knowledge engineering, SPARQL query language, OWL and ontological engineering, and applications.

Prerequisite: CS 505 and CS 530, or permission of instructor

**CS 580 - Topics in Database Systems and Applications (3)**

Database technology needed to develop and manage sophisticated database systems. Topics include design of database management systems, advanced database applications, hypermedia, and object-oriented database management systems.

Prerequisite: CS 501, CS 502.

### **CS 590 - Topics in High Performance Computing and Communications (3)**

Design, implementation, and evaluation of high performance computing and communications technologies for the development of distributed multimedia systems. Topics include distributed systems, parallel computing, modern operating systems, and network administration.

Prerequisite: CS 481, CS 501, CS 502.

### **CS 592 - Advanced Computer Security (3)**

The fundamentals of computer and network security issues are explored. Topics include classical and modern techniques of conventional encryption; algorithms; public-key encryption, hash functions, and quantum resilience; software reverse engineering; and system security intruders, viruses, worms, and firewalls.

Prerequisite: CS 501 or admission to Software Engineering MS program or permission of Department Chair.

Cross-Listed as: CYS 592. No credit granted to students with credit for CYS 592.

### **CS 593 - Advanced Secure Software Designs (3)**

Advanced study of the approaches, mechanisms, and tools to make software systems more secure. We will motivate the study by discussing common software security threats. The majority of the course will be divided into four main modules: architectural approaches to building secure software (e.g., confinement, virtual machines, trusted computing); software analysis (e.g., static analysis and testing, model checking); language-based approaches to building secure software (e.g., type systems, proof-carrying code); and run-time enforcement of security policies (e.g., dynamic taint analysis).

Prerequisite: Grade C- in CS 501, or admission to Software Engineering MS program or Permission of Department Chair.

Cross-Listed as: CYS 593. No credit granted for students with credit for CYS 593.

### **CS 594 - Graduate Research Seminar (3)**

An opportunity for students to explore various topics of interest. Research topics will span many diverse areas of software engineering ranging from the application of theoretical foundations to the most current industrial practices. Additional topics will include the use of modern software engineering techniques such as agile methods,

tools and environments, automated code generation, testing strategies, patterns, metrics in the development process, successful teamwork, ethical issues, professional development and lifelong learning.

Prerequisite: CS 505, CS 506, CS 508, and CS 530

### **CS 595 - Capstone in Software Engineering (3)**

Capstone integrative experience requiring analysis, design and implementation of an advanced team project of significant size and scope on software engineering related topic. Requirements include a research paper, oral presentation, and completed application project.

Prerequisite: Completed Software Engineering MS core and at least 3 elective courses within the program, permission of advisor, and a 3.00 overall GPA

## **CYS - Cybersecurity**

### **CYS 227 - Introduction to Cybersecurity (3)**

Broad introduction to the field of cybersecurity. Information assurance terminology and issues in context of the rules and guidelines that control them. Methodologies and technologies for assurance. Security policies and laws related to cyber defense.

Prerequisite: CET 249 (C- or higher)

### **CYS 291 - Introduction to Computer Forensics (3)**

An introduction to modern computer forensics. Topics include: tools and platforms for evidence collection, disk and file system analysis, operating systems and their artifacts, email investigation, file formats and data recovery, ethical and legal aspects.

Prerequisite: Grade of C- or better in CS 151

Cross-Listed as: Cross listed as CS 291. No credit given to students with credit for CS 291.

### **CYS 400 - Internship & Senior Seminar (1-3)**

This course is designed to provide students an opportunity to observe, participate and work in an environment directly related to cybersecurity. The internship is a program of experiences tailored for each intern within a specific cooperating company. Students must be employed during the semester they enroll.

Prerequisite: Completion of 75 credits in the degree or Permission of Department Chairperson.

### **CYS 407 - IT Topics in Cybersecurity (3)**

Comprehensive study of a specialized or emerging cybersecurity topic in IT. Course may be repeated for a

maximum of 6 credits for different topics. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CET 349 with a grade of C- or higher or permission of department chair; Graduate students must obtain permission of department chair.

Cross-Listed as: Cross listed with CET 407. No credit given to students with credit for CET 407

### **CYS 409 - Advanced CS Topics in Cybersecurity (3)**

This course provides an opportunity to introduce into the curriculum computer science related cybersecurity topics of interest and new courses on an experimental basis. May be repeated with different topics for up to 6 credits.

Prerequisite: Grade C- or better in both CS 253 and (CS 254 or CET 229) and permission of instructor. Graduate students must obtain permission of instructor.

Cross-Listed as: Cross listed as CS 409. No credit given to students with credit for CS 409.

### **CYS 419 - Usable Security and Privacy (3)**

The role of human factors in securing cyber-systems is increasingly seen as a crucial factor. This course introduces students to the implications of human factors on security and privacy of cybersystems. The goal of this course is to teach students the methods of identifying usability, security and privacy issues in a given cyber-system and designing secure cyber-systems with a human-centric focus. To this end, students will learn fundamental principles of authentication, risk communication, privacy, human-computer interaction (HCI), designing user studies, and qualitative and quantitative data analysis techniques. No prior experience in security, privacy, or human-computer interaction is required.

Prerequisite: Grade C- or better in both CS 253 and CS 254

Cross-Listed as: CS 419

### **CYS 429 - Internet of Things (IoT) with Embedded Intelligence and Security (3)**

This course develops students' understanding of Internet of Things (IoT) with a variety of real-world application scenarios, technologies, architectures, communication protocols, cybersecurity issues, and emerging embedded intelligence with machine learning capabilities. It also discusses societal and environmental impacts, and how to apply these technologies to real-world problems. Two hours lecture and two hours laboratory; course meets four hours per week.

Prerequisite: CET 239 or CET 229, all with C- or higher grades, or permission of instructor

Cross-Listed as: Cross-listed with CET 429 and linked with CYS 529 and CET 529. No credit for CYS 429 granted to students with credit for any of these other courses.

### **CYS 446 - Introduction to Machine Learning for Cybersecurity (3)**

This course provides an exploration of the application of advanced machine learning (ML) techniques in the context of cybersecurity. Students will delve into the theoretical foundations and practical methodologies of leveraging ML to tackle complex cybersecurity challenges. The course emphasizes hands-on experience through practical exercises, case studies, and real-world applications.

Prerequisite: C- or better in CS 253 and (CS 492 or CYS 492) or permission of instructor.

Cross-Listed as: CS 446. No credit granted to students with credit for CS 446

### **CYS 455 - Principles of Secure Software Development (3)**

This course introduces a variety of topics on implementing secure software using different programming languages. The primary focus is given to design and development techniques used to avoid the most common software errors by using defensive coding techniques, managing resources securely, and creating secure interaction between components.

Prerequisite: Grade C- or better in CS 355

Cross-Listed as: Cross listed with CS 455. No credit given to students with credit for CS 455 or CS 515.

### **CYS 459 - Network Security Technologies (3)**

Practical techniques of network security and how the field is related to information technology. Topics include general security concepts, communication security, infrastructure security, cryptography basics, and operational security.

Prerequisite: CET 349 with a grade of C- or higher

Cross-Listed as: Cross listed with CET 459. No credit given to students with credit for CET 459.

### **CYS 467 - Security System Management (3)**

In-depth understanding of the core concepts and skills needed for the design, implementation, and management of security systems to protect network and information systems. This course is linked to CET 569. Two hours

lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CET 349 and CYS 227 (C- or higher in both)

### **CYS 477 - Ethical Hacking and Penetration Testing (3)**

Awareness of security related issues and the essential skills needed to implement and maintain security in networks. Methods of discovering ways of exploiting vulnerabilities to gain access to a system. Understanding of flaw identification, vulnerability scanning, penetration testing, and families of attacks. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CET 459 or CYS 459 or CS 490 (C- or higher in either)

### **CYS 487 - Network Forensics (3)**

Forensic science principles and practices for collecting, preserving, examining, analyzing and presenting digital evidence in network systems. Understanding of the rules, laws, policies, and procedures that affect network forensics. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CET 459 (C- or higher) or CYS 459 (C- or higher)

Cross-Listed as: Cross listed with CET 487. No credit given to students for CYS 487 with credit for CET 487.

### **CYS 492 - Computer Security (3)**

The fundamentals of computer and network security issues are explored. Topics include classical and modern techniques of conventional encryption; algorithms; public-key encryption, hash functions, and quantum resilience; software reverse engineering; and system security intruders, viruses, worms, and firewalls.

Prerequisite: Grade C- or better in both CS 253 and either CS 254 or CET 229, or permission of Department Chair, or admission to a graduate program in CIT. CS 501 and CS 502 are prerequisites for graduate students.

Cross-Listed as: Cross listed as CS 492. No credit given to students with credit for CS 492.

### **CYS 493 - Secure Software Designs (3)**

Study of the approaches, mechanisms, and tools to make software systems more secure. We will motivate the study by discussing common software security threats. The majority of the course will be divided into four main modules: architectural approaches to building secure software (e.g., confinement, virtual machines, trusted computing); software analysis (e.g., static analysis

and testing, model checking); language-based approaches to building secure software (e.g., type systems, proof-carrying code); and run-time enforcement of security policies (e.g., dynamic taint analysis).

Prerequisite: C- or better in CS 253 and CS 254 or CET 229

Cross-Listed as: Cross listed with CS 493. No credit given to students with credit for CS 493.

### **CYS 494 - Cryptographic Systems (3)**

An introduction to modern cryptography as used in software systems. Topics include: block and stream ciphers, symmetric-key encryption, one-way functions, computational complexity, public key encryption, key management, hash functions, digital signatures, digital certificates, and authentication protocols.

Prerequisite: C- or better in either CS 254 or CET 349, and MATH 217 or MATH 218.

Cross-Listed as: Cross listed as CS 494. No credit given to students with credit for CS 494.

### **CYS 496 - Software Reverse Engineering (3)**

This course is designed to provide students with an understanding of Software Reverse Engineering (SRE) techniques, emphasizing hands-on lab exercises. The discipline of reverse engineering plays a crucial role in deducing the design of software components, understanding how software works, recovering software specifications, discovering data used by software, and aiding in the analysis of software through disassembly and decompilation. This skill is particularly essential in the cyber operations field for tasks such as malware analysis and auditing closed- source software.

Prerequisite: C- or better in both CS 253 and CS 254.

Cross-Listed as: CS 496. No credit granted to students with credit for CS 496.

### **CYS 503 - Applied Networking Technology III (3)**

Enterprise knowledge and skills through a series of in-depth hands-on experiences that reinforce the learning. Core networking, advanced routing technologies and services, infrastructure security, services, and automation are included. Two hour lecture and three hour laboratory, course meets five hours per week.

Prerequisite: CET 502

Cross-Listed as: Cross listed as CET 503. No credit given to students for CYS 503 with credit for CET 503.

**CYS 511 - Advanced Software Reverse Engineering (3)**

This course is designed to provide students with a comprehensive understanding of Software Reverse Engineering (SRE) techniques, emphasizing hands-on lab exercises. The discipline of reverse engineering plays a crucial role in deducing the design of software components, understanding how software works, recovering software specifications, discovering data used by software, and aiding in the analysis of software through disassembly and decompilation. This skill is particularly essential in the cyber operations field for tasks such as malware analysis and auditing closed-source software.

Prerequisite: CS 501 and CS 502 or admission to Software Engineering MS program or permission of Department Chair.

Cross-Listed as: CS 511. No credit granted to students with credit for CS 511.

**CYS 529 - Internet of Things (IoT) with Embedded Intelligence and Security (3)**

This course develops students' understanding of Internet of Things (IoT) with a variety of real-world application scenarios, technologies, architectures, communication protocols, cybersecurity issues, and emerging embedded intelligence with machine learning capabilities. It also discusses societal and environmental impacts, and how to apply these technologies to real-world problems. Two hours lecture and two hours laboratory; course meets four hours per week.

Prerequisite: CET 239 or CET 229, all with C- or higher grades, or permission of instructor

**CYS 546 - Machine Learning in Cybersecurity (3)**

This course provides an in-depth exploration of the application of advanced machine learning (ML) techniques in the context of cybersecurity. Students will delve into the theoretical foundations and practical methodologies of leveraging ML to tackle complex cybersecurity challenges. The course emphasizes hands-on experience through practical exercises, case studies, and real-world applications.

Prerequisite: CS 501 and (CS 592 or CYS 592) or permission of instructor.

Cross-Listed as: CS 546. No credit granted to students with credit for CS 546.

**CYS 559 - Applied Network Security (3)**

Practical techniques of network security. Current applied research project presentation is expected. Topics include general security concepts, communication security, infrastructure security, cryptography basics, and operational security. This is a link course with CYS 459. Cross listed as CET 559. No credit given to students for CYS 559 with credit for CET 559 or vice versa.

Prerequisite: CET 501

Cross-Listed as: Cross listed as CET 559. No credit given to students for CYS 559 with credit for CET 559 or vice versa.

**CYS 577 - Advanced Ethical Hacking & Penetration Testing (3)**

Ethical hacking techniques and tactics currently used in modern penetration testing or "red team" operations. Students will learn concepts and methodologies, as well as advanced hands-on skills and tools to penetrate most popular operating systems. Two hour lecture and two hour laboratory, course meets four hours per week. Cross listed as CYS 577. No credit given to students for CET 577 with credit for CYS 577 or vice versa.

Prerequisite: CET 559 or CYS 559

Cross-Listed as: Cross listed with CET 577. No credit given to students for CYS 577 with credit for CET 577.

**CYS 579 - Linux System Administration (3)**

Bottom-up network administration in a GNU/Linux-based server environment. Linux system parts, administration, security, and services. Two hour lecture and two hour laboratory, course meets four hours per week.

Prerequisite: Acceptance to the Graduate MSCIT or MSTM programs

Cross-Listed as: Cross listed as CET 579. No credit given to students for CYS 579 with credit for CET 579 or CET 479, or vice versa.

**CYS 592 - Advanced Computer Security (3)**

The fundamentals of computer and network security issues are explored. Topics include classical and modern techniques of conventional encryption; algorithms; public-key encryption, hash functions, and quantum resilience; software reverse engineering; and system security intruders, viruses, worms, and firewalls.

Prerequisite: CS 501 or admission to Software Engineering MS program or permission of Department Chair.

Cross-Listed as: CS 592. No credit granted to students with credit for CS 592.

### **CYS 593 - Advanced Secure Software Designs (3)**

Advanced study of the approaches, mechanisms, and tools to make software systems more secure. We will motivate the study by discussing common software security threats. The majority of the course will be divided into four main modules: architectural approaches to building secure software (e.g., confinement, virtual machines, trusted computing); software analysis (e.g., static analysis and testing, model checking); language-based approaches to building secure software (e.g., type systems, proof-carrying code); and run-time enforcement of security policies (e.g., dynamic taint analysis).

Prerequisite: Grade C- in CS 501, or admission to Software Engineering MS program or Permission of Department Chair.

Cross-Listed as: CS 593. No credit granted for students with credit for CS 593.

## **DAN - Dance**

### **DAN 110 - Introduction to Dance Education (2)**

Examines the history, philosophy, and foundation aspects of dance education with allied fields. 3 hours of field experience in a dance education setting required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Open to Dance Education Majors and Dance Minors

### **DAN 151 - Beginning Modern Dance (2)**

Modern dance technique incorporating the Limon/Humphrey style. Attention is given to combinations across the floor. Choreographic approaches and improvisational skills are explored and developed resulting in short studio presentations. May be repeated for a maximum of 4 credits with permission of instructor.

Prerequisite: None

### **DAN 152 - Beginning Ballet (2)**

Introduces fundamentals, historical background and terminology of ballet. Application of barre exercises, basic

positions, and beginning center floor work will be developed.

Prerequisite: None

### **DAN 157 - Beginning Jazz Dance (1)**

Introduction to jazz dance emphasizing the origin of dance in America. Simple center floor combinations will be taught. May be repeated for a maximum of 2 credits with permission of instructor.

Prerequisite: None

### **DAN 200 - Dance Practicum (1)**

Provides a practical opportunity to hone skills through production. Meetings will be divided between production meetings, rehearsals, evaluation of recently completed projects and workshops lead by professionals in the field. May be repeated for a maximum of 8 credits.

Prerequisite: None

### **DAN 210 - Occupational Wellness in Dance Education (3)**

This course examines areas of occupational wellness in dance education. It covers mental health, physical health, and financial health for dance educators. Topics include stress management, nutrition and energy intake, supplemental exercise, self-care, and financial management for independent contractors.

### **DAN 222 - Yoga (1)**

Students will learn the philosophy, health benefits and longevity patterns of Yoga. Balancing poses, stretching, strength, breath work, salutations, and meditation will be included.

### **DAN 225 - Hip Hop (2)**

Designed to develop fundamental hip hop skills. Explore this unique dance style emphasizing motor skills, musicality, and performance qualities. Emphasis on a variety of hip hop combinations.

### **DAN 230 - Afro-Caribbean Dance and Culture (2)**

Introduction to Afro/Caribbean dances integrating movement, music, history, costume and drama. Exploration of Afro-Caribbean dances through a variety of influences from a diverse ethnological viewpoint. Afro-Caribbean dances influenced by Amerindians, Spanish, European, British and Asian dance forms encouraging cultural awareness and diversity through dance.



**DAN 234 - Ballroom Dance (1)**

International and American styles of ballroom dance including Latin rhythm and smooth standard dances. Partnering, lifts, and pre-competition preparation are included.

Prerequisite: None

**DAN 235 - Movement for Performers (2)**

While finding new ways to move through improvisation and self-exploration, students will have an opportunity to develop their own movement style.

Prerequisite: None

**DAN 236 - Principles of Choreography (2)**

Introduces dance composition. Solo, partner and group work in basic choreographic processes and forms are explored, developed, presented, and evaluated. Includes readings, writings, and videos on choreographers and choreography.

**DAN 252 - Intermediate Ballet (2)**

Attention will be given to a full ballet barre with more complex adagio and allegro work. Turns will be emphasized.

Prerequisite: None

**DAN 257 - Intermediate Jazz Dance (1)**

A fast-paced rhythmic class with more complex combinations. Choreographic approaches will be developed resulting in a short studio performance. May be repeated for a maximum of 2 credits with permission of instructor.

Prerequisite: None

**DAN 272 - Creative Dance in Education (2)**

Introduction to spatial and dynamic considerations of movement focusing on kinesthetic awareness and movement analysis. The Laban Framework and cross-curricular concepts are integrated in making and teaching creative dances and lessons for the elementary curriculum.

Prerequisite: Open to Physical Education and Dance Education majors

**DAN 298 - Psycho-Social Aspects of Dance Education (3)**

Examination of the foundation and practical psychological and sociological principles to facilitate classroom management, teaching effectiveness, and student learning in dance education. 12 hours of field experience

in a dance education setting required. CT law requires fingerprinting and a criminal background check for the field experiences in this class. Fingerprinting must be completed prior to the beginning of class.

Prerequisite: Open to Dance Education Majors and Dance Minors

Corequisite: EDTE 314

**DAN 299 - Dance History (3)**

A study of the evolution of dance in world cultures and the influences they have had on the development of American dance in the 20th and 21st century. Course includes lecture, video presentations, and selected readings.

Prerequisite: None

**DAN 300 - Elementary Methods in Dance Education (3)**

Application of the child-centered, problem-solving approach as a method to learning fundamental concepts of dance movement. Discussion, observation, and laboratory experiences will provide a theoretical background. 12 hours of field experience in an elementary dance education setting required. CT law requires fingerprinting and a criminal background check for the field experiences in this class. Fingerprinting must be completed prior to the beginning of class.

Prerequisite: Admission to the Professional Program in Dance Education

**DAN 377 - Modern Dance and Theory (2)**

Continuation of modern dance technique including elements of performance. Movement analysis, improvisation, and choreographic forms are developed and pedagogical material for the secondary level will be a strong focus.

Prerequisite: DAN 151 or DAN 272 or permission of instructor

**DAN 398 - Contemporary Dance Technique (2)**

Contemporary dance as it applies to becoming a dance educator, performer or movement specialist. Training in Graham Technique and contemporary styles from various cultures.

Prerequisite: None

**DAN 400 - Advance Modern Dance (2)**

A modern dance class inviting intermediate/advanced students to explore complex phrase work with an awareness of changing body relationships while

demonstrating competencies in various techniques. There will be an underlying emphasis on alignment and kinesiological sound movement patterns; students will be expected to take on various leadership roles.

### **DAN 477 - Secondary Methods in Dance Education (3)**

Emphasis is on dance education unit planning and pedagogical methods of teaching at the secondary school level with exposure to classroom pedagogy. 12 hours of field experience in a secondary dance education setting required. CT law requires fingerprinting and a criminal background check for the field experiences in this class. Fingerprinting must be completed prior to the beginning of class.

Prerequisite: Admission to the Professional Program in Dance Education or permission of instructor.

### **DAN 480 - Project: Dance (1)**

Individual projects in choreography, research, or production under the guidance of dance/theatre staff. May be repeated for a maximum of 3 credits.

Prerequisite: Permission of instructor.

## **DATA-Data Science**

### **DATA 101 - Fundamentals of Data Science (3)**

Understandable introduction to the field of data science. Topics include the data science methodology, data preparation, exploratory data analysis, an introduction to classification, modeling, and report writing. Students will gain familiarity with a popular data science software platform.

Prerequisite: C- or better in a first semester statistics course, such as STAT 104 or STAT 200 or STAT 215 or permission of department chair.

### **DATA 201 - Classification Analytics (3)**

Accessible introduction to data scientific classification. Topics include cross-validation, data partitioning, model building and evaluation, and making predictions. Basic introduction to classification algorithms, and decision trees. Deeper familiarity with a popular data science software platform.

Prerequisite: DATA 101 and STAT 201 (C- or better), or permission of department chair.

### **DATA 202 - Estimation and Clustering Analytics (3)**

Accessible introduction to data scientific estimation and clustering. Topics include estimation algorithms and the k-means clustering algorithm. Basic introduction to

regression modeling, model building, and evaluating goodness of fit. Deeper familiarity with a popular data science software platform.

Prerequisite: DATA 101 and STAT 201 (C- or better), or permission of department chair.

### **DATA 203 - Advanced Topics in Data Science (3)**

Advanced treatment of classification, estimation, and cluster analysis. Topics include neural networks, k-nearest neighbor, decision trees, multiple regression, hierarchical clustering, and Kohonen clustering. Advanced use of a popular data science software platform.

Prerequisite: DATA 201 and DATA 202 (both with C- or better)

### **DATA 301 - Data Science Using Python (4)**

Introduction to the powerful Python programming environment. Students learn to implement the data science methodology using Python packages such as pandas, statsmodels, and scikit-learn. Topics may include prediction, classification, and clustering methods using Python and its packages.

Prerequisite: DATA 101 and STAT 201 or equivalent, or permission of department chair.

### **DATA 311 - Information Visualization (4)**

Students will learn how to turn data into impactful graphics, by designing and creating data visualizations, based on the desired task to be achieved. Topics may include data aggregation, data filtering, and mapping data attributes. Students will become familiar with a popular information visualization software platform, such as Tableau.

Prerequisite: DATA 101 and STAT 201, or permission of department chair.

### **DATA 331 - Introduction to Multivariate Analytics (4)**

Applied approach to multivariate analysis for data science. Topics may include multivariate normal distribution, supervised and unsupervised dimensionality reduction, principal component analysis, partial least-squares, discriminant analysis, and cluster analysis. Use of an open-source data science platform, such as R.

Prerequisite: DATA 202 and MATH 228, or permission of department chair.

### **DATA 421 - Introduction to Bioinformatics (4)**

Accessible introduction to bioinformatics. Topics include basic terminology and basic algorithms, tools, and

databases. Topics may include sequence alignment and similarity search algorithms, specialized databases and browsers, and preprocessing of gene expression data.

Prerequisite: DATA 101 and Junior class standing or permission of department chair.

#### **DATA 471 - Big Data and Cloud Computing (3)**

Introduction to the implementation and analysis of big data techniques as applied to cloud computing resources. Platforms may include Amazon Elastic Cloud, Microsoft Azure, or other cloud computing platform.

Prerequisite: DATA 301 and DATA 331, or permission of department chair.

#### **DATA 499 - Data Science Senior Project (3)**

Capstone project, where students tackle an interesting and challenging data science problem. Data science methodology must be followed. Report required.

Prerequisite: Senior status (at least 90 credits completed), and at least 20 credits of DATA courses, or permission of department chair.

#### **DATA 511 - Introduction to Data Science (4)**

Introduction to the analysis of data using a data scientific methodology. Topics include data preparation, missing data, data cleaning, exploratory data analysis, statistical estimation and prediction, cross-validation, model evaluation techniques, misclassification costs, cost-benefit analysis, classification and regression trees and report writing.

Prerequisite: B or better in a first semester statistics course, such as STAT 104 or STAT 200 or STAT 215 or permission of department chair.

#### **DATA 512 - Predictive Analytics: Estimation and Clustering (4)**

Investigation and application of analytical methods for prediction, using estimation models and clustering models. Topics will include regression modeling, multiple regression modeling, model building, dimension reduction methods, k-means clustering, and evaluating cluster goodness. Further topics may include hierarchical clustering, Kohonen networks clustering, and BIRCH clustering.

Prerequisite: DATA 511 or permission of department chair.

#### **DATA 513 - Predictive Analytics: Classification (4)**

Investigation and application of analytical methods for prediction using classification models. Topics will include neural networks, logistic regression, data-driven misclassification costs, and segmentation models. Further topics may include k-nearest neighbor classification, advanced decision tree algorithms, QUEST, CHAID, naive Bayes classification and Bayesian networks, cost-benefit analysis for trinary and k-nary models. market basket analysis, and association rules.

Prerequisite: DATA 511 or permission of department chair.

#### **DATA 514 - Multivariate Analytics (4)**

Concept-based introduction to applied multivariate analysis for data science students. Topics may include: multivariate normal distribution, supervised and unsupervised dimensionality reduction, principal component analysis, non-negative matrix factorization, partial least-squares, supervised principal components, multivariate feature selection, discriminant analysis, cluster analysis, and multidimensional scaling.

Prerequisite: DATA 511 or permission of department chair.

#### **DATA 521 - Introduction to Bioinformatics (4)**

Introduction to bioinformatics terminology, current high-throughput biomedical technologies, basic algorithms, tools, and databases. Topics may include: microarray genomic and proteomic technologies, next generation sequencing, public data repositories, sequence alignment and similarity search algorithms, specialized databases and browsers, methods for gene or protein expression data preprocessing and basic exploratory analysis.

Prerequisite: DATA 511 or permission of department chair.

#### **DATA 522 - Mining Gene and Protein Expression Data (4)**

Focus on data science methods that can efficiently and effectively deal with high-dimensional genomic and proteomic data. Topics may include: supervised feature selection, proper methods of model building and validation, discriminant analysis, support vector machines, bagging, random forests and ensemble approach to feature selection and classification.

Prerequisite: DATA 514 and DATA 521 or permission of department chair.

**DATA 525 - Biomarker Discovery (4)**

Practical application of methods covered in DATA 521 and DATA 522. Students will use large, real-life high-throughput and high-dimensional genomic or proteomic data sets to perform all stages of data evaluation, preparation and analysis leading to the identification of parsimonious multivariate biomarkers and to building and validation of efficient predictive models that are robust and have a plausible biomedical interpretation.

Prerequisite: DATA 522 or permission of department chair.

**DATA 531 - Text Analytics with Information Retrieval (4)**

Investigation of text mining tools using R, including bag-of-word models, and information retrieval using the term frequency-inverse document frequency (tf-idf) approach. Advanced topics such as document clustering are considered. A variety of types of texts are analyzed from tweets from Twitter to digitized books from Project Gutenberg.

Prerequisite: DATA 511 or permission of department chair.

**DATA 532 - Text Analytics with Natural Language Processing (4)**

Investigation of text mining tools using Python, focusing on natural language processing, which includes techniques like text pattern matching with regular expressions, stemming words, removing stop words, and part-of-speech tagging. Advanced topics such as sentiment analysis and topic modeling are considered. Many types of texts are analyzed from instant messaging to news articles.

Prerequisite: DATA 511 or permission of department chair.

**DATA 541 - Advanced Estimation Methods (4)**

Predictive modeling methods for continuous response variables. Focus on feature selection and building and validating predictive models based on regularized regression approaches. Topics may include: multiple regression, partial least-squares regression, ridge regression, lasso, elastic net, least-angle regression, random forests for regression, and support vector machines for regression.

Prerequisite: DATA 512 or permission of department chair.

**DATA 542 - Advanced Clustering Methods (4)**

Unsupervised learning focusing on modern clustering methods. Topics may include: distance metrics, linkage methods, hierarchical clustering, k-medoid clustering, block clustering, two-way clustering, heat maps, self-organizing maps, kernel-based clustering, ensemble-based clustering, and fuzzy clustering.

Prerequisite: DATA 512 or permission of department chair.

**DATA 543 - Advanced Classification Methods (4)**

Powerful methods for enhancing the performance of classification models. Topics will include random forests, boosting, bagging, model voting, propensity averaging, and segmentation models. Further topics may include support vector machines, graphical evaluation of classification models, feature selection, anomaly detection, and multiple imputation of missing data.

Prerequisite: DATA 513 or permission of department chair.

**DATA 551 - Predictive Modeling for Insurance Data (4)**

An overview of generalized linear models (GLMs) that covers estimation and inference using examples that are specific to the insurance industry. Other topics include the model-building, data preparation, selection of model form, model refinement, model validation, and extensions.

Prerequisite: DATA 511 or permission of department chair.

**DATA 565 - Web Data Science (4)**

Data scientific methods and techniques for uncovering information from web user behavior. Topics may include web log cleaning and filtering, server identification, feature derivation, bot identification, de-spidering, user identification, heuristic methods, error handling, session identification, path completion, explaining why users leave the website, identifying anomalous user behavior, basket transformations, estimating last-page duration, exploratory data analysis and modeling for web analytics, including clustering, association, and classification.

Prerequisite: DATA 511 or permission of department chair.

**DATA 576 - Topics in Data Science (4)**

Topics depending on the interest and qualifications of students will be chosen from advanced modeling, classification and estimation, or other areas. May be

repeated under different topics to a maximum of 8 credits.

Prerequisite: Permission of instructor.

### **DATA 599 - Special Project (Plan C) (3)**

Preparation of special project under guidance of special project advisor for students completing master's requirements under M.S. Plan C in Data Science.

Prerequisite: Permission of advisor, at least 18 credits completed, and a 3.00 overall GPA.

## **DES - Design (Graphic Information)**

### **DES 100 - Design & Fonts (3)**

Overview of the principles, practices, and purposes of the field of graphic/information design.

Prerequisite: None

### **DES 122 - Fundamentals of Graphic/Information Design (3)**

Exploration of Graphic/Information Design principles, practices, and problem solving. Pre-Graphic/Information Design majors only. No transfer credit will be accepted. May be repeated only with the permission of the department chair.

Prerequisite: None

### **DES 222 - Graphic/Information Design I (3)**

Introductory techniques for the professional practice of graphic/information design. Includes instruction in appropriate computer applications. Explores issues relating to typographic, symbolic, and three-dimensional design. Open to majors only.

Prerequisite: ART 130 (with a grade of C- or higher).

### **DES 225 - History & Design of Typography (3)**

Exploration of the history of letterforms including exercise in design and application in contemporary use. Majors only.

### **DES 322 - Graphic/Information Design II (3)**

Continuation of DES 222. Advanced techniques for the professional practice of graphic/information design. Includes instruction in appropriate computer applications. Typographic and series design solutions will be stressed. Open to majors only.

Prerequisite: DES 222 (grade of B or higher) and DES 225 (C- or higher) and either ART 230 or ART 224 (with a grade of C- or higher).

### **DES 325 - Digital Imaging / Motion Graphics I (3)**

Computer processing of image for design (graphic/information) using a variety of programs. Image enhancement, manipulation, and derivation techniques will be explored. Open to majors only.

Prerequisite: DES 222 (with a grade of B or higher) and DES 225 (with a grade of C- or higher).

### **DES 326 - Digital Imaging / Motion Graphics II (3)**

Advanced computer processing of image for design (graphic/information) using a variety of programs. Additional image enhancement, manipulation, and derivation techniques will be explored. Open to majors only.

Prerequisite: DES 325 (with a grade of C- or higher).

### **DES 419 - History of Design (3)**

History and philosophy of design function and aesthetics. Topics include graphic design, industrial design, and architectural design.

Prerequisite: ART 110 or ART 112 or ART 113 (with grades of C- or higher).

Notes:

A grade of C or better is needed for graduate students to count this course as a prerequisite.

### **DES 425 - 3-D and AV/VR for Graphic/Information Design (3)**

Exploration of the artistic and creative three dimensional visual effects including modeling, texturing, lighting, rendering and compositing as it applies to the practice of Graphic/Information Design. Majors only.

Prerequisite: DES 325 (C- or higher).

### **DES 436 - Graphic/Information Design III (3)**

Continuation of DES 322. Additional advanced techniques for the professional practice of graphic/information design. Includes instruction in appropriate computer applications. Campaign and expansive design solutions will be stressed. Open to majors only.

Prerequisite: ART 224 and DES 322 (both with grades of C- or higher).

### **DES 437 - Design Internship (3)**

Internship with professional graphic/information design organization. Open to majors only. May be repeated for a maximum of six credits.

Prerequisite: DES 326 and DES 436 (grade of C- or higher) and permission of instructor.

### **DES 438 - Graphic/Information Design IV (3)**

Continuation of DES 436. Additional advanced techniques for the professional practice of graphic/information design. Includes instruction in appropriate computer applications. Professional presentation and design for the web will be stressed. Open to majors only.

Prerequisite: DES 436 (with grade of C- or higher).

### **DES 439 - Central Design (3)**

Graphic/information design practice. Features real project and production situations with simulation of a real world graphic/information design atmosphere. Open to majors only. May be repeated for a maximum of 6 credits.

Prerequisite: DES 326 and DES 436 (both with grades of C- or higher) and successful Central Design portfolio review; permission of instructor.

### **DES 465 - Topics in Graphic/Information Design (3)**

Selected topics in graphic/information design. May be repeated with different topics for a maximum of six credits. Open to majors only.

Prerequisite: Permission of instructor.

### **DES 499 - Computer Applications for Graphic/Information Design (3)**

Study of the relationship of computer application in contemporary graphic/information design practice. Laboratory exploration of relevant software and its application in the field. Open to majors only. Students may not take this course for credit under the same topic more than once.

Prerequisite: DES 326 (with a grade of C- or higher) or admission to the M.A. Information Design program, or permission of instructor. May be repeated up to two times under different topics.

### **DES 501 - Graphic/Information Design Theory I (3)**

Critical analysis of the purpose and evolution of graphic/information design theory, integrity, and computer application. Includes problem solving.

Prerequisite: Admission to graduate program in Information Design or permission of Department Chair.

### **DES 502 - Graphic/Information Design Theory II (3)**

Continuation of DES 501. Additional theory and applications. Technology, economic, and ethical issues will be explored.

Prerequisite: Admission to graduate program in Information Design or permission of Department Chair.

### **DES 503 - Graphic/Information Design Practice I (3)**

Applied design research and practice in graphic/information design. Emphasis on creativity, practical problem solving, technical proficiency, and presentation. May be repeated with different topics for a maximum of six credits.

Prerequisite: Admission to graduate program in Information Design or permission of Department Chair.

### **DES 504 - Graphic/Information Design Practice II (3)**

Advanced design research and practice, portfolio, and presentation development. May be repeated with different topics for a maximum of six credits.

Prerequisite: Admission to graduate program in Information Design or permission of Department Chair.

### **DES 509 - Advanced Computer Applications for Graphic/information Design (3)**

Advanced study of the relationship of computer applications in contemporary graphic/information design practice.

Laboratory exploration of relevant software and its application in the field.

Prerequisite: Admission to graduate program in Information Design or permission of Department Chair. May be repeated with different topics for a maximum of six credits. Topics taken under 499 may not be repeated.

### **DES 520 - Advanced History of Design (3)**

Advanced study of the history and philosophy of design. Topics include in-depth study of symbolic meaning, visual awareness as it applies to design, and the creation of visual language in design.

Prerequisite: Admission to graduate program in Information Design or permission of Department Chair.

### **DES 537 - Advanced Design Internship (3)**

Internship with professional graphic/information design organization.

Prerequisite: Admission to graduate program in Information Design or permission of Department Chair.

### **DES 539 - Advanced Central Design (3)**

Advanced information design studio practice. Features comprehensive project and production design experience.

Prerequisite: Prerequisite: Admission to Graduate program in Information Design or Permission of Department Chair.

### **DES 565 - Advanced Topics In Graphic Information Design (3)**

Selected advanced topics in Graphic/Information Design. May be repeated with different topics for a maximum of six credits. This is a link course with DES 465. No credit given for students with credit for DES 465 with the same topic.

Prerequisite: Admission to graduate program in Information Design or permission of Department Chair.

### **DES 597 - Research Project (Plan C) (3)**

Preparation of the research project under the supervision of research project advisor. Acceptance of the research project by the Research Project Committee (selected by student with approval of research project advisor) is required.

Prerequisite: DES 503, DES 598 (both with grades of C or higher), completion of 21 credits of planned program, and a 3.00 overall GPA.

### **DES 598 - Research Methods in Design (3)**

Study of research methods unique to the professional practice of design. Includes discussion of issues pertaining to conceptual, visual, and technological research specific to the design process.

Prerequisite: Admission to graduate program in Information Design or permission of Department Chair.

## **DH - Digital Humanities**

### **\$name**

#### **DH 100 - Understanding the Digital World (3)**

Introduction to the interdisciplinary study of Digital Humanities and the ethical, social, and political dimensions of everyday technology use.

## **DNAP-Doctorate of Nurse Anesthesia Practice**

### **DNAP 501 - Principles of Nurse Anesthesia Practice I (4)**

Topics include pre-anesthesia evaluation and choice of anesthetic, fluid and blood therapy, monitoring, introduction to the anesthesia machine, acid-base balance, pain management, post anesthesia care unit, basic airway management and regional anesthesia. Three hours of lecture and one three-hour lab session per week. Required lab time will be held at CCSU or affiliated hospital sites.

Prerequisite: Completion of 24 credits in DNAP program.

### **DNAP 502 - Principles of Nurse Anesthesia Practice II (2)**

Students are introduced to the basic chemistry and physics essential to the safe delivery of anesthetic care. Additional emphasis is placed on the understanding of the functioning and relevant physical laws governing the use of the equipment required in the delivery of anesthesia. Two hours of lecture per week.

Prerequisite: Admission to DNAP program and a final grade of 84 or better in DNAP 501.

### **DNAP 503 - Principles of Anesthesia Practice III (2)**

Advanced principles and techniques for anesthesia in cardiac, vascular, emergency, thoracic and other case management; also includes advanced regional anesthesia techniques; anesthesia management of patients with a variety of co-morbidities. Plan anesthesia across various spectrums of wellness, ages, cultures, individuals and families. Two hours of lecture per week.

Prerequisite: Admission to DNAP program and a final grade of 84 or better in DNAP 502.

### **DNAP 504 - Principles of Nurse Anesthesia Practice IV (4)**

Continuation of DNAP 503. Three hours of lecture and one three-hour lab session per week. Required lab time will be held at CCSU or affiliated hospital sites.

Prerequisite: Admission to DNAP program and a final grade of 84 or better in DNAP 503.

### **DNAP 515 - Professional Aspects of Nurse Anesthesia Practice (2)**

Practice of anesthesia including professional behavior, standards of care, scope of practice, and ethics, (i.e. social media), political, legal (i.e. HIPAA, documentation), and economic aspects of anesthesia practice; substance abuse and wellness; quality assurance, risk management and

liability insurance; government regulation of practice and licensure; history of nurse anesthesia.

Prerequisite: DNAP 501 and cumulative GPA 3.00

Corequisite: NAR 731

### **DNAP 518 - Advanced Pathophysiology, Anatomy, and Physiology for Nurse Anesthesia I (3)**

An integrated, systems approach to the advanced study of anatomy, physiology, and pathophysiology, serving as a foundation for nurse anesthesia practice. Provides nurse anesthesia students with the basis of anatomical and physiological processes necessary for understanding health and disease. Major physiological principles and essential concepts of pathophysiology are taught emphasizing those of specific concern to the nurse anesthetologist. Focus is on cellular mechanisms, immunology, renal, hepatic, and endocrine systems of the human body. Three hours of lecture per week.

Prerequisite: Admission to the DNAP program and a final grade of 84 or better in BIO 517.

### **DNAP 519 - Advanced Pathophysiology, Anatomy, and Physiology for Nurse Anesthesia II (3)**

This course is a continuation of ANES 518. It provides an integrated, systems approach to the advanced study of anatomy, physiology, and pathophysiology, serving as a foundation for nurse anesthesia practice. Provides nurse anesthesia students with the basis of anatomical and physiological processes necessary for understanding health and disease. Major physiological principles and essential concepts of pathophysiology are taught emphasizing those of specific concern to the nurse anesthetologist. Primary focus is on the respiratory, cardiac, neurological, and musculoskeletal systems of the human body. Three hours of lecture per week.

Prerequisite: Admission to the DNAP program and a final grade of 84 or better in DNAP 518.

### **DNAP 525 - Advanced Physical Health Assessment for Nurse Anesthetists (3)**

Lectures, demonstrations, group discussions, anatomy lab and simulations presenting advanced physical health assessment of all body systems. Includes principles of peri-anesthetic care of patients with emphasis on cardiovascular, pulmonary, neurologic, renal and endocrine function; interpretation of lab data and selected specialty examinations such as pulmonary function studies, chest X-rays, 12-lead EKGs, and cardiology studies. One two-hour lecture and one two-hour lab per week.

Prerequisite: Admission to DNAP Program.

### **DNAP 527 - Advanced Anesthesia Pharmacology I (4)**

A comprehensive investigation into the pharmacological agents and their utilization in anesthesia. Special consideration given to pharmacodynamics.

Prerequisite: Admission to the DNAP program and a final grade of 84 or better in BIO 517.

### **DNAP 528 - Advanced Anesthesia Pharmacology II (3)**

Pharmacology of drugs used in anesthesia with emphasis on chemical structure, pharmacokinetics and dynamics of the volatile and non-volatile inhalation agents, intravenous anesthetic and accessory/adjuvant drugs (induction agents, muscle relaxants, opioids, benzodiazepines, butyrophenones, anticholinergics, and anticholinesterases), and local anesthetics. The signs and stages of anesthesia will be covered along with theories of narcosis.

Prerequisite: Admission to the DNAP program and an 84 or better in DNAP 527.

### **DNAP 725 - Bioethics in Nurse Anesthesia (3)**

Ethical issues in biomedical research. Foundational knowledge and skills in responsible bioethical decision-making behavior to reflect upon, address and resolve the ethical and socio-cultural issues they confront during professional practice. Discussion of application of ethical decision-making to nurse anesthesia care. Reflection upon AANA Code of Ethics.

Prerequisite: Admission to DNAP Program

### **DNAP 730 - Human Factors and Patient Safety for Nurse Anesthetists (3)**

Explores human error and patient safety in anesthesia care. Introduces a systems approach to error investigation and analysis; use of multidisciplinary teamwork for prevention of errors and crisis management; and use of stimulation and monitoring systems and other techniques in improving safety in anesthesia practice.

Prerequisite: Admission to the DNAP program

### **DNAP 736 - Evidence-based Practice and Biostatistics (3)**

Review of statistical techniques and their benefits and limitations for clinical research. Emphasis on reviewing anesthesia literature. Include translation of research into practice, evaluation of practice, and improvement and reliability of nurse anesthesia practice and outcomes.

Prerequisite: Admission to the DNAP program



**DNAP 739 - Advanced Topics in Pharmacology (3)**

Study of current topics in pharmacology and nurse anesthesia practice. Topics will vary and will include pharmacogenetics, and acute and chronic pain management.

**DNAP 740 - Leadership and Nurse Anesthesia Education (3)**

Principles of teaching and learning applicable to the anesthesia didactic and clinical environment. Strategies in teacher/learner communication, presentation development and strategies, course and curriculum design methods of evaluation pertinent to nurse anesthesia education, multicultural healthcare, leadership and interpersonal communication, and inter-professional collaboration.

Prerequisite: Admission to the DNAP program

**DNAP 742 - Policy and Politics for the Nurse Anesthetist (3)**

Topics include healthcare policy developments at the state and federal levels, healthcare financing and reimbursement, the business of anesthesia/practice management and leadership skills in anesthesia. Lectures, seminars, discussions, guest lectures, independent readings and reports as appropriate for the will be utilized. Attendance at the AANA Mid-Year Meeting (April) is strongly encouraged.

Prerequisite: Admission to the DNAP program

**DNAP 744 - Entry to Practice Doctoral Scholarly Project I (2)**

This Doctoral Scholarly Project seminar will be the foundational work in developing the student's Doctoral Scholarly Project (DSP). The DSP will be relevant to clinical practice, education, or leadership and utilize evidence-based practice to improve clinical practice and patient outcomes. Students work with their doctoral scholarly project advisor and committee members both individually and in small group meetings. The student will identify DSP group members and committee, complete IRB training and approval, and attend lectures and complete assignments that aid in developing the DSP project and deliverable.

Prerequisite: Admission to the DNAP program and 3.00 cumulative GPA

**DNAP 745 - Entry to Practice Doctoral Scholarly Project II (3)**

This Doctoral Scholarly Project seminar is a continuation of DNAP 744 and requires the student to develop the Doctoral Scholarly Project (DSP). The DSP will be relevant to clinical practice, education, or leadership and utilize evidence-based practice to improve clinical practice and patient outcomes. Students work with their doctoral scholarly project advisor and committee members both individually and in small group meetings. The student will work with DSP group members, develop a plan for implementation into clinical or academic practice, develop the required manuscript, attend lectures, and complete assignments that aid in developing the DSP project.

Prerequisite: Admission to the DNAP program, 3.00 cumulative GPA, and DNAP 744

**DNAP 746 - Doctoral Scholarly Project II (3)**

Doctoral capstone project research, writing, and if ready, capstone completion. Students work with their doctoral capstone advisor and committee members both individually and in small group meetings.

Prerequisite: DNAP 745 and 3.00 cumulative GPA

**DNAP 747 - Entry to Practice Doctoral Scholarly Project IV (1-6)**

Required continuation of BIO 746 for students who have not completed their doctoral capstone project and completion. May be repeated for up to 6 credits over three calendar years. Students work with their doctoral capstone advisor and committee members both individually and in small group meetings.

Prerequisite: Admission to the DNAP program, 3.00 cumulative GPA, and DNAP 745

**DNAP 754 - Advanced Specialization Doctoral Scholarly Project I (2)**

This Doctoral Scholarly Project seminar will be the foundational work in developing the student's Doctoral Scholarly Project (DSP). The DSP will be relevant to clinical practice, education, or leadership and utilize evidence-based practice to improve clinical practice and patient outcomes. Students work with their doctoral scholarly project advisor and committee members both individually and in small group meetings. The student will identify DSP group members and committee, complete IRB training and approval, and attend lectures and complete assignments that aid in developing the DSP project.

Prerequisite: Admission to the DNAP program and 3.00 cumulative GPA

**DNAP 755 - Advanced Specialization Doctoral Scholarly Project II (2)**

This Doctoral Scholarly Project seminar is a continuation of DNAP 754 and requires the student to develop the Doctoral Scholarly Project (DSP). The DSP will be relevant to clinical practice, education, or leadership and utilize evidence-based practice to improve clinical practice and patient outcomes. Students work with their doctoral scholarly project advisor and committee members both individually and in small group meetings. The student will work with DSP group members, develop a plan for implementation into clinical or academic practice, develop the required manuscript, attend lectures, and complete assignments that aid in developing the DSP project.

Prerequisite: Admission to the DNAP program, 3.00 cumulative GPA, and DNAP 754

**DNAP 756 - Advanced Specialization Doctoral Scholarly Project III (2)**

This Doctoral Scholarly Project seminar is a continuation of DNAP 755 and requires the student to complete and disseminate the Doctoral Scholarly Project (DSP). The DSP will be relevant to clinical practice, education, or leadership and utilize evidence-based practice to improve clinical practice and patient outcomes. Students work with a doctoral scholarly project advisor and committee both individually and in small group meetings. The student will work with DSP group members, disseminate the project to the University committee and complete and submit the required manuscript.

Prerequisite: Admission to the DNAP program, 3.00 cumulative GPA, and DNAP 755

**DNAP 757 - Advanced Specialization Doctoral Scholarly Project IV (1)**

Required continuation of DNAP 756 for students who have not completed their doctoral scholarly project and deliverable. May be repeated for up to 6 credits over three calendar years. Students work with their doctoral scholarly advisors and committee members both individually and in small group meetings.

Prerequisite: Admission to the DNAP program, 3.00 cumulative GPA, and DNAP 755

**ECON - Economics**

**ECON 200 - Principles of Macroeconomics (3)**

Macroeconomics. Introduction to the prevailing pattern of American economic institutions, the theory of income, employment and investment in the national economy, and public policies that affect them

Prerequisite: None

**ECON 201 - Principles of Microeconomics (3)**

Microeconomics. Presents economic principles related to consumer demand, and determination of prices of goods and factors of production under differing market structures. Applications to real world situations will be discussed.

Prerequisite: None

**ECON 250 - Contemporary Economic Issues (3)**

Economic analysis of contemporary issues. Topics include federal deficits, regulation of business, income distribution, unemployment, military spending, consumer protection, technical change, and environmental degradation.

Prerequisite: None

**ECON 300 - Macroeconomics (3)**

Theoretical analysis of determination of national income and economic growth. CSUS Common Course.

Prerequisite: ECON 200, ECON 201.

**ECON 305 - Microeconomics (3)**

Determination of prices of goods and productive factors in a free market economy and the role of prices in the allocation of resources. CSUS Common Course.

Prerequisite: ECON 200, ECON 201.

**ECON 306 - Behavioral Economics (3)**

An introduction to behavioral economics. The course incorporates insights from other behavioral and social science disciplines. It discusses and explains a range of social phenomena, and how those explanations differ from standard economic theory. In particular, the course will examine how irrationality influences people's judgment and decision-making.

Prerequisite: ECON 200 and ECON 201 or permission of Instructor

**ECON 308 - Political Economy (3)**

Critical examination of two major themes of political economy: power relations within capitalism, and evolutionary change. Topics include the features of the capitalist revolution, the theoretical distinctions between conventional economics and political economy, the core principles of political economy (surplus product, class, and accumulation), as well as political economy perspectives of the capitalist firm, the worker-owned firm, and the state.

Prerequisite: ECON 200, ECON 201

**ECON 310 - Mathematical Economics I (3)**

Application of mathematical methods to economic problems. Topics may include functions, differential calculus, unconstrained and constrained optimization, comparative statics, linear algebra-matrices and determinants.

Prerequisite: ECON 200, ECON 201 and MATH 123/MATH 125/MATH 152, or permission of instructor

**ECON 311 - Mathematical Economics II (3)**

A continuation of ECON 310. Examination of economic problems in a dynamic framework. Topics may include integrals, differential equations and difference equations, linear programming and game theory.

Prerequisite: ECON 310.

**ECON 320 - Globalization Issues (3)**

Introduction to major policy debates and concepts in the study of Globalization. Analysis of the impact of globalization on individuals, institutions, cultures, and the nation-state; as well as the controversies surrounding the arguments in favor and against globalization.

Prerequisite: 3 credits in Economics or permission of Instructor.

**ECON 321 - The Economics of Social Issues (3)**

Introduction to major social policy debates from an economic perspective. Tools of economic analysis will be used to examine current social issues. Topics include pollution problems, the economics of crime and its prevention, the economics of education, poverty, and discrimination, the economics of professional sports, social security and Medicare.

Prerequisite: 3 credits in Economics or permission of instructor

**ECON 340 - Health Economics (3)**

Introduction to the economic issues of health care markets. Microeconomic theories will be used to analyze the structure and performance of the health care industry in the United States. Topics include: the markets for health and health care; physician firms; hospitals; public and private health insurance markets; health policy.

Prerequisite: ECON 201 or permission of instructor.

**ECON 360 - Sports Economics (3)**

Microeconomic theories and tools will be used to analyze a variety of topics related to the sports industry. Topics covered include the impact of monopoly and cartel behavior, unions, salary caps, free agency, the NCAA, and public concerns involving the impacts of sports on the economy.

Prerequisite: ECON 201 or Instructor Permission

**ECON 380 - Food Economics (3)**

Exploration and comparison of food and agriculture issues in both industrialized and developing countries. Topics will include hunger and nutrition, US farm policy, food distribution, food security, food aid, environmental effects, GMO's, the connection between food production and health outcomes.

Prerequisite: 3 credits in Economics or permission of the Instructor

**ECON 398 - Topics in Economics (3)**

Examination of selected topics in economics which are not otherwise offered as part of the department's regular courses. Course may be repeated under different topics for up to 6 credits.

Prerequisite: ECON 200 and ECON 201, or permission of instructor.

**ECON 400 - Internship in Economics (3)**

This course provides students a link between classroom theory and practical experience as they work in a supervised position at a private firm or public organization that relates to the field of economics and their personal career goals. Students complete a minimum of 120 hours throughout the semester and attend a weekly seminar to discuss their experiences. Open to majors or minors.

Prerequisite: Junior or Senior status and Permission of Instructor

**ECON 408 - The Great Recession (3)**

Examination of the origins, transmission, and legacy of the Great Recession. Topics include US economic history prior to 2008, policy responses during the crisis, as well as the nature and direction of the recovery from the crisis. Traditional and alternative approaches will be employed.

Prerequisite: ECON 200, ECON 201

**ECON 416 - Quantitative Methods in Economics (3)**

Introduction to quantitative techniques widely used by economists. Topics include various methods of applied statistics that facilitate the understanding of economic literature and the pursuit of empirical research.

Prerequisite: ECON 200, ECON 201 and STAT 215.

**ECON 420 - Urban Economics (3)**

Economic analysis of metropolitan and regional entities with special focus on land use, location decision-making, the provision and role of public services, transportation, public finance, human resources, and social welfare.

Prerequisite: ECON 200, ECON 201, or admission to Masters in Public Policy.

**ECON 428 - State and Community Economic Development (3)**

Examines the effect of spatial issues on economic interactions. Theories of regional economic growth and development will be introduced. Techniques and methods will be presented for analyzing regional economic conditions and effectiveness of economic development policies. Covers historical and current issues in regional economic policy and development, especially at the state and community level.

Prerequisite: ECON 200 and ECON 201 or admission to Masters in Public Policy.

**ECON 430 - International Economics (3)**

Principles of international trade and finance and application to modern world, theory of comparative advantage, exchange rates, monetary standards, international financial institutions, tariffs, commercial policy, and aid to underdeveloped countries.

Prerequisite: ECON 200, ECON 201.

**ECON 432 - Economics of Religion (3)**

Examines the interrelationships between religion and economics. Investigates the impact that religion has on economic, social, and public policy issues and how

economics may affect religious beliefs, activities, and institutions. Connections will be made to various topics, such as trust, risk taking, beliefs, labor economics, market structures, and public choice.

Prerequisite: ECON 200 and ECON 201.

**ECON 435 - Economic Development (3)**

This course aims to provide students with an understanding of the vast and diverse economic challenges facing the world's developing economies. Students will study the meaning of underdevelopment, traditional and heterodox theories of economic growth, as well as how policies of the developed world and international financial institutions impact low-income countries and their process of economic development.

Prerequisite: ECON 200 or admission to Masters in Public Policy.

**ECON 445 - Labor Economics (3)**

Economic analysis of human resources as a factor of production. Special attention is devoted to demographics, labor market structures, wage determination, career decision-making, training, and the roles of employee organizations.

Prerequisite: ECON 200, ECON 201, or admission to Masters in Public Policy.

**ECON 446 - Gender and the Economy (3)**

Role gender plays in economies and the way gender affects economic outcomes for individuals and societies. Introduces feminist economic theories and alternative approaches that promote gender equity. It examines gendered nature of economic life, gender differences in small business lending and gender in a global context.

Prerequisite: ECON 200 and ECON 201.

**ECON 450 - Money, Credit, and Banking (3)**

Money and its functions, including structure of the American banking system, with emphasis on monetary theory and policy.

Prerequisite: ECON 200.

**ECON 455 - Public Finance (3)**

Analysis of federal revenues and expenditures, including an examination of federal budget concepts, fiscal policy, cost-effectiveness analysis, tax efficiency and equity, and debt management problems.

Prerequisite: ECON 200, ECON 201, or admission to Masters in Public Policy.

### **ECON 460 - Economic Forecasting (3)**

The theory and use of such forecasting techniques as simple and multiple regression, seasonal adjustment, economic indicators, input-output and macroeconomic models. Emphasis will be given to economic applications and the use of the computer.

Prerequisite: ECON 200, ECON 201 and STAT 215 or equivalent, or admission to Masters in Public Policy.

### **ECON 462 - Industrial Organization (3)**

Study of the structure, conduct, and performance of selected U.S. industries. The effects of concentration on prices, outputs, profits, and technological change will be analyzed.

Prerequisite: ECON 201.

### **ECON 465 - Government and Business (3)**

Role of government in the mixed economy, with special emphasis on antitrust laws, regulation and deregulation, social legislation, and public enterprise.

Prerequisite: ECON 201, or admission to Masters in Public Policy.

### **ECON 467 - Marxian Economics (3)**

Examination of Marx's critique of political economy, and analysis of capitalism. Includes a close reading of *Capital*, Volume I. Marxian analysis of contemporary capitalism, conventional economic theories, and policymaking will also be discussed.

Prerequisite: ECON 200 and ECON 201

### **ECON 470 - Managerial Economics (3)**

Application of economic theory and quantitative methods to managerial decision-making problems. Topics include decision analysis, forecasting, demand analysis, production and cost analysis, linear programming, break-even analysis, and capital theory and budgeting.

Prerequisite: ECON 201, or admission to Masters in Public Policy.

### **ECON 475 - History of Economic Thought (3)**

Historical survey of economic thought from ancient times to the present. Examines the evolution of central ideas within the economics discipline on class, globalization, government, human behavior, markets, and money, among others, and contextualizes those ideas in the

economic circumstances of their times. Topics include economic thought prior to capitalism, classical political economy, Marx's critique of political economy, the neoclassical revolution, the Keynesian revolution, and other currents from twentieth and twenty-first century economic thought.

Prerequisite: ECON 200, ECON 201

### **ECON 485 - Econometrics (3)**

Application of statistical methods to economics. Emphasis is placed on statistical inference, regression analysis, and real-world applications using the computer.

Prerequisite: ECON 200, ECON 201 and STAT 215.

### **ECON 486 - Applied Microeconometrics (3)**

Application of statistical methods used in economic analysis. Econometric analysis will be conducted using STATA or an equivalent programming language. Emphasis is placed on (1) the use of cross-sectional and panel data in regression analysis, (2) the use of non-linear models, (3) solutions to common econometric issues including endogeneity and reverse causality, and (4) estimation of limited dependent variable models.

Prerequisite: ECON 200, ECON 201, STAT 215

### **ECON 498 - Advanced Topics in Economics (3)**

Examination of advanced topics in economics which are not otherwise offered as part of the department's regular courses. Course may be repeated under different topics for up to 6 credits.

Prerequisite: ECON 200 and ECON 201, or permission of instructor.

### **ECON 499 - Independent Study in Economics (1-3)**

Students may specialize in projects of an advanced nature not covered by regular course offerings. Supervision is given through periodic conferences with each student and through several group meetings to discuss findings and common problems.

Prerequisite: Permission of instructor.

### **ECON 500 - Economics and Public Policy (1)**

Introduction to theoretical and applied economic analysis of public policy issues.

Prerequisite: Admission to a graduate program or instructor permission

## ED - Education

### ED 498 - Individual Study Project (1-6)

Individual research open only to advanced students and experienced teachers. Systematic study of problems of special interest. Students in either elementary or secondary fields are guided in selection, analysis, gathering of data, and drawing conclusions. Not for credit in graduate degree programs.

Prerequisite: Permission of Department Chair.

### ED 515 - Professional Ethics and Law for Educators and Scholars (3)

An in-depth understanding of and appreciation for laws and court decisions; for statutory, case, and common laws; and of the rights and responsibilities of students and staff in a school setting as they relate to school operation and administration

Prerequisite: Admissions to the MS Educational Leadership program or permission of the department chairperson.

### ED 520 - Instructional Programs for Diverse Learners (3)

Application of knowledge about ethnicities, cultures, languages, individual student differences, and motivation to instructional improvement, intervention, and remediation. Implementation of SRBI, IDEA, and equitable opportunities to learn.

Prerequisite: EDT 540, EDL 555, ED 598.

### ED 545 - Integration of Methods of Research and Assessment (6)

Examination of traditional and alternative assessment strategies to promote learning. Techniques for analyzing and evaluating qualitative and quantitative research studies and developing skills to design, implement and assess action research projects specific to the internship and school site.

Prerequisite: Admission to the full-year post-baccalaureate certification program and a 3.00 overall GPA.

### ED 582 - Supervision of Secondary School Teaching (3)

Supervised teaching experience for graduate students who possess a Durational Shortage Area Permit from the State of Connecticut, signed by the SEPS Dean or designee. Not to be credited towards master's degree. To meet teacher certification program requirements, student must complete ED 582 and ED 583 and earn at least a C in each course. In accordance with CT law, districts may

require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Permission of content area department chair and assistant dean of Education and Professional Studies.

### ED 583 - Supervised Student Teaching (3)

Continuation of ED 582. Supervised teaching experience for students who possess a Durational Shortage Area Permit (DSAP) from the State of Connecticut signed by the SEPS Dean or designee. To meet teacher certification program requirements, student must complete ED 582 and ED 583 and earn at least a C in each course. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: ED 582

### ED 591 - Curriculum, Instruction, and Assessment I (3)

Principles of standards-based elementary and secondary curriculum development, implementation, and curricular evaluation Part I. Development of formative and summative evaluations to monitor student progress. Capstone Project: Action Research. Plan E.

Prerequisite: ED 598, EDT 540, EDL 555, ED 523.

### ED 592 - Curriculum, Instruction, and Assessment II (3)

Principles of standards-based elementary and secondary curriculum development, implementation, and curricular evaluation Part 2. Development of formative and summative evaluations to monitor student progress. Capstone Project: Action Research. Plan E.

Prerequisite: ED 598 and ED 591.

### ED 598 - Introduction to Research in Education (3)

Students will develop competence in locating, interpreting, and synthesizing various forms of research literature in education; gain understanding and skills in conducting a literature review on a relevant topic, and disseminate their findings to an external audience.

Prerequisite: Admission to a graduate program in education.

## EDEC - Education - Early Childhood

### EDEC 101 - Introduction to Early Childhood Studies (3)

This introductory course is designed to provide students with an overview of the field of early childhood education. Foundational theories of early childhood education and child developmental milestones will be explored. Curriculum content and development, the physical environment, and family connections will be covered. Students will be introduced to foundational documents that guide early childhood educators' practices such as the National Association for the Education of Young Children (NAEYC) Code of Ethical Conduct, NAEYC Statement on Developmentally Appropriate Practice, and NAEYC's statement on the Advancement of Equity in Early Childhood.

Prerequisite: None

### EDEC 102 - Fieldwork in Early Childhood and Infant/Toddler Mental Health I (1)

Structured and supervised *first-level* observations and onsite experiences, including course embedded field assignments, in infant/toddler and preschool program settings to gain real life experience and knowledge to meet CT ECTC and Infant/Toddler Mental Health competencies. Field placements provide candidates with access to both infant/toddler and preschool children and families in classrooms and community-based agencies. The program coordinator is in charge of field placement in collaboration with school and community partners. A combined total of **45 fieldwork hours** in this course, and other courses with field assignments taken within the same semester, is required. Fieldwork placement will be scheduled **once a week** (Monday through Friday), **8:00AM-12:00PM**, in a preschool and/or infant/toddler setting. **NOTE: Candidate must pass the fieldwork requirements in order to pass the course.** In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Declared major in Early Childhood Studies and Infant/ Toddler Mental Health program

### EDEC 103 - Health, Safety & Nutrition for Infants, Toddlers, and Preschoolers (3)

Overview of the health, safety, and nutritional needs of infants, toddlers, and preschool children. Content includes

infant/toddler and early childhood practices to ensure the health and well-being of each child, the roles and responsibilities of adults in meeting the diverse needs, habits, and practices that promote and sustain a healthy lifestyle, common infant/ toddler and early childhood illnesses and injuries, health, nutrition and safety standards, and planning nutritious meals that are appropriate especially for infants, toddlers, and preschool children.

Prerequisite: Declared major in Early Childhood Studies and Infant/Toddler Mental Health program

### EDEC 104 - Fieldwork in Early Childhood and Infant/Toddler Mental Health II (1)

Structured and supervised *first-level* observations and onsite experiences, including course embedded field assignments, in infant/toddler and preschool program settings to gain real life experience and knowledge to meet CT ECTC and Infant/Toddler Mental Health competencies. Field placements provide candidates with access to both infant/toddler and preschool children, and families in classrooms and community-based agencies. The program coordinator is in charge of field placement in collaboration with school and community partners. A combined total of 45 fieldwork hours in this course, and other courses with field assignments taken within the same semester, is required. Fieldwork placement will be scheduled **once a week** (Monday through Friday), **8:00AM-12:00PM**, in a preschool and/or infant/ toddler setting. **NOTE: Candidate must pass the fieldwork requirements in order to pass the course.** In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: EDEC 102 or by permission of program coordinator

### EDEC 105 - Arts, Aesthetics, and Play for Infants, Toddlers, and Preschool Children (3)

Exploration of the imagination of infants, toddlers, and preschool children in relation to curriculum and teaching through play. Students will examine developmentally appropriate teaching for young children, diversity, and the roles teachers play as leaders and learners in diverse early childhood learning communities. Inquiry-based approach throughout the course includes participation in aesthetic experiences, place-based learning, multiple intelligences,

case analysis, and examination of beliefs and research on learning and teaching.

Prerequisite: Declared major in Early Childhood Studies and Infant/Toddler Mental Health program

**EDEC 200 - Introduction to Infant/Toddler Development and Infant Mental Health: Foundations for Home Visiting and Early Care and Education (3)**

This course is an introduction to infant/toddler development and the field of Infant Mental Health with special focus on the contexts of Home Visiting and Early Care and Education. Candidates learn about infant and toddler development and the central role of primary caregiving relationships in supporting this development. The course weaves together theory and research along with the development of candidates' own observation and reflection skills. Students will, throughout the course, be conducting assigned observations and reflections at their field placement sites in order to strengthen their own practices.

Prerequisite: Declared major in Early Childhood Studies and Infant/Toddler Mental Health

Corequisite: Must be taken with EDEC 206

**EDEC 202 - Child, Family, and the Community (3)**

Overview of the diverse needs of young children, birth through 5, within the context of family, school, community, and society. Candidates examine the interplay of contemporary family living and cultural patterns on the social, emotional, and mental development of infants, toddlers, and preschoolers in relationship to family, school, community, and society. Candidates gain an understanding of their professional role in supporting evidence-based practices that strengthen positive, respectful, collaborative family-child relationships through effective use of community and family resources.

Prerequisite: EDEC 101 or by permission of department chair

**EDEC 203 - Fieldwork in Early Childhood & Infant/Toddler Mental Health III (1)**

Structured and supervised *second-level* observations and onsite experiences, including course embedded field assignments, in infant/toddler and preschool children's program settings to gain real life experience and knowledge to meet CT ECTC and Infant/Toddler Mental Health competencies. Field placements provide candidates with access to both infant/toddler and preschool children, and families in classrooms and community-based agencies. The program coordinator is in

charge of field placement in collaboration with school and community partners. A combined total of 60 fieldwork hours in this course, and other courses with field assignments taken within the same semester, is required. Fieldwork placement will be scheduled **twice a week** (Monday through Friday), **8:00AM-12:00PM**, in a preschool and/or infant/toddler setting. **NOTE: Candidate must pass the fieldwork requirements in order to pass the course.** In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: EDEC 104 or by permission of program coordinator

**EDEC 204 - Observing, Documenting, and Assessing to Support Infants, Toddlers, Preschool Children & Their Families (3)**

Emphasis on observation, documentation, and other forms of assessment central to the practice of infant/toddler and preschool children's mental health professionals. Candidates are immersed in the use of systematic observations, documentation, and other effective assessment strategies in order to obtain solid data and information that can be used to positively support infants, toddlers, and preschool children and their families.

Prerequisite: EDEC 101 or by permission of department chair

**EDEC 205 - Child, Family, and the Community II (3)**

Builds on candidate learning from EDEC 202-Child, Family, and Community I. Emphasis on the influences, issues and concerns related to contemporary family living and cultural patterns on the child, family/community relationships. Candidates are immersed in the critical roles of families in the development of young children especially infant/toddler and preschool children's social, developmental, and mental health. Candidates investigate the efficacy of community resources and services that support and strengthen families.

Prerequisite: EDEC 202 or by permission of department chair



**EDEC 206 - Fieldwork in Early Childhood & Infant Toddler Mental Health (1)**

Field placements provide candidates with access to infants, toddlers, and preschool children, and families in a variety of early childhood settings. Fieldwork experiences are structured and supervised and include observations and onsite experiences. Fieldwork experiences are designed for students to apply knowledge and build early childhood and Infant/Toddler Mental Health competencies while gaining real life experiences. The program oversees field placements in collaboration with school and community partners and early childhood faculty. A total of 60 fieldwork hours is required in this course. **NOTE: Candidate must pass the fieldwork requirements in order to pass the course.** In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: EDEC 103 and EDEC 105, or by permission of program coordinator

**EDEC 207 - Positive Relationships & Equity in Early Childhood Education (3)**

This course is designed for students to explore the foundational and theoretical underpinnings of the social and emotional development of children birth through age 8 as well as the components and practices needed to create equitable early learning environments. Additionally, students will become more familiar with learning goals connected to early childhood social studies learning and be able to create lesson plans connected to these learning goals. Classroom management and climate techniques will also be addressed.

**EDEC 208 - History & Foundations of Early Childhood Education (3)**

This course provides an overview of the historical, philosophical and educational influences in the field of early childhood education. Students will examine and discuss notable theorists, resources and foundational theories that have impacted child development that are embedded in current evidence-based early childhood education programs. This course will also introduce historical and cultural perspectives, organization, and evidence-based practices in early childhood, and identify current issues impacting early childhood education.

**EDEC 300 - Curriculum and Instruction for Diverse Learners: Infants, Toddlers, and Preschool Children (3)**

Focuses on knowledge, skills, and attitudes to effectively organize and implement content and skills for infants, toddlers, and preschool children, especially English language learners and children with and without exceptionalities, in the classroom as well as federally and/or state-funded programs. Emphasis is placed on applying principles of developmentally appropriate practice for infants, toddlers, and preschool children.

Prerequisite: LLA 201 and EDEC 204, or permission by department chair

**EDEC 301 - Child Development and Implications for Teaching and Learning in the Early Childhood Classroom (4)**

Theoretical principles and practices of developmentally appropriate integrated curriculum in early childhood programs serving children 0 - 5 years of age. Implications for practice in inclusive classrooms to include learning through play and exploration, planning, implementation, observation, assessment and evaluation of student learning and instruction. Role of the child, teacher, parent and other professionals working collaboratively for the benefit of the student will be explored. Reflection on practice in the place-based setting is required. 45 hours of Field Experience. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Early Childhood Education.

**EDEC 304 - Pre-Practicum in Early Childhood and Infant/Toddler Mental Health I (3)**

This pre-practicum requires 100 hours of structured and supervised early childhood experiences. Candidates apply knowledge, skills, and understanding about social, emotional, physical, and mental development of infants, toddlers, and preschool children. The supervising faculty, in collaboration with the site supervisor, assesses the candidate's performance as a qualified professional who can work with infants and toddler or preschool children, and their families. The program oversees field placements in collaboration with school and community partners and early childhood faculty.

**NOTE: Candidate must pass the field experience requirements in order to pass the course.** In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: EDEC 206 or by permission of program coordinator

### **EDEC 305 - STEM for Infants, Toddlers, and Preschool Children (3)**

Applies young children's development principles to the planning of STEM (science, technology, engineering, and math) experiences for both typically and atypically developing infants, toddlers, and preschool children. Emphasis is placed on developing and providing developmentally and culturally appropriate STEM activities for young children, understanding how children develop problem-solving skills, and on recognizing how adults can facilitate inquiry-discovery experiences for infants, toddlers, and preschool children with diverse learning styles and needs. Coursework includes creating scientific learning opportunities, brain-building experiences, and mathematical experiences to build the foundations of infant/toddler and preschool children's mathematical understanding and scientific learning through inquiry and exploration.

Prerequisite: EDEC 101 or by permission of department chair

### **EDEC 306 - Design and Management of Infant/Toddler and Preschool Programs (3)**

This introductory administration course is designed to provide students with a glimpse into the role of the program administrator in programs serving children ages 0-8 including children with disabilities, developmental delays, language and /or cultural differences. Students will explore the multi-dimensional aspects involved in utilizing administration skills to oversee day-to-day program operations as well as serve as a mentor, coach and instructional leader. Latest trends affecting the childcare services and workforce, including job descriptions and hiring practices, program evaluation, facility planning and management, accreditation, licensing, and quality practices are addressed.

Prerequisite: EDEC 101 or by permission of department chair

Corequisite: Must be taken with EDEC 304 or EDEC 308 or EDEC 403 or EDEC 404

### **EDEC 307 - Current Trends and Issues in Infant/Toddler and Preschool Children's Development and Community Based Partnerships (3)**

Current issues and trends in infant/toddler and preschool children's development are identified and analyzed from historical perspectives and how they impact the field as well as culturally responsive home-school-community relationships and their impact on children and their families.

Prerequisite: EDEC 101 and EDEC 106 or by permission of program coordinator

Corequisite: Must be taken with EDEC 304 or EDEC 308

### **EDEC 308 - Pre-Practicum in Early Childhood and Infant/Toddler Mental Health II (3)**

This course is a prerequisite to Practicum in Early Childhood and Infant/Toddler Mental Health I. This pre-practicum requires 100 hours of structured and supervised early childhood experiences. Candidates apply knowledge, skills, and understanding about social, emotional, physical, and mental development of infants, toddlers, and preschool children. The supervising faculty, in collaboration with the site supervisor, assesses the candidate's performance as a qualified professional who can work with infants and toddler or preschool children, and their families. The program oversees field placements in collaboration with school and community partners and early childhood faculty.

**NOTE: Candidate must pass the field experience requirements in order to pass the course.** In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: EDEC 304 or by permission of program coordinator

### **EDEC 321 - Curriculum and Instruction for English Language Learners (3)**

Designed to provide teacher candidates with the knowledge, skills, attitudes, and insights, to effectively organize and implement instruction for English Language Learners (ELLs) in pre-K-3 grade levels. Students will learn about language acquisition and explore practical

strategies in curriculum and instruction for English Language Learners. They will apply principles of developmentally appropriate practice in the context of educating dual language learners. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Early Childhood Education.

### **EDEC 400 - Leadership in Early Childhood Education (3)**

This course is designed to explore leadership theory and influences in early childhood education. An overview of leadership perspectives that center around equity-based practices will be the focus. Topics include, but are not limited to, leadership styles, organizational leadership, how to be reflective and encourage practitioners to be reflective, aspects of a collective leadership model, and the cultural context of leadership.

Prerequisite: EDEC 304 or permission by department chair.

### **EDEC 401 - Integrated Methods for Early Childhood: Teaching and Learning of Mathematics and Science (4)**

Integrated methods of math and science curriculum, instruction, and assessment using developmentally appropriate practices. Introduction to the Common Core State Standards for Math and Literacy, the Framework for K-12 Science Education, and the CT Science Standards. CT law requires fingerprinting and a criminal background check for the field experiences in this class. Fingerprinting must be completed prior to the beginning of class. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Early Childhood Education.

### **EDEC 402 - Child development and Implications for Teaching in the Primary Classroom (3)**

Exploration of developmentally appropriate integrated models of curriculum, instruction and assessment strategies in alignment with appropriate standards to meet the needs of a diverse learning community serving children 6 - 8 years of age. Reflection on practice in the place-based setting is required. 30 hours of field experience required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program In Early Childhood Education.

### **EDEC 403 - Practicum in Early Childhood and Infant/Toddler Mental Health I (6)**

This practicum requires 200 hours of structured and supervised classroom and community-based experiences. Candidates apply knowledge, skills, and understanding about infant, toddler and preschool children's social, emotional, physical and mental development. Host school(s) and state funded community-based agencies serve as practicum placements. The supervising faculty, in collaboration with the site supervisor, assesses the candidate's performance as a qualified professional who can work with infants, toddlers, and preschool children, and their families, and makes recommendations for the Practicum in Early Childhood and Infant/Toddler Mental Health II. The program oversees field placements in collaboration with school and community partners and early childhood faculty. Students will be observed by the field supervisor and by their onsite supervisor throughout this course. Candidates are expected to complete 200 hours *each* of practicum experience in Practicum I & II focusing on infants, toddlers, and preschool children. This supervised practicum in an early childhood setting. The age group and setting the student is assigned to for course completion depends on where they completed EDEC 304 and EDEC 308.

Prerequisite: EDEC 308 or by permission of program coordinator

**EDEC 404 - Practicum in Early Childhood and Infant/Toddler Mental Health II (6)**

This is the final Practicum in Early Childhood and Infant/Toddler Mental Health. This practicum requires 200 hours of structured and supervised classroom and community-based experiences. Candidates apply knowledge, skills, and understanding about infant, toddler and preschool children's social, emotional, physical and mental development. Host school(s) and state funded community-based agencies serve as practicum placements. The supervising faculty, in collaboration with the site supervisor, assesses the candidate's performance as a qualified professional who can work with infants, toddlers, and preschool children, and their families, and makes recommendations for program completion. The program oversees field placements in collaboration with school and community partners and early childhood faculty. Students will be observed by the field supervisor and by their onsite supervisor throughout this course. The age group and setting the student is assigned to for course completion depends on where they completed EDEC 403.

Prerequisite: EDEC 403 or permission by department chair.

**EDEC 431 - Early Childhood Student Teaching Seminar (1)**

As a community of learners, student teachers reflect upon the student teaching experience and work collaboratively to address pertinent matters related to the classroom experience. Information related to certification, preparation for employment and current trends are addressed

Prerequisite: Admission to the Professional Program.

**EDEL - Education-Elementary****EDEL 115 - Fostering Positive School Climate through Aesthetic Education (3)**

Exploration of ways in which aesthetics and creativity impact social/emotional intelligence and conflict resolution. The moral imagination of students in relationship to curriculum and teaching will also be covered.

**EDEL 210 - Education & Teacher Leadership in Diverse Learning Communities (3)**

Exploration of teaching, diversity, and the roles teachers play as leaders in diverse educational learning communities. Inquiry-based approach includes participant experiential learning, case analysis,

examination of beliefs, and research on learning and teaching.

Prerequisite: None

**EDEL 212 - Foundations of Educating and Schooling in Elementary Education (3)**

Analysis of foundations of elementary education which include philosophical, historical, social, cultural, political, and economic influences on the development of educational policies and practices. Students will explore these within the context of the nation's diverse multicultural society and elementary schools and how one's beliefs influence one's teaching within this context. Focus is on the elementary school level. Pre-req for all elementary education candidates.

**EDEL 315 - Principles of Learning: Elementary Education (3)**

Examination of principles pertinent to teaching and learning. Emphasizes the use of educational theory and research findings applicable to classroom practices, learning communities, and learners' developmental levels. 30 hours of certification specific field experience required. In Elementary Education, taken concurrently with SPED 315 and RDG 315. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program.

**EDEL 322 - Effective Elementary Teaching I (3)**

Emphasis on use of standards, development and alignment of objectives, planning of consecutive lesson plans, instructional strategies, and assessment concepts. Students critique and develop formative and summative assessments as part of lesson planning. Forty-five hours of certification specific field experience required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program of Teacher Education, EDEL 315.

**EDEL 415 - Elementary Social Studies Methods (2)**

Introduction to content and processes of elementary social studies. Students examine curricular goals and materials, research, and construct integrative, developmentally appropriate social studies lessons, and implement lessons in field setting. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program of Teacher Education; EDEL 315.

**EDEL 420 - Effective Elementary Teaching II (3)**

Taken concurrently with LLA 412 (p. 208), MATH 412, and SCI 412 in the Elementary Education Program. Current trends in Elementary School curriculum and instruction with a focus on developing compassionate classrooms that are culturally responsive through integration of teaching strategies that are respectful of all students' cultural, social, and developmental differences. Teacher candidates complete integrated learning segments and collect and analyze data to inform future instruction. Sixty hours of certification specific field experience is expected. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program of Teacher Education; EDEL 322.

**EDEL 430 - Elementary Education Student Teaching (9)**

Student teachers in elementary schools work with teachers and children in professional activities. Placement culminates with student teachers assuming responsibility for planning and implementing units of instruction and developing classroom leadership. Full semester of field-based work required. Not for credit in graduate programs. Only the required concurrent courses may be taken during

student teaching. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Permission of the Director of the Office of Field Experiences.

**EDEL 431 - Topic Seminar in Leadership and Learning Communities (1)**

Examination of current research and theory pertaining to teacher leadership and the development of learning communities in classrooms and schools. Topics include educational reform, professional ethics, diversity, collegiality and continuous professional development. May be repeated for a maximum of two credits. Not available for graduate credit.

Prerequisite: Admission to the Professional Program; concurrent with student teaching.

**EDEL 502 - Focus on Diversity in Education (3)**

Study of philosophical and historical foundations of diversity in elementary educational settings as they relate to learning, pedagogy, and the role of education and teachers in the United States. Critical analysis of fundamentals grounding educational policies and their effect on student diversity in the elementary school.

Prerequisite: Admission to MS Program or approval by department chair.

**EDEL 508 - Current Instructional Trends in Elementary Education (3)**

Current trends in Elementary School curriculum and instruction. Focus on developing pragmatic and purposeful lessons and units infused with a variety of elements, such as virtual instruction, social justice, social emotional learning, and culturally responsive pedagogy.

Prerequisite: Admission to MS in Elementary Education or approval by dept. chair.

**EDEL 512 - Assessment of Learning (3)**

Study of assessment theory and practices in subject content areas in the elementary curriculum. Emphasis in developing and reviewing formative and summative assessments with evaluative criteria that inform next steps in instruction for academic success. Forty-five hours of certification specific field experience required. CT law

requires fingerprinting and a criminal background check for the field experiences in this class. Fingerprinting may be required prior to the beginning of fieldwork.

Prerequisite: Admission to a Master's program or approval by department chair.

### **EDEL 515 - Developmental Theories of Learning (3)**

This course examines the principles pertinent to teaching and learning and emphasizes the use of educational theory and research findings applicable to classroom practices, learning communities and diverse learners' developmental levels. Students will investigate how to design research-based, socially-emotionally developmentally appropriate and challenging learning experiences. Thirty hours of certification specific field experience required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Acceptance into a graduate program or permission of department chair.

### **EDEL 529 - Analysis of Teaching (3)**

Analysis of instructional methods, including virtual pedagogy, and their effects on learners in the different content areas in elementary schools. Special focus on student-directed methods fostering critical thinking and student inquiry grounded in ways of doing and knowing within diverse populations. Emphasis on confronting and addressing ideologies that perpetuate inequities and injustice.

Prerequisite: Admission to MS in Elementary Education or approval by dept. chair.

### **EDEL 530 - Internship (6)**

Master's Program Interns, as student teachers in elementary schools, work with teachers and children in professional activities. Placement culminates with Interns assuming responsibility for planning and implementing units of instruction and developing classroom leadership. Full semester of internship. In accordance with CT law, districts may require criminal background (including fingerprinting) and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Interns are required to follow the background check policies of the district in which they are placed and are

responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Acceptance to the MS Program in Elementary Education and completion of 21 credits in the program or permission by department chair

## **EDF - Educational Foundations**

### **EDF 200**

#### **EDF 215 - Education in a Multicultural Society (3)**

Introductory course focused on the evolving purposes and roles of education and teachers in American society, issues of diversity and equity in education, and the societal and cultural factors, key policies, and court cases that have shaped U. S. education.

Prerequisite: Pre-BSED status or permission of department chair

#### **EDF 415 - Educational Foundations (3)**

Social and moral contexts of schooling, purposes of education in American society, contemporary educational policy, politics of the policy-making process and the role of teachers as leaders. Not for credit in graduate degree programs.

Prerequisite: Admission to the Professional Program.

## **EDL - Educational Leadership and Instructional Technology**

### **EDL 523 - Instructional Leadership and Coaching (3)**

Investigation of coaching models and practices. Includes development of personal coaching vision, and strategies for building and supporting coaching relationships and collaborative, reciprocal interactions.

Prerequisite: Admission to a graduate program in Education.

### **EDL 524 - Leadership and the Dynamics of Organizational Change (3)**

Theories of organizational change. Assessing school culture, developing goals for school improvement, and overcoming barriers to school change. Developing human, fiscal, technological, and community resources to support the change process. (S)

Prerequisite: EDL 523, Admission to the M.S. Educational Leadership or permission of the department chair.

**EDL 531 - Collaboration and Professional Development (3)**

Fostering a collaborative culture of continuous improvement. A study of adult learning theory and principles for designing and facilitating professional development in support of instruction.

Prerequisite: Admission to a Masters program in Education.

**EDL 551 - Curriculum Leadership (3)**

The course designed to investigate the scope and components of curriculum leadership. Curriculum planning, delivery, monitoring, and evaluation as they relate to leadership behavior will be studied. Students will demonstrate the requisite skills needed for effective curriculum and instructional leadership.

Prerequisite: None

**EDL 552 - Topics in Educational Leadership (3)**

Comprehensive inquiry into a specific area of educational leadership. It may be repeated once with different content.

Prerequisite: Permission of department chair.

**EDL 555 - Leadership for Social Justice (3)**

Theories of leadership for social justice with emphasis on inquiry, reflection, critical analysis, collaboration and advocacy. Facilitating effective interactions with diverse students, and among colleagues, families, and the larger community.

Prerequisite: None

**EDL 590 - Leaders as Learners: Educational Leadership and Self-Assessment (3)**

Self-assessment of leadership. Discussion of self-awareness as the cornerstone of effective leadership. Exploration of State and national standards, learning and leading styles, the impact of cultural and experiential background, and values and beliefs concerning educational leadership.

Prerequisite: Admission to the Sixth Year Certificate program or permission of department chair.

**EDL 594 - Practicum I in Educational Leadership (3)**

Part one of a two-semester supervised practicum in educational leadership. Students initiate action plans, document collaborative initiatives, and implement curriculum, instructional and organizational change strategies promoting equitable outcomes for all students.

Prerequisite: Completion of ED 517, ED 540, ED 598, EDL 523, EDL 524, EDL 555. With the approval of the department chair, one prerequisite may be taken with the field experience.

**EDL 595 - Practicum II in Educational Leadership (3)**

Part two of a two-semester supervised practicum in educational leadership. Students complete action plans to document collaborative initiatives, and evaluate curriculum, instructional, and organizational change strategies being implemented to promote equitable outcomes for all students.

Prerequisite: EDL 594.

**EDL 605 - Leadership in Teaching and Learning I (3)**

Study of leadership in the teaching and learning process. Focus on supervision of instruction, classroom assessment strategies, and working with diverse learners.

Prerequisite: Admission to the Sixth-Year Certificate program and EDL 590.

**EDL 606 - Leadership in Teaching and Learning II (3)**

Continuation of EDL 605 and SPED 605 (p. 318).

Prerequisite: EDL 605 or SPED 605.

**EDL 610 - School Leadership I (3)**

Emphasis on enhancing students' repertoire of knowledge, skills and attitudes in identifying educational problems, and making informed decisions.

Prerequisite: Admission to the Sixth-Year Certificate program and EDL 590.

**EDL 611 - School Leadership II (3)**

Continuation of EDL 610.

Prerequisite: EDL 610

**EDL 618 - Understanding the Political and Ethical Environment of Educational Leadership (3)**

Knowledge and skills for political and ethical leadership, including ethical and legal decision making, policy development, fiscal management, and contract negotiations.

Prerequisite: Available to 6th year Educational Leadership students with permission of CCSU department chair or students admitted to Western Connecticut State University's Instructional Leadership doctoral program with permission of CCSU department chair.

**EDL 620 - Educational Policy, Communities, and Pluralistic Governance (3)**

Knowledge and skills for political and community leadership focused on PK-12 education policy and related governance structures at the federal, state, and local levels. Evaluation of policy trends from socio-cultural, political, technological, and economic perspectives. Principles and processes of community and family engagement as core elements of democratic practices in educational leadership. Course requirements include field-based application of key concepts and skills.

Prerequisite: Admission to the Sixth Year Program in Educational Leadership and EDL 590 or Reading and Language Arts, or admission to the Doctoral Program in Educational Leadership.

**EDL 630 - Education Law, Ethics, and Equity (3)**

Candidates explore case studies to develop decision-making skills for effective organizational management and leadership for learning. Course requirements include field-based application of key concepts and skills.

Prerequisite: Admission to the Sixth Year Program in Educational Leadership and EDL 590 or Reading and Language Arts, or admission to the Doctoral Program in Educational Leadership.

**EDL 634 - Seminar in Curriculum Development (3)**

Study of curriculum design including the setting of objectives, selection of content material, instructional techniques, and program evaluation.

Prerequisite: None

**EDL 652 - Advanced Topics in Educational Leadership (1 )**

Seminar addressing a specific topic in organizational leadership for educational settings. May be repeated for a total of 6 credits.

Prerequisite: Admission to the Sixth-Year Certificate or Ed.D. program, and permission of instructor.

**EDL 656 - Leadership and Supervision in Teaching and Learning (3)**

Focuses on strategic leadership skills of using instructional leadership, supervision, communication and technology to improve teaching and learning.

Prerequisite: Available to 6th year Educational Leadership students with permission of CCSU department chair or students admitted to Western Connecticut State University's Instructional Leadership doctoral program with permission of CCSU department chair.

**EDL 681 - District Leadership: Governance/Leadership Issues (3)**

This develops an understanding of the governance and leadership functions shared by Boards of Education and Central Office personnel. Attention will focus on the legal obligations of Boards of Education, issues related to governance of schools, the delineation of functions between Boards of Education and Central Office administrators, and the evolving nature of leadership.

Prerequisite: Completion of requirements for 092 certification and/or permission of the Department Chair.

**EDL 682 - District Leadership: Student Matters (3)**

Develops an understanding of the role of the central office with respect to the delivery of educational services to students, including the leadership roles of the superintendent, the central office and the Board of Education in developing an organizational learning culture designed to improve student achievement. Student matters include student rights, extra-curricular activities, disciplinary issues, Special Education, cultural diversity and alternative education.

Prerequisite: EDL 681 or permission of the Department Chair.

**EDL 683 - District Leadership: Personnel/Operations Issues (3)**

Develops an understanding of employee relations and the support functions maintained by Boards of Education. Areas of focus will include contract negotiations, bargaining unit relationships, and the hiring, retention, and termination of staff. Operational topics will include finance, facilities, transportation, technology and food services.

Prerequisite: EDL 682 or permission of the Department Chairperson.

**EDL 688 - Administration of Programs for Diverse Learners I (1)**

The course will provide administrative and current information about programs, policies, and procedures at the federal, state, and local levels for meeting the needs of all students.

Prerequisite: None

**EDL 689 - Administration Programs for Diverse Learners II (1)**

The course will provide administrative and current information about programs, policies, and procedures at



the federal, state, and local levels for students who are English Learners.

Prerequisite: None

### **EDL 690 - Internship in Educational Leadership I (2)**

Part one of a year-long supervised administrative internship (6 month in building leadership and 6 months in district leadership). Students initiate action plans, and begin professional portfolios to document strategic, instructional, organizational, and contextual leadership.

Prerequisite: Admission to the Sixth-Year Certificate program, and completion of 18 credits in planned program or permission of instructor.

### **EDL 691 - Internship in Educational Leadership II (2)**

Part two of a year-long supervised administrative internship. Students continue work on actions plans in building and district settings, and add to their professional portfolios.

Prerequisite: EDL 690.

### **EDL 695 - Internship: The Superintendency I (3)**

Part one of supervised administrative internship. Interns apply strategic, organizational, and contextual leadership skills. Students will conduct organizational assessments to design an action plan and initiate the development of a professional portfolio.

Prerequisite: Admission to Ed.D., or Sixth-Year Certificate program; 092 cert.; EDL 681 and EDL 682 and/or permission of department chair.

### **EDL 696 - Internship: The Superintendency II (3)**

Also based on meeting requirements for Intermediate Administration Certification. Part two of a supervised administrative internship in the superintendency. Students will complete their professional portfolio.

Prerequisite: EDL 695.

### **EDL 697 - Readings and Conference (1-3)**

Individual or small group directed study of a specific topic under the supervision of a faculty member. May be repeated with different topics for a total of 6 credits.

Prerequisite: Admission to the Sixth-Year Certificate program and permission of Department Chair.

### **EDL 700 - The Purposes of Education in America (3)**

A critical examination of the social, political, economic, and moral purposes of American education and their

implications for goals, curriculum, teaching, evaluation, organization, administration, and financing of education.

Prerequisite: Admission to the Ed.D. Program

### **EDL 701 - Leading Organizational Change I: Theory (3)**

Theoretical foundations of change emphasizing organizational culture and development, chaos theory, models of systemic change and critical theory. Leaders develop capacity to critically assess their organizations for the purposes of guiding and sustaining meaningful change.

Prerequisite: Admission to the Ed.D. program and EDL 712

### **EDL 702 - Leading Organizational Change II: Program Development & Evaluation (3)**

Theoretical foundations and practical applications of strategies aimed at organizational development and ongoing systematic evaluation. Application of strategies of group learning and data-driven decision-making to the assessment of organizational outcomes.

Prerequisite: Admission to the Ed.D. program and EDL 712

### **EDL 703 - Human-Centered Leadership (3)**

Awareness-based leadership in educational organizations. Students complete self-assessments related to leadership, personal dispositions, and awareness-based frameworks. Exploration of the intersection of personal growth, collaborative leadership, and organizational change.

Prerequisite: Admission to the Ed.D. program or permission of Ed.D. Director.

### **EDL 705 - Leadership to Promote Effective Teaching & Learning (3)**

Focus on new research on human learning and teaching. This course will explore the leadership implications of this research for the design and support of formal instructional environments aimed at helping all individuals achieve their full potential. Variable credit to a total of 6 credits applied to the doctoral program.

Prerequisite: Admission to Ed.D. program.

### **EDL 710 - The Study of Human and Organizational Learning (2)**

Educational research ethics and the relationship between research and the purposes of schooling. Students refine information-gathering skills and engage in introductory study of both quantitative and qualitative research methods. Preparation of an integrative literature review.

Prerequisite: Admission to the Ed.D. program.

**EDL 711 - Inquiry Seminar II: Quantitative Research (3)**

Quantitative methods for educational research, including quasi-experimental design and instrumentation. Emphasis on data collection techniques and modes of analysis, such as applied statistics. Coursework will focus on quantitative skill development (including institutional data bases; survey research; and basic skills for using descriptive and inferential statistics).

Prerequisite: EDL 710.

**EDL 712 - Inquiry Seminar III: Qualitative Research (3)**

Qualitative methods for educational research with emphasis on case studies and evaluation studies. Primary focus on data collection techniques and modes of analysis, including evaluation and intervention studies, qualitative coding, and use of qualitative data coding software.

Prerequisite: EDL 711

**EDL 713 - Inquiry Seminar IV: Study of Organizational Change (2)**

Application of research methodologies to studies of the change process. A specific focus on quantitative research methodologies and statistics. Students develop a conceptual framework, an integrative review of the literature, and an inquiry plan for a study of organizational and cultural change.

Prerequisite: EDL 712.

**EDL 714 - Inquiry Seminar V: Advanced Research Design (3)**

Advanced topics in research study such as randomized field experiments, interrupted time series, and interaction analysis. A continued focus on both quantitative and qualitative methods. Matching design and method to contexts, questions and researcher intentions are discussed. Students investigate mixed methods approaches to research. Students begin developing dissertation topics.

Prerequisite: EDL 713.

**EDL 715 - Inquiry Seminar VI: Leadership Portfolio and Capstone Prospectus (3)**

Students complete the electronic leadership portfolio requirement and prepare a dissertation prospectus. Continued development of academic writing skills.

Prerequisite: EDL 714

**EDL 716 - Inquiry Seminar VII: Capstone Proposal Development (4)**

Defense of the capstone proposal. Students work through the summer with their dissertation advisor and committee members both individually and in small group tutorials.

Prerequisite: EDL 715.

**EDL 717 - Inquiry Seminar VIII: Capstone Research I (4)**

Dissertation research and writing. Seminars provide intellectual and emotional support for problem-solving related to ethical, political and methodological dilemmas, conflicts of purpose, time management and stress. One-on-one and small group meetings with the dissertation advisor.

Prerequisite: EDL 716.

**EDL 718 - Inquiry Seminar IX: Capstone Research II (4)**

Continuation of EDL 717. Seminars provide intellectual and emotional support. One-on-one and small group meetings with the dissertation advisor. Students complete the dissertation.

Prerequisite: EDL 717.

**EDL 719 - Inquiry Seminar X: Capstone Research III (1-2)**

Required continuation of EDL 718 for students who have not completed their dissertations. May be repeated for up to eighteen credits over three calendar years.

Prerequisite: EDL 718.

**EDL 720 - Inquiry Seminar XI: Disseminating Research Findings (2)**

Students defend their completed dissertations and present their findings during professional development workshops for educational leaders. Preparation of conference proposals and articles for publication.

Prerequisite: EDL 716 and permission of Ed.D. Director.

**EDL 730 - Budgeting and Resource Management in Higher Education (3)**

Covers budgeting theory in Higher Education. Public vs. private sources of funding. Endowment and investing policies and strategies. Strategic Planning theory and the use of strategic planning in resource decision-making. Intersection of ethics, access and equity in resource management. Accreditation pertaining to feedback assessment processes.

Prerequisite: EDL 700

**EDL 731 - Administration and Ethics in Higher Education (3)**

Philosophy of administration; principles of management and applications in colleges and universities. The political economic and bureaucratic politics of educational organizations. Legal issues in Higher Education. Institutional control and the development of ethics in decision and policy-making.

Prerequisite: EDL 700, Admission into the Educational Leadership in Higher Education track or permission of program Director.

**EDL 732 - Organizational Theory and Governance in Higher Education (3)**

Application of organizational theory and research to post-secondary education organizations and administration; use of research in administrative practice, including organizational structure, resource dependence, strategy, institutional theory, organizational culture, socialization, leadership and decision making.

Prerequisite: EDL 700, Admission into the Educational Leadership in Higher Education track or permission of program Director.

**EDL 733 - Curriculum Planning and Development in Higher Education (3)**

Types of curricula (vocational, professional, general education, liberal arts) in higher education and supporting philosophies; approaches to curriculum planning and assessment (including program and student); patterns of interdisciplinary studies; sources of curricular reforms. Staffing and provision of resources.

Prerequisite: EDL 700, Admission into the Educational Leadership in Higher Education track or permission of program Director.

**EDL 734 - Leadership and Innovation in Higher Education Administration (3)**

Change leadership in Higher Education administration. Students investigate cases of large-scale systems change initiatives in Higher Education in relationship to socio-cultural, technological, and economic themes. Frameworks are presented for conceptualizing sustainable innovation in the delivery of higher education services. Focus on leadership for equitable access and outcomes for diverse stakeholders. Students use digital tools to collaboratively develop an online community of practice.

Prerequisite: Admission to the Ed.D. program and EDL 731, or permission of Ed.D. Director.

**EDL 735 - Special Topics in Leadership (1 to 3)**

Inquiry into special topics in educational leadership. Repeatable with permission for up to 15 credits.

Prerequisite: Admission to CCSU Ed.D. program

**EDL 736 - System Leadership I: Analysis & Diagnosis (3)**

System leadership in Higher Education administration. Students apply systems thinking tools to the analysis and diagnosis of core problems of practice in Institutions of Higher Education. Focus on development of skills utilizing stakeholder engagement interviews and collegial dialogues. Students develop causal loop diagrams of systems in practice and identify leverage points for organizational improvement and transformation.

Prerequisite: EDL 734 and either admission to the Ed.D. program or permission of Ed.D. Director.

**EDL 737 - System Leadership II: Design & Implementation (3)**

System leadership in Higher Education administration. Design of initiatives for organizational improvement and transformation through the application of organizational design frameworks. Implementation planning grounded in principles of adaptive leadership, organizational sustainability, and human-centered design.

Prerequisite: EDL 734 and either admission to the Ed.D. program or permission of Ed.D. Director.

**EDL 738 - Stress Management for Educators (3)**

Management of stress for school leaders (PreK-College), professionals, and individuals. Problems and nature of stress as a multidimensional phenomenon. Occupational, physical, psychosocial, and bioecological/cultural causes of stress are examined. Students identify, discuss, and critique stress preventive and reduction resources, and/or coping techniques. Self-assessment exercises to develop a personal and professional stress management plan.

Prerequisite: Admission to the Ed.D. program or permission of Ed.D. Director.

**EDSC - Education-Secondary****EDSC 412 - Student Teaching, TESOL, All Levels 12 (12)**

Full semester of student teaching in TESOL, K-12. One half of the semester is spent at the elementary school level, and one half at the secondary school level. CT law requires fingerprinting and a criminal background check for the field experiences in this class. In accordance with

CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program and permission of the Director of the Office of Field Experiences.

#### **EDSC 414 - Preliminary Student Teaching (Technology Education) (6)**

In accordance with the public school schedule, Technology Education students spend approximately an eight-week period in the first semester of the senior year in a public middle school. The Technology Education major demonstrates his or her ability to organize and conduct school learning activities and to work effectively with adolescent youth in a program of technology education. Emphasis on Connecticut teaching competencies in both classroom and laboratory situations. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Teacher Education and permission of the Director of the Office of Field Experiences.

#### **EDSC 415 - Student Teaching (Technology Education) (6)**

In accordance with the public school schedule, Technology Education students spend approximately an eight-week period in the first semester of the senior year in a public senior high school. The Technology Education major demonstrates his or her ability to organize and conduct school learning activities and to work effectively with adolescent youth in a program of technology education. Emphasis on Connecticut teaching competencies in both classroom and laboratory situations. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Teacher Education and permission of the Director of the Office of Field Experiences.

#### **EDSC 417 - Student Teaching (Elementary P.E.) (6)**

An eight-week period of the senior year is spent in a physical education department of a public elementary school where the student demonstrates the ability to conduct activity classes and to work effectively with children. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Teacher Education and permission of the Director of the Office of Field Experiences.

#### **EDSC 419 - Student Teaching (Secondary School P.E.) (6)**

An eight-week period of the senior year is spent in a physical education department of a public secondary school where the student demonstrates his or her ability to conduct activity classes and to work effectively with youth. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Teacher Education and permission of the Director of the Office of Field Experiences.

#### **EDSC 420 - Student Teaching - Elementary Music Education (4.5)**

Eight-week period in the last semester spent in a music education department of a public elementary school where the student demonstrates the ability to conduct learning activities in music and to work effectively with children. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program for Teacher Education and permission of the Director of the Office of Field Experiences.

#### **EDSC 421 - Student Teaching - Secondary Music Education (4.5)**

Eight-week period in the last semester spent in a music education department of a public secondary school where the student demonstrates the ability to conduct learning activities in music and to work effectively with youth. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program for Teacher Education and permission of the Director of the Office of Field Experiences.

#### **EDSC 425 - Multicultural, Interdisciplinary Teaching at the Secondary Level (3)**

Examination of multicultural and social justice teaching through methods of instruction, curriculum planning, assessment, and classroom climate as it encompasses the responsibilities of the teacher. The course focuses on the 7-12 classroom. Thirty hours of content area major field experience is required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: EDTE 314, or EDTE 316; admission to the Professional Program in Teacher Education.

#### **EDSC 428 - Student Teaching - Elementary Art (5)**

Eight-week student teaching where student demonstrates ability to conduct learning activities and to work effectively with pupils and teachers in an elementary program of art education. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program of Teacher Education and permission of Director of the Office of Field Experiences.

#### **EDSC 429 - Student Teaching - Secondary Art (5)**

Eight-week student teaching where student demonstrates ability to conduct learning activities and to work effectively with pupils and teachers in a secondary program of art education. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program of Teacher Education and permission of Director of the Office of Field Experiences.

#### **EDSC 431 - Student Teaching I — Technology and Engineering Education (5)**

In accordance with the public school schedule, Technology & Engineering Education students spend approximately eight weeks in the first semester of the senior year in a public middle school. The candidate demonstrates the ability to organize and conduct school learning activities and work effectively with adolescent youth in a program of technology education. Emphasis on demonstration of Connecticut teaching competencies in both classroom and laboratory situations. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program for Teacher Certification and permission of the Director of the Office of School Community Partnerships. Must be taken with EDSC 432 and TE 419.

#### **EDSC 432 - Student Teaching II Technology and Engineering Education (5)**

In accordance with the public school schedule, Technology & Engineering Education students spend approximately eight weeks in the first semester of the senior year in a public senior high school. The candidate demonstrates the ability to organize and conduct school learning activities and

work effectively with adolescent youth in a program of technology education. Emphasis on demonstration of Connecticut teaching competencies in both classroom and laboratory situations. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Must be taken with EDSC 431 and TE 419.

### **EDSC 435 - Secondary Education Student Teaching (9)**

Experiences in classrooms of public secondary schools where the student demonstrates the ability to conduct secondary school learning activities and to work effectively with adolescent youth. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Teacher Education and permission of the Director of the Office of School Community Partnerships

### **EDSC 436 - Student Teaching (Elementary Dance Education) (6)**

An eight-week period of the senior year is spent in a dance education department of a public elementary school where the student demonstrates the ability to conduct dance classes and to work effectively with children. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Teacher Education and permission of the Director of the Office of Field Experiences.

### **EDSC 437 - Student Teaching (Secondary School Dance Education) (6)**

An eight-week period of the senior year is spent in a dance education department of a public secondary school

where the student demonstrates his or her ability to conduct dance classes and to work effectively with youth. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Teacher Education and permission of the Director of the Office of Field Experiences.

### **EDSC 505 - Innovations in Secondary Education (3)**

A critical analysis of past and current school reform models, including innovative school-level, and classroom-level practices. Students will design and implement transformative practices in their schools or classrooms.

Prerequisite: None

### **EDSC 556 - Instructional Theory and Practice (3)**

Students will design, implement, and evaluate an action research project within their content area that reflects advanced studies of the theoretical bases of instruction, focusing on cutting edge instructional models.

Prerequisite: Admission to an M.S. program.

### **EDSC 586 - Seminar in Secondary Education (3)**

Examination of issues relevant to the teacher in the middle or high school. Investigation of a specific curricular issue through qualitative methods of inquiry.

Prerequisite: None

## **EDT - Educational Technology**

### **EDT 101 - Basic Instructional Design & Production (1)**

Designed to develop basic knowledge, skills, and disposition related to the use of instructional technology to become a more effective and more productive teacher in the Early Childhood classroom. Although there is some technology infusion in this course, EDT 101 is primarily concerned with the design, production, and evaluation of effective instruction using technology.

Prerequisite: Admitted to Early Childhood Program or by permission of dept. chair.

**EDT 301 - Instructional Technology in the Classroom I (1)**

Application of instructional design strategies and techniques using a range of technologies to develop effective lessons/instruction.

Prerequisite: Admission to the Professional Program in Early Childhood Education.

**EDT 302 - Advanced Instructional Design & Production (1)**

Emphasis on advanced knowledge, skills, and dispositions related to the use of instructional technology through the use of three specific technologies (Apps, Games, and Simulation) to be a more effective and more productive teacher in the Early Childhood classroom. EDT 302 builds on EDT 101 and 201 by focusing on how to integrate apps, games, and simulation in the Early Childhood classroom. A combined total of 100 fieldwork hours in EDEC 305, EDEC 306, EDEC 307, EDT 302 and EDEC 308. Pre practicum placement will be scheduled **three times a week** (Monday through Friday), **8:00AM-12:00PM**, in a preschool and/or infant/toddler setting. **NOTE: Candidate must pass the pre practicum experience requirements in order to pass the course.** In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: EDEC 300, SPED 321, EDEC 304, EDEC 309. Candidates must have completed IT Module 3, and Infant/Toddler Mental Health Modules 1 & 2. Taken concurrently with EDEC 305, EDEC 306, EDEC 307 and EDEC 308. Candidates must complete Infant/Toddler Mental Health Module 3.

**EDT 305 - Educational Technology For Elementary (1)**

Prepares elementary education candidates to integrate technology into lesson planning through the design and development of an interactive, multimedia presentation. Multiple forms of technology are utilized to develop the lesson along with other supporting instructional and assessment materials.

Corequisite: EDEL 315

**EDT 315 - Educational Technology in the Secondary School Classroom (1)**

Prepares educators to integrate technology into secondary lesson planning through the design and

development of an interactive, instructional program that utilizes multimedia and Web 2.0 technologies.

Prerequisite: None

**EDT 321 - Instructional Technology in the Classroom II (1)**

Must have completed EDT 301 successfully. Apply instructional design strategies and techniques using a range of technologies to develop effective lessons/instruction. More advanced production skills, use online sources effectively to communicate information online and develop digital social network skills to share ideas, ask questions, post work to dialog with faculty, students, and public school teachers and continue their Digital Interactive Portfolio.

Prerequisite: Admission to the Professional Program in Early Childhood Education.

**EDT 401 - Instructional Technology in the Classroom III (1)**

Admission to the Professional Program in Early Childhood Education. Successful completion of EDT 321. Advanced knowledge and skills in instructional design for classroom lessons and instruction. In addition, students will learn advanced production skills, use more advanced online sources effectively to communicate information, and develop digital social network skills to share ideas, ask questions, post work to dialog with faculty, students, and public school teachers, and continue toward a final draft of their Digital Interactive Portfolio.

Prerequisite: None

**EDT 402 - Designing Instruction for the Professional (1)**

Designed to support candidates in their Practicum for Infant/Toddler and Preschool/Kindergarten in designing, producing, and evaluating effective instructional technology for Early Childhood classroom as well as community-based programs. Synthesizes and builds on skills learned from EDT 101, 201, and 302. Application of hands on laboratory experience whereby candidates collaborate in developing lesson plans and instructional presentations, as well as building their technology presence in the classroom (website) and materials for instructional purposes. A combined total of 200 practicum hours with EDEC 403. Practicum placement will be scheduled **four to five times a week** (Monday through Friday), **8:00AM-04:00PM**, in a preschool and/or infant/toddler setting. **NOTE: Candidate must pass the practicum requirements in order to pass the course.** In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry

checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: EDEC 305, EDEC 306, EDEC 307, EDT 302 and EDEC 308. Candidates must have completed Infant/Toddler Mental Health Module 3. Taken concurrently with EDEC 403.

### **EDT 415 - Developing Instructional Materials (1)**

This class is the second part of a two part series of educational technology courses for elementary education majors. The purpose of this class is to introduce you to the various roles web based instruction plays in the elementary classroom and the educational field. As aspiring teachers, this class will help you learn how to use technology to increase classroom productivity, meet national and state standards and integrate digital-age media tools into the curriculum seamlessly.

Prerequisite: EDT 210 or EDT 305

### **EDT 421 - Instructional Technology in the Classroom IV (1)**

Instructional design strategies and techniques using a range of technologies to develop effective lessons/instruction during their student teaching experience. Integrates skills in the previous EDT courses and their field work in a discovery lab setting. Students will complete effective lesson plans that will be used in their student teaching. The lesson plans is a culmination project that will reflect their skills in instructional design, instructional techniques, technology, and assessment. Students will share their final lesson plans with faculty, students, and public school teachers, and complete their Digital Interactive Portfolio.

Prerequisite: Admission to the Professional Program in Early Childhood Education. Successful completion of EDT 401.

### **EDT 502 - Design Tools (3)**

Exploration of various software and hardware programs and how these multimedia tools can impact the design of instructional materials. Development of various audio and video compression skills.

Prerequisite: Admission to Educational Technology, MS

### **EDT 505 - Inquiry in Educational Technology (3)**

Graduate level research course with a focus on educational technology literature, providing familiarity

with the process of reporting and evaluating research in the field. Research concepts and procedures will be stressed.

Prerequisite: Admission to Educational Technology MS

### **EDT 515 - Instructional Design (3)**

Application of instructional design principles that includes design of needs analysis, learner analysis, task analysis, goals and objectives, instructional and media strategies, and evaluation in solving instructional issues.

Prerequisite: Admission to the program

### **EDT 517 - Message Design and Production (3)**

Application of message design theories and principles involving perception, memory, attitude and persuasion. Course includes hands-on learning experience in the design and production of instructional materials.

Prerequisite: Admission to the program

### **EDT 520 - E-Learning (3)**

Application of computer-based strategies for instruction, including interactivity, adaptivity, feedback, branching, and evaluation, with emphasis on screen design, developing flowcharts and storyboarding.

Prerequisite: EDT 515

### **EDT 525 - Instructional Video and Audio (3)**

Design and production of effective instructional video and audio.

Prerequisite: EDT 520

### **EDT 530 - Online Instruction (3)**

Analysis of effective online instruction, including hands-on experiences to design, produce, evaluate, and manage online instruction programs.

Prerequisite: EDT 517

### **EDT 535 - Interactive Multimedia I (3)**

Application of multimedia principles emphasizing screen design, branching, instructional, and media strategies, using flowcharts, storyboards, and evaluation techniques.

Prerequisite: EDT 525

### **EDT 536 - Interactive Multimedia II (3)**

Production of multimedia through hands-on experiences that include CD-ROM mastering, digital audio and video, animation, graphics, programming, and subsequent evaluation procedures for Educational Technology.



Prerequisite: EDT 535

### **EDT 540 - Educational Technology: Instructional Design, Assessment, and Data (3)**

Use of technology in the systematic design of instruction to enhance, repurpose, and improve teaching, learning, and assessment.

Prerequisite: None

### **EDT 597 - Final Project (3)**

Culminating experience. Students develop an instructional project that demonstrates acquired skills in design, production, and evaluation in Educational Technology.

Prerequisite: Completion of 21 credits in program including EDT 505 and EDT 525

### **EDT 700 - Topics in Leadership for Technology in Schools (1 to 3)**

Technology applications to enhance professional practice, increase organizational learning, and enhance productivity. Participants document their progress in meeting TSSA standards, and develop and carry out individualized learning plans. Variable credit to a total of 3 credits applied to the doctoral program.

Prerequisite: None

## **EDTE - Education-Teacher**

### **EDTE 314 - Applying Learning Theories in Diverse Settings (K-12 Programs) (3)**

Examination of educational theory and research related to K-12 practices, learning communities, and learners' developmental needs that promote equity. The course emphasizes elementary level teaching. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: 20 hours of field experience in assigned settings required.

Corequisite: MUS 310, or ART 301, or PE 299 or TE 299.

### **EDTE 316 - Principles of Learning in Diverse Settings (Secondary) (4)**

Application of theory and research to effectively support the success of diverse learners. Topics include behavioral,

cognitive, and social-cognitive models; academic language; culturally responsive teaching; universal design for learning; and skills in planning, assessing, and delivering instruction. Satisfactory completion of 30 hours of content area field experience in assigned middle or high school setting required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Secondary Education.

## **EE - Electrical Engineering**

### **EE 101 - Electric Circuits I (3)**

Basic concepts and laws, methods of analysis and circuit theorems in DC and transient circuits. Topics include voltage, current, power, resistance, capacitance, inductance, node analysis, mesh analysis, Thevenin's theorem, Norton's theorem, steady state and transient analysis. Laboratory experiments involve building circuits, using instruments to measure quantities and observe phenomena. Two hours lecture and three hours laboratory.

Prerequisite: MATH 221 and PHYS 125 (both may be taken concurrently or C- or higher)

### **EE 201 - Electric Circuits II (3)**

Frequency response, gain and phase shift, Bode plots, resonance. Two-port circuit characterization. Phasor and Laplace Transforms in analysis of linear circuits with and without initial conditions. Low and high-pass filter design. Determining frequency response by analysis of poles and zeroes in the complex plane. Two hours lecture and three hours laboratory.

Prerequisite: EE 101 (C- or higher) and MATH 355 (may be taken concurrently or C- or higher)

### **EE 212 - Fundamentals of Logic Design (3)**

Principles and applications of digital circuits, number systems, Boolean algebra, combinatorial and sequential logic circuits, and arithmetic circuits. Laboratory experiments focus on circuit building and troubleshooting using TTL integrated circuits. CAD tools for design, simulation and testing of digital designs. Three hours lecture and two hours laboratory.

Prerequisite: ENGR 240 (C- or higher)

**EE 301 - Signals and Systems (3)**

Study of linear systems using differential equations: impulse and step response with convolution, Fourier series and transforms, and Laplace transforms for discrete time and continuous time signals. Emphasis on modeling of systems and description of the transient and steady state responses. Three hours lecture.

Prerequisite: EE 201 (C- or higher) and MATH 355 (C- or higher, may be taken currently)

**EE 312 - Computer Systems (3)**

Computer hardware and software components, memory-addressing modes, development of assembly language programs, programming involving input/output ports and interrupts. Two hours lecture and two hours laboratory.

Prerequisite: EE 212 (C- or higher)

**EE 313 - Electric Energy Engineering I (3)**

Review of electric utility industry. Study of energy engineering which includes symmetrical three-phase systems, the three-phase synchronous generator, the power transforms, transmission lines, energy system in its normal states - power-flow analysis. Two hours lecture and two hours laboratory.

Prerequisite: EE 201 and MATH 221 (All prerequisites require a C- or higher)

**EE 323 - Electric Energy Engineering II (3)**

Optimum operating strategies, the energy system in steady state - the control problems, the energy system transients - surge phenomena and symmetrical fault analysis, unbalanced system analysis, emergency control. Two hours lecture and two hours laboratory.

Prerequisite: EE 313 (C- or higher)

**EE 324 - Control Systems I (3)**

Study of continuous transfer function models, signal norms, basic feedback loop, stability and tracking. Root locus analysis and design, phase and gain margin analysis and design. Two hours lecture and two hours laboratory.

Prerequisite: EE 301 (C- or higher)

**EE 330 - Electromagnetics (3)**

Study of electric and magnetic fields are studied using vector algebra. Development of Maxwell's Equations. Study of transmission lines. Three hours lecture.

Prerequisite: EE 201 and MATH 222 and MATH 226 (All prerequisites require a C- or higher)

**EE 331 - Introduction to Semiconductors (3)**

Study of electrical conduction in solid-state materials. Analysis and design of switching circuits containing diodes and transistors. Analysis and design of combinational logic on the transistor level through the layout and advantages of CMOS circuits. Two hours lecture and two hours laboratory.

Prerequisite: EE 201 (C- or higher)

**EE 333 - Electric Machines and Motors I (3)**

Introduction to magnetic systems: Equivalent circuits, magnetism, energy, losses, and magnetic flux. Ideal transformers, equivalent circuit for two-winding transformer, coupled-circuit representation, transformer performance, transients, and variable frequency operation. Basic principles of electric machines, electromechanical energy conversion, cylindrical machines, constant torque conditions, polyphase alternating current machines, construction of electromagnetic machinery. Three hours lecture.

Prerequisite: EE 330 (C- or higher)

**EE 343 - Electric Machines and Motors II (3)**

Direct current machines, magnetic systems for dc machines, windings, excitation, equivalent circuit, general equations, generator performance, motor performance, permanent magnet motors. Induction machines, AC windings, three phase induction machines, approximate equivalent circuit. Synchronous machines, three phase synchronous machines, steady state operation, power factor, determination of equivalent circuit parameters. Three hours lecture.

Prerequisite: EE 333 (C- or higher)

**EE 351 - Analog Circuit Design (3)**

Analysis and design of single transistor amplifiers, multiple transistor amplifiers, and operational amplifiers. Emphasis is placed on the simulation of amplifiers on the transistor level using industry standard software. Two hours lecture and two hours laboratory.

Prerequisite: EE 331 (C- or higher)

**EE 352 - Signal Processing and Pattern Analysis (3)**

Study of signal processing techniques including data sampling, discrete-time filtering, spectral analysis, and convolution. Introduction to pattern analysis for description, recognition, and prediction of sensor signals.

Applications of the techniques include sensor-based monitoring of diverse electrical systems. Two hours lecture and two hours laboratory.

Prerequisite: MATH 226 and EE 301 (All prerequisites require a C- or higher.)

### **EE 353 - Energy Storage Systems (3)**

Energy storage effectively stabilizes the Electric Grid. Mechanical, Electrochemical, Chemical, Electrical and Thermal energy storage systems. Categories of commercial-grade batteries, rechargeable batteries. The role of hydropower generation. The thermal power plants. Energy storage technologies - Generation responses by technology. Three hours lecture.

Prerequisite: EE 323 and CHEM 161 and CHEM 162 (All prerequisites require a C- or higher)

### **EE 363 - Renewable Energy (3)**

Topics include wind energy, hydroelectric power plants, solar power plants, geothermal power generation, biofuel, wave-motion power plants, and promoting renewable energy. Three hours lecture.

Prerequisite: EE 323 (C- or higher)

### **EE 401 - Random Signals and Systems (3)**

Topics covered include random variables, random processes, probability, and basic statistics as they relate to reliability and safety of electric circuits. Analysis of noise and random signals. Two hours lecture and two hours laboratory.

Prerequisite: MATH 226 and EE 301 (All prerequisites require a C- or higher)

### **EE 424 - Control Systems II (3)**

Topics covered include random variables, random processes, probability, and basic statistics as they relate to reliability and safety of electric circuits. Analysis of noise and random signals. Two hours lecture and three hours laboratory.

Prerequisite: EE 312 and EE 324 (All prerequisites require a C- or higher)

### **EE 430 - RF Communications (3)**

Study of encoding information using various modulation methods. Examples include amplitude, frequency, and phase modulation. Introduction of information rate and analysis of noise in communication systems. Two hours lecture and three hours laboratory.

Prerequisite: EE 330 and EE 401 and EE 351 (All prerequisites require a C- or higher)

### **EE 497 - Capstone I (2)**

Identification, investigation, research, and proposal of problem. Social, environmental, ethical, economic, and legal factors are considered. A detailed concept and design proposal is presented. Students perform preliminary design, submit documented design, and present at a formal preliminary design review. Two hours lecture.

Prerequisite: EE 323 or EE 324 or EE 351 (All prerequisites require a C- or higher)

### **EE 498 - Capstone II (2)**

Second course in capstone design sequence. Student design teams finalize capstone projects. Final design analysis must satisfy project objectives written in previous course and show sound engineering judgment. A functional prototype is simulated, built, and evaluated. A final report is presented and the project demonstrated. Two hours lecture.

Prerequisite: EE 497 (C- or higher)

## **ENG - English**

### **ENG 203 - Survey of World Literature: Ancient to Early Modern (3)**

Survey of great works of world literature from its origins to 1650, with emphasis on literatures other than British and American. Not a prerequisite for ENG 204. CSUS Common Course.

Prerequisite: WRT 105 or WRT 110 (may be taken concurrently).

### **ENG 204 - Survey of World Literature: 17th Century to the Present (3)**

Survey of great works of world literature from 1650 to the present, with emphasis on literatures other than British and American. ENG 203 is not a prerequisite.

Prerequisite: WRT 105 or WRT 110 (may be taken concurrently)

### **ENG 205 - Survey in British Literature: Middle Ages to the 18th Century (3)**

Major British writers from the beginnings through the 18th century. Not a prerequisite for ENG 206. CSUS Common Course.

Prerequisite: WRT 105 or WRT 110 (may be taken concurrently)

**ENG 206 - Survey of British Literature: Romanticism to the Present (3)**

Major British writers from the late 18th century to the present. ENG 205 is not a prerequisite. CSUS Common Course.

Prerequisite: WRT 105 or WRT 110 (may be taken concurrently)

**ENG 207 - Special Topics in Asian American Literature (3)**

An exploration of Asian American literature, with a specific focus on its literary and cultural significance. Topics to be announced each semester. Students may repeat for up to 6 credits under different topics.

Prerequisite: WRT 105 or WRT 110 (may be taken concurrently)

Cross-Listed as: Cross-listed with AAPI 207. No credit may be received by students who have received credit for ENG 207 or AAPI 207 on the same topic.

**ENG 209 - EJI Topics in Literature (3)**

An exploration of issues related to Equity, Justice, and Inclusion in the United States as it appears in literature. Topics to be announced each semester. Students may repeat for up to 6 credits under different topics.

Prerequisite: WRT 105 or WRT 110 (may be taken concurrently)

**ENG 210 - Survey of American Literature: Pre-Civil War (3)**

American literature from the Colonial Period to the Civil War. Not a prerequisite for ENG 211. CSUS Common Course.

Prerequisite: WRT 105 or WRT 110 (may be taken concurrently)

**ENG 211 - Survey of American Literature: Civil War to the Present (3)**

American literature from the Civil War to the present. ENG 210 is not a prerequisite. CSUS Common Course.

Prerequisite: WRT 105 or WRT 110 (may be taken concurrently)

**ENG 212 - African-American Literature (3)**

Survey of African-American writers from the eighteenth through twentieth centuries. Does not count toward the English major.

Prerequisite: WRT 105 or WRT 110 (may be taken concurrently)

Cross-Listed as: Cross listed with AFAM 212. No credit given to students with credit for AFAM 212.

**ENG 213 - Studies in American Literature (3)**

An exploration of select subjects, techniques, and themes in American literature. Topics to be announced each semester. Students may not take this course under the same topic more than once. Does not count toward the English major. May be repeated under different topics for a maximum of 6 credits.

Prerequisite: WRT 105 or WRT 110 (may be taken concurrently)

**ENG 214 - Studies in International Literature (3)**

An exploration of select subjects, techniques, and themes in British and world literature. Topics to be announced each semester. Students may not take this course under the same topic more than once. Does not count toward the English major. May be repeated under different topics for a maximum of 6 credits.

Prerequisite: WRT 105 or WRT 110 (may be taken concurrently)

**ENG 215 - Introduction to Women Writers (3)**

Introduction to women writers of the world, primarily in the eighteenth, nineteenth, and twentieth centuries. Does not count toward the English major.

Prerequisite: WRT 105 or WRT 110 (may be taken concurrently)

Cross-Listed as: Cross listed with WGSS 215. No credit given to students with credit for WGSS 215 or WS 215.

**ENG 216 - Studies in British Literature (3)**

An exploration of select subjects, techniques, and themes in British literature. Topics to be announced each semester. Students may repeat for up to 6 credits under different topics

Prerequisite: WRT 105 or WRT 110 (may be taken concurrently)

**ENG 217 - Study Abroad Topics (3)**

Select subjects, techniques, and themes in literature. Includes a mandatory international travel component. May be repeated under different topics for a maximum of 6 credits.

Prerequisite: WRT 105, WRT 110, or equivalent (may be taken as a co-requisite)

**ENG 220 - Shakespeare (3)**

Selected tragedies, comedies, and history plays.

Prerequisite: WRT 105 or WRT 110 (may be taken concurrently)

**ENG 250 - Contemporary Literature (3)**

Modern fiction, plays, and poetry in relation to modern life. Does not count toward the English major.

Prerequisite: WRT 105 or WRT 110 (may be taken concurrently)

**ENG 260 - Introduction to Poetry (3)**

A close analysis of poetry: prosody, diction, figurative language, structure, tone, and theme. Selections read from entire range of English and American poetry. Does not count toward the English major. CSUS Common Course.

Prerequisite: WRT 105 or WRT 110 (may be taken concurrently)

**ENG 261 - Introduction to Fiction (3)**

A close analysis of the elements, structure, and technique of short stories and novels. Does not count toward the English major. CSUS Common Course.

Prerequisite: WRT 105 or WRT 110 (may be taken concurrently)

**ENG 262 - Introduction to Drama (3)**

A close analysis of plays, representing major and minor genres of drama (tragedy, comedy, tragi-comedy, melodrama, farce, etc.), relationship of genre, structure, and statement. Does not count toward the English major. CSUS Common Course.

Prerequisite: WRT 105 or WRT 110 (may be taken concurrently)

**ENG 270 - Dramatic Enactment (3)**

Introduction to the theory and applications of creative drama as an interpretive tool and a response to literature.

Prerequisite: WRT 105 or WRT 110 or equivalent; restricted to English Elementary Education or pre-Elementary Education majors, except by permission of instructor.

**ENG 274 - Storytelling (3)**

Study of the history, art, and present uses of storytelling. Practice of the skills involved to develop the student's competency in this oral tradition. Designed to enable the student to build a personal repertoire of stories for use in a wide range of disciplines.

Prerequisite: WRT 105 or WRT 110 or equivalent.

**ENG 298 - Introduction to Literary Studies (3)**

Restricted to English BA and BS majors and English minors, except by permission of instructor. Introduction to the basic formal and methodological elements of the study of literature.

Prerequisite: WRT 105 or WRT 110 (C- or higher) or equivalent.

**ENG 310 - Close Reading the Sentence (3)**

Intensive workshop in which students learn to analyze literature at the sentence level. For English majors and minors this course counts as a Literature Elective.

Prerequisite: ENG 298, or permission of instructor for non-majors.

**ENG 317 - Study Abroad Explorations (3)**

Topics in literature with a focus on historical or other context (period, genre, culture, etc.). Includes a mandatory international travel component. Attention to literary analysis and the close reading of primary texts. May be repeated under different topics for a maximum of 6 credits.

Prerequisite: ENG 298 or permission of the instructor

**ENG 330 - Old English Language and Literature (3)**

Students learn Old English in order to translate and discuss basic Old English texts.

Prerequisite: ENG 298.

**ENG 331 - Chaucer's Canterbury Tales (3)**

Chaucer's Canterbury Tales in Middle English.

Prerequisite: ENG 298.

**ENG 333 - The English Renaissance (3)**

Emphasis on British poetry and prose of the 16th and early 17th centuries, including such writers as More,

Erasmus, Sidney, Spenser, Marlowe, Shakespeare, and Jonson.

Prerequisite: ENG 298, or permission of instructor for non-majors.

### **ENG 334 - Seventeenth-Century Poetry & Prose (3)**

British poetry and prose of the earlier 17th century, including Donne, Herbert, Marvell, Bacon, Burton, and Browne.

Prerequisite: ENG 298, or permission of instructor for non-majors.

### **ENG 335 - Restoration & Eighteenth-Century Literature (3)**

British poetry, prose and drama from 1660 to 1798, including such writers as Dryden, Congreve, Addison, Swift, Pope, Fielding, Gay, Johnson, Goldsmith, and Sheridan.

Prerequisite: ENG 298, or permission of instructor for non-majors.

### **ENG 336 - The Romantic Age (3)**

British Literature from Blake to 1832, including Wordsworth, Coleridge, Byron, Shelley, and Keats.

Prerequisite: ENG 298, or permission of instructor for non-majors.

### **ENG 337 - The Victorian Age (3)**

Poetry and non-fiction prose from 1832 to 1900, including poetry of Tennyson, Browning and Arnold and prose of Carlyle, Mill, Newman, and Ruskin.

Prerequisite: ENG 298, or permission of instructor for non-majors.

### **ENG 339 - Modern British Literature (3)**

Prose and poetry from 1900 to the present, including such writers as Hopkins, Sitwell, Eliot, Yeats, Joyce, Woolf, Forster, Auden, MacNiece, Spender, Graves, Thomas, and Orwell.

Prerequisite: ENG 298, or permission of instructor for non-majors.

### **ENG 340 - Early American Literature (3)**

Early writers of the country through approximately the first third of the 19th century, with emphasis on the ideological and social influences which shaped their art.

Prerequisite: ENG 298, or permission of instructor for non-majors.

### **ENG 341 - American Romanticism (3)**

Prose and poetry of American romantic authors in the 19th century. Special emphasis on Poe, Hawthorne, Melville, Thoreau, Emerson, Whitman; contemporary ideologies.

Prerequisite: ENG 105 or ENG 110, ENG 298, or permission of instructor for non-majors.

### **ENG 342 - American Realism & Naturalism (3)**

Study of the period after the Civil War to about 1915, including such writers as Dickinson, Twain, James, Wharton, Crane, and Dreiser.

Prerequisite: ENG 298, or permission of instructor for non-majors.

### **ENG 343 - Modern American Literature (3)**

Major American writers in the period between World War I and World War II; the ideological and social influences which shaped their art.

Prerequisite: ENG 298, or permission of instructor for non-majors.

### **ENG 344 - Contemporary American Literature (3)**

Study of major American writers from WWII to the present, focusing on historical, cultural, and aesthetic movements of the time.

Prerequisite: ENG 298, or permission of instructor for non-majors.

### **ENG 345 - Modern African-American Literature (3)**

Study of selected writers, beginning with the Harlem Renaissance.

Prerequisite: ENG 298, or permission of instructor for non-majors.

Cross-Listed as: Cross listed with AFAM 345 and AMS 345. No credit given to students with credit for AFAM 345 or AMS 345.

### **ENG 347 - Latino/a Literature (3)**

Important U.S. Latino/a literary works in prose, poetry, drama, and essay.

Prerequisite: ENG 298, or permission of instructor for non-majors.

Cross-Listed as: Cross-listed with LTN 347. No credit may be received by students who have received credit for LTN 347.

**ENG 348 - Explorations of American Literature (3)**

Topics in American literature, with a focus on historical or other context (period, genre, culture, etc.). Attention to literary analysis and the close reading of primary texts. May be taken under different topics for a maximum of 6 credits.

Prerequisite: ENG 298, or permission of instructor for non-majors.

**ENG 358 - Explorations of British Literature (3)**

Topics in British literature, with a focus on historical or other context (period, genre, culture, etc.). Attention to literary analysis and the close reading of primary texts. May be taken under different topics for a maximum of 6 credits.

Prerequisite: ENG 298, or permission of instructor for non-majors.

**ENG 360 - Bible as Literature: Hebrew Texts (3)**

Major books of Hebrew texts important to literature, their literary qualities, and their historical and cultural backgrounds.

Prerequisite: ENG 298, or permission of instructor for non-majors.

**ENG 361 - Bible as Literature: Christian Texts (3)**

Major books of Christian texts important to literature, their literary qualities and their historical and cultural backgrounds. Part of Apocrypha.

Prerequisite: ENG 298, or permission of instructor for non-majors.

**ENG 363 - Greek Literature (3)**

Greek poetry and prose from the late 8th Century BCE through the Alexandrian period, focusing on representative works and authors of epic, lyric, drama, history, oratory, and/or philosophy. No credit given to students who have taken ENG 362.

Prerequisite: ENG 298, or permission of instructor for non-majors.

**ENG 364 - Latin Literature (3)**

Latin poetry and prose from the late 1st Century BCE into the medieval period, including representative works and authors of epic, lyric, drama, satire, history, oratory, and/or philosophy. No credit given to students who have taken ENG 362.

Prerequisite: ENG 298, or permission of instructor for non-majors.

**ENG 365 - The Modern European Novel (3)**

Representative works by such writers as Flaubert, Tolstoy, Dostoyevsky, Proust, Kafka, and Camus.

Prerequisite: ENG 298, or permission of instructor for non-majors.

**ENG 367 - Global Novel (3)**

Explores the globalization of the novel genre since World War II, with emphasis on adaptations of the novel form in non-Anglo-European traditions.

Prerequisite: ENG 298, or permission of instructor for non-majors.

**ENG 388 - Explorations of World Literature (3)**

Topics in World literature, with a focus on historical or other context (period, genre, culture, etc.). Attention to literary analysis and the close reading of primary texts. May be taken under different topics for a maximum of 6 credits.

Prerequisite: ENG 298, or permission of instructor for non-majors.

**ENG 398 - Topics in Literary Theory and Research (3)**

Gateway undergraduate course, prerequisite for 400 level ENG courses, that prepares students for upper-level study in the English major. Through the study of American, British, or World literature of a specified period, genre, or authorship, course provides introduction to literary theory and various literary critical approaches and practice in fundamentals of literary research while continuing instruction in literary analysis, close reading, and argumentation. Requirements will include a long research-based critical essay.

Prerequisite: ENG 298.

**ENG 402 - Advanced Composition & Technology in the English Classroom (3)**

Advanced writing for the refinement of writing skills. Explores ways to teach writing. Addresses the use of technology in secondary English classrooms in regard to instruction, data management, and classroom management. Not applicable to M.A. in English program.

Prerequisite: ENG 110 and acceptance in the Professional Program of Teacher Education; or permission of instructor.

**ENG 406 - Teaching the Mechanics of Writing (3)**

Secondary English Education majors only. Students take an in-depth look at the mechanics of selected literary works to provide a pedagogical foundation for the teaching of mechanics in the secondary classroom.

Prerequisite: None

**ENG 407 - Literature for Teachers (3)**

Focusing on fiction, poetry and non-fiction texts commonly taught in middle and high schools, this course offers students critical literary reading and writing skills in the context of their preparation to teach those skills to secondary school students.

Prerequisite: Admission to the Secondary Education program in English.

**ENG 408 - Teaching Writing in Middle and Secondary Schools (3)**

Designed to teach students how to teach writing in middle and secondary schools, this course is practice- and activity-oriented; students will leave the class able to design writing instruction appropriate to their students' needs by engaging in the sorts of activities that they will eventually design. A second focus is on the assessment of writing, both formal and informal, with an emphasis on creating effective rubrics.

Prerequisite: Admission to the Secondary Education program in English.

**ENG 417 - Advanced Study Abroad Topics (3)**

Topics in literature, with a focus on individual authors, literary theory/method, or other specialized subjects. Includes a mandatory international travel component. Attention to literary criticism, interpretation, and research. May be repeated under different topics for a maximum of 6 credits. (May be taken for graduate credit.)

Prerequisite: ENG 398, or permission of the instructor

**ENG 420 - Teaching English in Secondary Schools (3)**

Methods and materials for teaching English language and literature. Includes 30 hours of guided observations in middle and high school classrooms. Not applicable to M.A. in English program. ENG 421 (1 credit) is a required co-requisite. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and

are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: ENG 407 and ENG 408 and acceptance into the Professional Program of Teacher Education.

Corequisite: ENG 421 Field Work in Secondary English Education

**ENG 421 - Field Work in Secondary English Education (1)**

30 hours of guided observations in middle and high school classrooms. Required co-requisite for students taking ENG 420. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: ENG 407 and ENG 408 and acceptance into the Professional Program.

Corequisite: Required co-requisite for ENG 420

**ENG 435 - Student Teaching Seminar (1)**

Discussion of issues that arise in the student teaching placements. Emphasis on improving individual classroom practices.

Prerequisite: ENG 420, EDSC 435 (taken concurrently).

**ENG 440 - Topics in Theory and Literary Study (3)**

Detailed study of literature through the lens of a literary theory or critical method. Provides an introduction to and grounding in a particular theory and its use in literary interpretation. Topics will vary; may be taken on different theories for up to 6 credits.

Prerequisite: ENG 398 or permission of instructor or Admission to MA English Literature

**ENG 445 - American Drama (3)**

Development of American drama and its contribution to literature.

Prerequisite: ENG 398, or permission of instructor for non-majors.

**ENG 448 - Advanced Studies in American Literature (3)**

Topics in American literature, with a focus on individual authors, literary theory/method, or other specialized subjects. Attention to literary criticism, interpretation, and research. May be taken under different topics for a maximum of 6 credits.



Prerequisite: ENG 398, or permission of instructor for non-majors.

Cross-Listed as: Cross listed with AMS 448. No credit given to students with credit for AMS 448.

### **ENG 449 - Major American Authors (3)**

Intensive study of the writings, life, influence, and historical milieu of a major American author. Authors will vary each year. May be repeated under different author subjects for a maximum of 6 credits.

Prerequisite: ENG 398, or permission of instructor for non-majors.

### **ENG 451 - Milton (3)**

Readings in Milton's prose and poetry, with emphasis upon *Paradise Lost* and *Samson Agonistes*.

Prerequisite: ENG 398, or permission of instructor for non-majors.

### **ENG 452 - Medieval English Literature (3)**

Old English and Middle English literature, exclusive of Chaucer's *Canterbury Tales*, from the eighth through the 14th centuries. Most material read in translation.

Prerequisite: ENG 398, admission to English MA program, or permission of instructor for non-majors.

### **ENG 458 - Advanced Studies in British Literature (3)**

Topics in British literature, with a focus on individual authors, literary theory/method, or other specialized subjects. Attention to literary criticism, interpretation, and research. May be taken under different topics for a maximum of 6 credits.

Prerequisite: ENG 398, or permission of instructor for non-majors.

### **ENG 460 - Shakespeare and Film (3)**

Explores what film can teach us about Shakespeare and his role in our culture; what Shakespeare can teach us about the nature and history of film; and what the intersection of the two can teach us about the politics of literary forms and entertainment media and about the many forms and media of politics in contemporary society. We will read 3-4 plays and view 2-3 films based each play. May require outside screenings.

Prerequisite: ENG 398, or permission of instructor for non-majors.

Cross-Listed as: Cross-listed with CINE 460. No credit may be received by students who have received credit for CINE 460.

### **ENG 461 - Shakespeare: Major Comedies (3)**

Close analysis of major comedies and pertinent critical problems.

Prerequisite: ENG 398, or permission of instructor for non-majors.

### **ENG 462 - Shakespeare: Major Tragedies (3)**

Close analysis of major tragedies and pertinent critical problems.

Prerequisite: ENG 398, or permission of instructor for non-majors.

### **ENG 463 - Elizabethan & Jacobean Drama (3)**

Major dramatists from Kyd to Ford, excluding Shakespeare.

Prerequisite: ENG 398, or permission of instructor for non-majors.

### **ENG 465 - Global Cinema (3)**

Surveys international cinema after World War II with an emphasis on the fiction feature films of Africa, Asia, and Latin America; also considers major film movements such as the European New Wave and Italian Neo-realism.

Prerequisite: ENG 398, or permission of instructor for non-majors.

Cross-Listed as: Cross-listed with CINE 465. No credit may be received by students who have received credit for CINE 465.

### **ENG 466 - American Cinema in the 60s and 70s (3)**

Examines the extraordinary changes in film culture in the United States during the time of the civil right movement, the countercultures of the 60s, and the war in Vietnam. Students are required to attend a weekly screening in addition to regular class meetings.

Prerequisite: ENG 398, or permission of instructor for non-majors.

Cross-Listed as: Cross-listed with CINE 466. No credit may be received by students who have received credit for CINE 466.

### **ENG 467 - Hitchcock (3)**

Chronological survey of the films of Alfred Hitchcock. Analysis of secondary literature in conjunction with each

film. Emphasis on both critical and cultural theory, including the work of Freud, Lacan and Zizek.

Prerequisite: ENG 110.

Cross-Listed as: Cross-listed with CINE 467. No credit given to students with credit for CINE 467.

### **ENG 470 - The Victorian Novel (3)**

Representative Victorian novelists with special emphasis on Trollope, Eliot, Dickens, Thackeray, and Hardy.

Prerequisite: ENG 398, or permission of instructor for non-majors.

### **ENG 474 - Contemporary American Novel (3)**

American novels which have come to prominence since World War II and the changing cultural environment which they reflect.

Prerequisite: ENG 398, or permission of instructor for non-majors.

### **ENG 475 - The British Novel to 1832 (3)**

Form and content of the novel with readings selected from Behn, DeFoe, Richardson, Fielding, Sterne, Smollett, Johnson, Burney, Walpole, Austen, and Scott.

Prerequisite: ENG 398, or permission of instructor for non-majors.

### **ENG 476 - The Modern British Novel (3)**

Form and content of the novel with readings selected from Joyce, Woolf, Ford, Conrad, Lawrence, Huxley, Forster, Greene, Waugh, and others.

Prerequisite: ENG 398, or permission of instructor for non-majors.

### **ENG 477 - Modern British Poetry (3)**

Major works of Hardy, Hopkins, Yeats, D.H. Lawrence, Owen, Sassoon, Auden, Dylan Thomas, Larkin, Hughes, and others.

Prerequisite: ENG 398, or permission of instructor for non-majors.

### **ENG 478 - Modern American Poetry (3)**

The study of important American poets from Dickinson to the present.

Prerequisite: ENG 398, or permission of instructor for non-majors.

### **ENG 480 - Modern Irish Literature (3)**

Study of the major themes and traditions in Irish writers of the 20th century. Included will be works by Yeats, Joyce, Synge, O'Casey, O'Connor, and others.

Prerequisite: ENG 398, or permission of instructor for non-majors.

### **ENG 486 - World Literature and Film (3)**

Examines the historical, political, and aesthetic relationships of literature and film produced outside the U.S. and Great Britain. Discussion of texts will be frequently structured around arguments from cosmopolitan theory and film theory. This course is not applicable to the M.A. in English, but may count as an elective in other graduate programs.

Prerequisite: ENG 398, or permission of instructor for non-majors.

### **ENG 487 - 20th-Century British Drama (3)**

Study of major British playwrights of the twentieth century. Selections may be from the works of Shaw, Coward, Maugham, O'Casey, Eliot, Beckett, Osborne, Pinter, Shaffer, Ayckbourn, Churchill, Gray, Hare, Stoppard, and others.

Prerequisite: ENG 398, or permission of instructor for non-majors.

### **ENG 488 - Advanced Studies in World Literature (3)**

Topics in World literature, with a focus on individual authors, literary theory/method, or other specialized subjects. Attention to literary criticism, interpretation, and research. May be taken under different topics for a maximum of 6 credits.

Prerequisite: ENG 398, or permission of instructor for non-majors of Graduate standing.

### **ENG 489 - Studies in Film Adaptation (3)**

Examines how literary works such as novels, short stories, plays, and poems have been adapted to the screen. What can literary works do that films cannot, and conversely, what can films do that literature cannot? Includes regular film screenings, literary readings, and critical and theoretical readings on the topic of adaptation. May be taken under different topics for a maximum of 6 credits.

Prerequisite: ENG 398, or permission of instructor for non-majors.

Cross-Listed as: Cross listed with CINE 489.

**ENG 490 - Individual Guided Reading (1-3)**

A conference course for English majors in their senior year who have a GPA of at least 3.00 or better and who wish to follow a planned program of guided reading.

Prerequisite: Permission of chair.

**ENG 491 - Children's Literature (3)**

Balanced selection of the best literature available to children. Traditional forms of fables, legends, myths, epics, fairy tales, and folk tales of the world; examination of how these represent the universal needs and aspirations of all cultures. Major authors and illustrators included. Not applicable to B.A. or M.A. in English programs or English minors.

Prerequisite: ENG 110 or equivalent; junior or senior standing required; restricted to English Elementary Education or pre-Elementary Education majors, except by permission of instructor.

**ENG 492 - Literature for Young Adults (3)**

Through extensive reading this course examines trends and issues, forms and content, and authors and topics of contemporary books read by and written expressly for adolescents. Not applicable to B.A. or M.A. in English programs or English minors.

Prerequisite: ENG 110 or equivalent; junior or senior standing required; restricted to English (Elementary and Secondary) Education majors, except by permission of instructor.

**ENG 495 - Internship (1-6)**

Internship projects under the guidance of an English faculty advisor. Can be used to fulfill requirements for the English major or minor, and the minors in writing, creative writing, TESOL, and descriptive linguistics.

Prerequisite: ENG 110 or equivalent, junior or senior standing, and permission of faculty advisor and department chair.

**ENG 500 - Seminar in American Literatures and Cultures (3)**

Examines topics in the literatures and cultures of the Americas, focusing mainly on selections from the US and/or Latin America. This seminar considers works in their literary, historical, and aesthetic contexts and may be repeated with different topics for up to 6 credits.

Prerequisite: Admission or conditional admission to a degree program in English or permission of instructor.

**ENG 501 - Seminar in British and Anglophone Literatures and Cultures (3)**

Examines topics in the literatures and cultures of the United Kingdom and/or world literatures in English. This seminar considers works in their literary, historical, and aesthetic contexts and may be repeated with different topics for up to 6 credits.

Prerequisite: Admission or conditional admission to a degree program in English or permission of instructor.

**ENG 507 - Advanced Study of Literature for Teachers (3)**

Focusing on fiction, poetry and non-fiction texts commonly taught in middle and high schools, this course offers students critical literary reading and writing skills in the context of their preparation to teach those skills to secondary school students. Course includes a literature-based research component that may involve field work. No credit given for those with credit in ENG 407.

Cross-Listed as: ENG 407

**ENG 508 - Advanced Study of Teaching Writing in Middle and Secondary Schools (3)**

Designed to teach students how to teach writing in middle and secondary schools, this course is practice-and activity-oriented; students will leave the class able to design writing instruction appropriate to their students' needs by engaging in the sorts of activities that they will eventually design. A second focus is on the assessment of writing, both formal and informal, with an emphasis on creating effective rubrics. Course includes a writing-based research component that may involve field work. No credit given for those with credit in ENG 408.

Prerequisite: None

Cross-Listed as: ENG 408

**ENG 509 - American Canons and Cultures (3)**

Covers texts written by American authors and commonly assigned in secondary school literature courses. Explores multiple informational and media sources—such as history, politics, art, and film—that provide useful pedagogical tools for exploring and understanding literature.

Prerequisite: Admission to English MA or permission of instructor.

**ENG 510 - British Canons and Cultures (3)**

Covers texts written by British authors and commonly assigned in secondary school literature courses. Explores multiple informational and media sources—such as

history, politics, art, and film—that provide useful pedagogical tools for exploring and understanding literature.

Prerequisite: Admission to English MA or permission of instructor.

### **ENG 511 - World Canons and Cultures (3)**

Covers texts written by global authors and commonly assigned in secondary school literature courses. Explores multiple informational and media sources—such as history, politics, art, and film—that provide useful pedagogical tools for exploring and understanding literature.

Prerequisite: Admission to English MA or permission of instructor.

### **ENG 520 - Advanced Study of Teaching English in Secondary Schools (3)**

Methods and materials for teaching English language and literature. Course includes a pedagogy-based research component. Not applicable to M.A. in English program. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies. No credit given for those with credit in ENG 420.

Cross-Listed as: ENG 420

### **ENG 522 - Topics in Poetry and Prosody (3)**

Detailed and systematic study of poetic form, including versification, rhetorical tropes, diction, and tone. May be organized by period, subject matter, genre, or critical method. May be repeated with different topics for up to 6 credits.

Prerequisite: None

### **ENG 530 - Topics in Literary Periods (3)**

Detailed study of a period in English, American, or comparative literature (with comparison to include English and/or American). Topics may include: surveys of particular periods; focused examinations of forms, themes, problems, or other subjects associated with a given period. Attention paid to questions of periodization and its critical use. May be taken on different periods for up to 6 credits.

Prerequisite: Admission to degree program in English or permission of instructor.

### **ENG 540 - Topics in Literature and Theory (3)**

Detailed study of literature through the lens of a particular literary theory or critical method. Provides in-depth instruction on an important theory and its application. Topics will vary; may be taken on different theories for up to 6 credits.

Prerequisite: ENG 598 or permission of instructor.

### **ENG 580 - Research and Pedagogical Practice in Developmental Composition (3)**

Review and study of pedagogical practice in composition programs focusing on basic/developmental/remedial education. Scholarly work alongside practical questions of curricular design and classroom practice will be discussed.

Prerequisite: Admission to MA English Program or permission of instructor

### **ENG 583 - Teaching Writing across the Curriculum I (6)**

Participants will explore research-based approaches to the teaching of writing; present successful teaching strategies in the area of writing across the curriculum, and write extensively in different genres. The emphasis is on personal and professional writing. Only 3 credits may be counted toward the Master's in English or Reading and Language Arts with the permission of the CCWP director and advisor.

Prerequisite: Acceptance to the Central Connecticut Writing Project (CCWP).

Cross-Listed as: Cross listed as RDG 583.

### **ENG 584 - Teaching Writing across the Curriculum II (3)**

A continuation of ENG 583 which will also include the completion of a professional writing piece.

Prerequisite: ENG 583.

### **ENG 590 - Graduate Tutorial: Individual Guided Reading (3)**

A graduate tutorial set up as an independent study for students who wish to pursue intensive, guided research on a particular author or literary period. May be repeated with different topics for up to 6 credits.

Prerequisite: Permission of department chair.

### **ENG 595 - Special Project: Critical Case Study (3)**

Capstone project requiring students to create a critical case study of a literary text through guided research,

analysis, and oral and written presentation. Spring or Fall only.

Prerequisite: ENG 598; students must have 18 credits completed or in process in the English M.A. program.

### **ENG 598 - Research in English (3)**

Research skills in literature. Introduces the techniques and resources of literary research through an examination of the theory, history, and practice of literary criticism.

Prerequisite: Admission or conditional admission to a degree program in English or permission of instructor.

### **ENG 599 - Thesis (3)**

Preparation of the thesis under the supervision of the thesis advisor.

Prerequisite: Admission to the M.A. program in English, a minimum of 18 credits and a 3.00 overall GPA in English and American Literature, and permission of the department chair.

## **ENGR - Engineering**

### **ENGR 150 - Introduction to Engineering (3)**

Introduction to Engineering Introduction to engineering problem-solving techniques unique to areas of the technical world, including chemical, civil, construction, nuclear, manufacturing, mechanical, and electrical disciplines. Problem solving is presented in both English and International (SI) Units.

Prerequisite: MATH 115 or MATH 119 or MATH 135 or MATH 152; may be taken concurrently

### **ENGR 240 - Computational Methods for Engineering (3)**

The application of spreadsheet and MATLAB tools for problem solving, graphing and analyzing engineering data, and programming of formulae, procedures and macros in Excel. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: ENGR 150 (C- or higher); MATH 135 (may be taken concurrently or C- or higher) or MATH 152 (may be taken concurrently or C- or higher).

### **ENGR 251 - Engineering Mechanics I - Statics (3)**

Engineering vector mechanics of equilibrium (statics), covering force resolution and composition, force moments and couples, and equilibrium equations for analysis. Forces and moments acting on structures and machines, centroids, and moments of inertia are evaluated.

Prerequisite: ENGR 150 (C- or higher) or PHYS 220 (may be taken concurrently or C- or higher); and PHYS 125 (C- or higher) and MATH 221 (may be taken concurrently or C- or higher).

### **ENGR 252 - Engineering Mechanics II - Dynamics (3)**

Engineering vector mechanics of non-equilibrium conditions (dynamics), covering the kinematics of motion and kinetics of particles and rigid bodies.

Prerequisite: ENGR 251 (C- or higher).

### **ENGR 290 - Engineering Technical Writing and Presentation (3)**

Investigate and practice the values, structures, and audience that provide the context for engineering documents, such as technical reports, executive summaries, abstracts, instructions and procedures, proposals, electronic communications, and presentations. Two hours lectures and two hours laboratory per week.

Prerequisite: ENG 105 or ENG 110 or WRT 105 or WRT 110 (all C- or higher); Minimum of 30 credits.

### **ENGR 351 - Numerical Methods for Engineering (3)**

This course emphasizes the implementation of numerical methods for computer-aided solutions to problems that arise in engineering design and analysis. Methods include interpolation, extrapolation, curve fitting, and integration and techniques for solving non-linear equations, systems of linear equations, and differential equations.

Prerequisite: MATH 226 (C- or better) and MATH 355 (C- or better, may be taken concurrently)

### **ENGR 357 - Mechanics of Materials (3)**

The analysis of simple and combined stress, torsion, flexure and deflection of beams, continuous and restrained beams, combines axial and bending loads, and columns. 2 hours lecture, 2 hours recitation per week.

Prerequisite: ENGR 251 (C- or higher).

### **ENGR 392 - Engineering Practicum (400 hours) (1)**

This course provides students the opportunity to apply engineering principles, theory, and problem solving procedures in industry to gain practical engineering experience.

Prerequisite: ENGR 357 (C- or higher) or ET 357 (C- or higher)

**ENGR 490 - Fundamentals of Engineering (FE) (3)**

Further development of topics included in the Fundamentals of Engineering (FE) general exam. Currently, Connecticut Department of Consumer Protection application deadlines are December 1 and July 1, prior to the April and October FE Exam offerings.

Prerequisite: ET or CE, or ME senior standing or permission of instructor.

**ENGR 501 - Engineering Analysis (3)**

Applications of mathematical analysis and numerical concepts to typical engineering problems such as analytical and numerical solutions for linear and nonlinear ordinary differential equations, Fourier series and integrals, the Laplace transform, and the solution of partial differential equations. Examples used in the course will be derived from the field of engineering. Use of computational software tools is an integral part of this course.

Prerequisite: Admission to either the MSME program or the MSCE program, or permission of the Engineering Department chair.

**ENGR 510 - Engineering Optimization (3)**

Application of optimization techniques to engineering design or process problems. Principles of design/process variables, constraints, and objective functions. Techniques for solving constrained and unconstrained optimization problems, computer implementation of optimization schemes. Both local and global methods are considered.

Prerequisite: Admission to the MSME program, or permission of the Engineering Department chair.

**ENGR 557 - Advanced Mechanics of Materials (3)**

This course explores advanced topics in mechanics of materials. Subjects include plasticity, orthotropic materials, energy methods, torsion of non-circular shafts, shear center, and beams on elastic foundations.

Prerequisite: Admission to either the MSME program or the MSCE program, or permission of the Engineering Department chair.

**ENGR 592 - Research and Development of Experiments (3)**

Concepts and procedures for obtaining, evaluating, and reporting existing and measured data.

Prerequisite: Admission to either the MSME program or the MSCE program, or permission of the Engineering Department chair.

**ENT - Entrepreneurship****ENT 296 - Main Street Business Ownership and Management (3)**

An introduction to the principles of management and business creation as applied in "Main Street" businesses. Main Street businesses are those anchored in a location, typically small to medium sized, often privately owned. Emphasis on techniques for starting or acquiring businesses, managing with limited resources, and personal challenges in a small organization setting.

**ENT 330 - Entrepreneurship and New Venture Creation (3)**

Focuses on how businesses are started. Includes recognizing opportunities and risks, gathering resources to convert opportunities into businesses. Develops the skills to evaluate and formulate a business plan.

Prerequisite: MGT 295 (C- or higher) and admission to the upper division of the Business School, or by permission of the chair

Cross-Listed as: Cross-listed with MGT 330. No credit may be received by students who have received credit for MGT 330.

**ENT 350 - Financing Entrepreneurial Ventures (3)**

Combines the analysis and evaluation of methods used to fund entrepreneurial ventures with the creation of a business plan for a new enterprise. Emphasis on creating pro-forma financial statement and managing cash flow.

Prerequisite: MGT 295 (C- or higher) and admission to the upper division of the Business School, or by permission of the chair

Cross-Listed as: MGT 350

**ENT 355 - Managing a Growing Business (3)**

Focuses on management decisions in resource allocation, human resource management, marketing policies and control mechanisms that contribute to growth and value creation in business. Case studies and exercises concentrate on opportunities and problems unique to growing firms.

Prerequisite: MGT 295 (C- or higher) and admission to the upper division of the Business School, or by permission of the chair

Cross-Listed as: MGT 355

**ENT 390 - Topics in Entrepreneurship (3)**

Selected topics in entrepreneurship and small/family business management. Course content will vary from semester to semester. May be repeated with different topics for a maximum of 6 credits

Prerequisite: MGT 295 or ENT 296

Cross-Listed as: MGT 390

**ENT 475 - New Venture Challenge: Lean Launch Methodology (3)**

The Lean Launch Methodology uses a scientific, hypothesis development and testing approach to discovering potentially successful business products and models. Students will learn to identify opportunities, test the scale and scope of opportunities, research competitive offerings, determine costs structure, find partners, and determine if a business is worth pursuing. The course utilizes an applied, project based pedagogy and may be delivered in a variety of formats.

Prerequisite: Admission to the upper division of the Business School, or by permission of the chair Graduate students: Admission to a School of Business graduate program and permission of the Associate Director of Graduate Programs

Cross-Listed as: MGT 475

**ENT 499 - Field Study in Entrepreneurship (3)**

Provides students with a practical knowledge of entrepreneurial ventures and small businesses by working closely with individual entrepreneurs to develop a business plan or complete a significant, applied business study, or by developing a business plan for a venture of the student's own choosing.

Prerequisite: ENT 330 and ENT 350 (both with C- or higher)

**EPS - Educational Policy Studies****EPS 500 - Contemporary Educational Issues (3)**

Contemporary educational issues and the ways they are affected by social, political, and economic forces of society.

Prerequisite: None

**EPS 516 - School and Society (3)**

Presentation and analysis of factors, institutions, and events relating to school's role in society. Sociocultural analysis and interpretation of historic development, as

well as contemporary influences affecting dynamic role of school in American life today.

Prerequisite: Matriculation into M.S. program.

**EPS 524 - Foundations of Contemporary Theories of Curriculum (3)**

Study of the social, psychological, and philosophical influences that shape the curriculum and a range of curriculum positions in the United States and in other countries.

Prerequisite: None

**EPS 525 - History of American Education (3)**

Study of the ideas, policies, practices, and social movements that have historically influenced and shaped the development of education in the United States.

Prerequisite: Admission to a Master's program.

**EPS 526 - Philosophy of Education (3)**

Provides advanced-level students in education, and especially in the Educational Studies MS program, with an in-depth introduction to philosophy of education as an academic discipline. Focus both historical and contemporary.

Prerequisite: None

**EPS 528 - Comparative and International Education (3)**

Study of education within international context, focusing on globalization, economic policy, and education in selected countries. Comparison with education in the U.S. will be made.

Prerequisite: Admission to a Master's program or Sixth Year program.

**EPS 535 - Special Topics in Educational Foundations (3)**

Inquiry into special topics in educational foundations. Examples include school violence, gender and education, multicultural education, national standards, and testing.

Prerequisite: Admission to Master's program.

**EPS 538 - The Politics of Education (3)**

Introduction to the politics of education and the making of educational policy within our society's political system. Topics include: school governance and the decision-making process, problems of policy-making in bureaucracy, intergovernmental rivalries of local, state, and Federal authority, legal and extra-legal influences, ideological conflict, and the struggle for change and reform in school institutions.

Prerequisite: None

### **EPS 583 - Sociological Foundations of Education (3)**

Sociological principles and information applied to problems and situations in education. Emphasis on cultural forces that affect education, institutions, and agencies which relate to the public school and social structure of the school.

Prerequisite: None

## **ESCI - Earth Sciences**

### **ESCI 100 - Search in Earth Sciences (3)**

Examination of various topics, contemporary issues and problems in Earth Sciences, such as environmental impacts of human activity, severe weather and natural disasters, and climate change. Exploration of relevant science concepts and how these relate to current events. Cannot be used to meet requirements for majors or minors in Earth Science or Geology. No credit given to students having taken ESCI 100 with the same topic. Course may be repeated twice with different topics. Three hours of lecture per week. This course is equivalent to GSCI 100 and credit will not be earned if this course has been previously taken with the same topic.

Prerequisite: None

### **ESCI 102 - Environmental Justice in the 21st Century (3)**

Introduction to key concepts of Environmental Justice and its historical development. Basic Earth Science concepts relevant to environmental issues such as climate change, toxic waste, water and air pollution, and examination of the disproportionate burdens of environmental contamination and related health disparities affecting communities of color across the US and internationally.

Prerequisite: None

### **ESCI 121 - The Dynamic Earth (3)**

Exploration of the dynamic processes operating within the Earth system, and how those processes impact the Earth's surface, manmade structures, and human settlements. Topics include plate tectonics, earth materials, mineral and energy resources, climate change, and natural hazards such as volcanos, earthquakes, and flooding. Three hours of lecture per week. No credit given to students with credit for ESCI 131 or GSCI 131. This course is equivalent to GSCI 121 and credit will not be earned if this course has been previously taken.

Prerequisite: None

### **ESCI 125 - The Dynamic Earth Laboratory (1)**

Laboratory investigation of the Earth's surface and the dynamic processes that shape it and impact humans living on the surface. Topics include rocks and minerals, streams and flooding, glaciers and climate change, coastal erosion, and water resources. One 3-hour laboratory per week. No credit given to students with credit for ESCI 135 or GSCI 135. This course is equivalent to GSCI 125 and credit will not be earned if this course has been previously taken.

Prerequisite: ESCI 121 (may be taken concurrently).

### **ESCI 129 - Meteorology: Earth's Weather (4)**

How the Earth's atmosphere affects weather and climate. Topics include atmospheric composition, structure, and basic motions, high- and low-pressure systems, severe weather, and the nature of climate change. Three hours of lecture and one two-hour laboratory per week. This course is equivalent to GSCI 129 and credit will not be earned if this course has been previously taken.

Prerequisite: MATH 099 or placement exam.

### **ESCI 131 - Environmental Earth Science (3)**

Investigation of Earth environmental systems including streams, lakes, estuaries, coastal, groundwater, soil, and the atmosphere as well as the impact of humans on those environments. Topics will also include energy resources, waste disposal, climate change, as well as overview of natural disasters such as earthquakes, volcanic eruption, mass wasting, floods, and tsunamis. Three hours of lecture per week. No credit given to students with credit for ESCI 121 or GSCI 121. This course is equivalent to GSCI 131 and credit will not be earned if this course has been previously taken.

Prerequisite: None

### **ESCI 135 - Environmental Earth Science Laboratory (1)**

Laboratory investigations of Earth environmental systems including streams, lakes, estuaries, coastal, groundwater, soil, and the atmosphere, as well as the impact of humans on those environments. Topics will also include energy resources, waste disposal, and climate change. One 3-hour laboratory per week. No credit given to students with credit for ESCI 125 or GSCI 125. This course is equivalent to GSCI 135 and credit will not be given if this course has been previously taken.

Prerequisite: ESCI 131 (may be taken concurrently).



**ESCI 141 - Earth and Life History (3)**

Formation and the evolution of the Earth and life. The connections between plate tectonics, climate change, the history of life, and geologic processes and events important to the formation of eastern North America will be examined. 3 hours of lecture per week. This course is equivalent to GSCI 141 and credit will not be earned if this course has been previously taken.

Prerequisite: None

**ESCI 145 - Earth and Life History Laboratory (1)**

Laboratory investigations of topics relevant to the formation of the Earth and the evolution of life, including identification of common minerals, rocks, and fossils, evolution through the geologic and fossil records, and geologic techniques such as stratigraphy and radiometric dating. One three-hour laboratory per week. This course is equivalent to GSCI 145 and credit will not be earned if this course has been previously taken.

Prerequisite: ESCI 141 (may be taken concurrently).

**ESCI 200 - Exploration in the Earth Sciences (3)**

Examination of contemporary topics and problems in Geological and Environmental Sciences, such as Physical Oceanography, Climate Change, or Water Resources. Exploration of relevant scientific topics and discussion of their relationship to current events. Three hours of lecture per week. No credit given to students having taken ESCI 100 or GSCI 100 with the same topic. Course may be repeated one time with a different topic.

Prerequisite: MATH 101 or MATH 102, or MATH 103; and either WRT 105 or WRT 110.

**ESCI 221 - Mineralogy (4)**

Study of mineral occurrence, properties, composition, and classification. Environmental and societal problems such as asbestos clean-up and conflict minerals will be discussed. Laboratory work includes study of minerals using properties, crystallography, X-ray diffraction, mineral chemical analysis, and optical petrographic microscope techniques. Three hours of lecture and one three-hour laboratory per week.

Prerequisite: ESCI 125 or ESCI 135 (may be taken concurrently).; CHEM 161 and CHEM 162 (may be taken concurrently).

**ESCI 223 - Sedimentary Geology (4)**

Study of the processes and environments that produce sedimentary rocks and analyses of sedimentary strata to

examine the spatial and temporal history of depositional environments Three hours of lecture and one three-hour laboratory per week. One or more one-day field trips. This course is equivalent to GSCI 223 and credit will not be earned if this course has been previously taken.

Prerequisite: ESCI 145, ESCI 290.

**ESCI 260 - Communicating the Earth and Space Sciences (1)**

Introduces the skills necessary to effectively communicate topics in the earth and space sciences to other scientists and the general public. Topics will include critically reading and citing geologic literature, developing materials for public outreach, preparing graphical representations of data, and giving effective presentations. One hour of lecture per week plus required attendance at weekly department seminars.

Prerequisite: Sophomore standing and Earth Sciences major

**ESCI 290 - Field Methods in the Earth Sciences (2)**

Methods and equipment used in field geology and environmental assessment, including use of a Brunton compass, GPS, outcrop description and sketching, basic mapping techniques, well testing, soil sampling and description, stream flow analysis, notebook maintenance, field safety, and report writing. One three-hour lab per week. Lab sessions will typically involve outdoor activities. Two or more half-day field trips. This course is equivalent to GSCI 290 and credit will not be earned if this course has been previously taken.

Prerequisite: ESCI 125 or ESCI 135 (may be taken concurrently).

**ESCI 321 - Structural Geology (4)**

Study of the geometry and origin of rock structures such as faults and folds that are products of earth deformation. Emphasis will be placed on recognition and interpretation of structures through field and laboratory studies. Application to environmental and engineering problems will be discussed. Three lectures and one three-hour laboratory per week. One or more one-day field trips are required. This course is equivalent to GSCI 321 and credit will not be earned if this course has been previously taken.

Prerequisite: ESCI 125 or ESCI 135; ESCI 290 (may be taken concurrently).

**ESCI 322 - Igneous and Metamorphic Petrology (4)**

Study of igneous and metamorphic processes and environments of formation. Application of chemical principles to the origin of igneous and metamorphic rocks. Identification and petrographic microscope analysis of rocks will be emphasized in the laboratory. Three hours of lecture and one three-hour laboratory per week. One or more one-day field trips. This course is equivalent to GSCI 322 and credit will not be earned if this course has been previously taken.

Prerequisite: ESCI 145 and ESCI 221.

**ESCI 350 - Computer Methods in the Earth and Space Sciences (3)**

Application and theory of computer applications commonly used in research and industry to solve problems in the earth, environmental, and planetary sciences. Topics to include applications of coordinate systems, geographic information systems, analysis of spatial datasets, digital elevation data sources and error assessment, application and evaluation of algorithms for terrain analysis, watershed characterization, hydrologic analysis and basic coding to enable automation of analysis procedures. Three hours of lecture per week.

**ESCI 360 - Research Methods in the Earth and Space Sciences (1)**

Investigation of the process of research through development of an independent research project, including applying the scientific method, identifying research questions, writing a research proposal, project management, and communication of results via written report and oral presentation. One hour of lecture per week plus required attendance at weekly department seminars. This course is equivalent to GSCI 360 and credit will not be earned if this course has been previously taken.

Prerequisite: ESCI 260

**ESCI 424 - Geomorphology (4)**

Study of the processes shaping the Earth's surface and the landforms that they produce. Investigation of tectonics, climate, and human influences on landscape development. Three hours of lecture and one three-hour laboratory per week. One or more one-day field trips. This course is equivalent to GSCI 424 and credit will not be earned if this course has been previously taken.

Prerequisite: ESCI 125 or ESCI 135

**ESCI 425 - Glacial Geology and Ice Ages (3)**

Examination of the role of glaciers in Earth's climate system with a focus on the on-going ice age, the mechanics of glaciers and their role in large-scale landscape change, the effects of climate change on glaciers, and the characteristics of the glacial deposits of southern New England. Three hours of lecture per week. One or more one-day field trips. This course is equivalent to GSCI 425 and credit will not be earned if this course has been previously taken.

Prerequisite: ESCI 125 or ESCI 135.

**ESCI 431 - Hydrogeology (4)**

Overview of the factors controlling the occurrences and dynamics of surface and subsurface waters. Examination of flow equations, governing principles, as well as assessment of chemistry, geochemical evolution through natural and anthropogenic processes, quality, contamination, and remediation. Three hours of lecture and one three-hour laboratory per week. One or one-day field trips. This course is equivalent to GSCI 431 and credit will not be earned if this course has been previously taken.

Prerequisite: ESCI 125 or ESCI 135, CHEM 161 and 162; MATH 152 (may be taken concurrently) or permission of department chair.

**ESCI 441 - Environmental Geochemistry (3)**

Geochemical principles controlling occurrence and distribution of inorganic and organic pollutants in the soil, atmosphere, and groundwater, as well as processes involving contaminant mobility, fate and transport within the critical zone environments. Emphasis will also be made on various contaminant remediation techniques. Three hours of lecture per week. This course is equivalent to GSCI 441 and credit will not be earned if this course has been previously taken.

Prerequisite: ESCI 121 or ESCI 131; and CHEM 161 and CHEM 162 or permission of instructor

**ESCI 443 - Principles of Soil Science (4)**

Exploration of the fundamental physical, chemical, biological, and spatial properties of soils and processes governing soil formation, development, and differentiation. Soil classification, mapping, conservation, management practices, and human influence on soil quality and productivity. Lab activities will include collection and geochemical analysis of soil samples. Three hours of lecture and one three-hour laboratory per week. One or more half-day field trips are required. This course

is equivalent to GSCI 442 and credit will not be earned if this course has been previously taken.

Prerequisite: ESCI 125 or ESCI 135

### **ESCI 452 - Independent Study in Earth Sciences (1-3)**

Special work in laboratory, theory, or research to meet individual requirements in areas not covered by regular curriculum. May be taken more than one semester up to 6 credits. This course is equivalent to GSCI 452 and credit will not be earned if this course has been previously taken.

Prerequisite: Plan of study developed with supervising instructor and approval of department chair.

### **ESCI 455 - Energy Science and Technology (3)**

Scientific principles, technologies and impacts of energy resources, including fossil fuels (coal, natural gas, and oil), nuclear energy, geothermal, tidal energy, wind energy, solar energy, and indirect solar energy. Three hours of lecture per week. This course is equivalent to GSCI 455 and credit will not be earned if this course has been previously taken.

Prerequisite: ESCI 121 or ESCI 131 and MATH 101 (C- or higher) or MATH 102 (C- or higher) or MATH 103 (C- or higher), or permission of instructor

### **ESCI 460 - Senior Project (1-3)**

Investigation of a topic of current research interest in consultation with a faculty advisor and as determined by student while completing the required pre-req (ESCI 360). Research technique, critical data evaluation, specialized knowledge, independence and originality are cultivated as the project develops. Written report and conference-style presentation required at the completion of the project. Students may earn up to 6 credits of ESCI 460. This course is equivalent to GSCI 460 and credit will not be earned if this course has been previously taken.

Prerequisite: ESCI 360, senior standing as an Earth Sciences major, and approval of both project advisor and department chair.

### **ESCI 478 - Image Analysis in the Earth and Space Sciences (3)**

Application and theory of satellite image analysis to determine the properties of the surfaces of the Earth and other solar system bodies. Examination of elevation, surface morphology, mineralogy, vegetation cover, and land use through analyses of multi- and hyper-spectral visible and infrared, thermal, and radar images as well as

derived datasets such as digital elevation models and gravity anomalies. Three hours of lecture per week.

### **ESCI 480 - Internship in the Earth Sciences (1-3)**

Students serving in the program will serve as interns, obtaining outside industrial and/or research experiences in an environment directly related to their specialization. Internships may be in any area of astronomy, environmental or geological sciences, meteorology, or planetary science. Projects will be supervised by one or more department members. Written report and conference-style presentation required. This course is equivalent to GSCI 480 and credit will not be earned if this course has been previously taken.

Prerequisite: Senior standing and approval from both the student's advisor and department chair.

### **ESCI 490 - Topics in Earth Sciences (3-4)**

Selected studies in Geological Sciences which are not offered presently in the curriculum of the department. Course may be repeated with different topics. This course is equivalent to GSCI 490 and credit will not be earned if this course has been previously taken with the same topic.

Prerequisite: None

### **ESCI 519 - Topics in Earth Sciences (3)**

Selected studies in the Earth Sciences. Combination of lecture, discussion, and student seminar presentations. May be taken more than once for credit under different topics. This course is equivalent to GSCI 519 and credit will not be earned if this course has been previously taken.

Prerequisite: Permission of the instructor.

## **ESL - English as a Second Language**

### **ESL 100 - Fundamentals of Composition for English Learners (3)**

Focus on improvement of basic writing skills with an emphasis on the needs of English Language Learners, in order to meet entrance requirements for ENG 110. After review of grammar and punctuation, the course emphasizes sentence and paragraph formation and the development of the coherent essay. Students who are required to take ESL 100 must pass the course with a C- or better before successful completion of 30 hours of coursework.

Prerequisite: Placement by CCSU Writing Placement Test

**ESL 105 - Enhanced Introduction to College Writing for English Learners (3)**

Introductory course in college-level academic writing for students who would benefit from additional individual and small-group writing instruction with an ESL focus. Shares ENG 110's focus on reading and responding to complex sources; critical thinking; writing as a social act; use of evidence; academic conventions; and writing process. Supplemented by required two additional hours of ESL-focused basic writing instruction and tutorial assistance in ESL 105P. Satisfies first-year writing requirement. Students enrolling in a section of ESL 105 must enroll in the associated section of ESL 105P.

Prerequisite: Placement by CCSU Writing Placement Test or permission of English Department Chair or Director of Composition

Corequisite: ESL 105P

**ESL 105P - Enhanced Introduction to College Writing Workshop for English Learners (2)**

Required 2-hour workshop accompanying ESL 105, offering ESL-focused basic writing instruction and tutorial assistance to support and supplement work in ESL 105. Students enrolling in a section of ESL 105P must enroll in the associated section of ESL 105.

Prerequisite: Placement by CCSU Writing Placement Test or permission of English Department Chair or Director of Composition

Corequisite: ESL 105

**ESL 106 - Academic Reading (3)**

Strategies and practice in comprehending and evaluating academic texts in English, including textbook excerpts, research articles, and other genres across a wide range of academic subject areas. For students dominant in a language other than English.

**ESL 107 - Oral Presentation in Academic English (3)**

Strategies and practice in comprehending academic lectures and the preparation and delivery of oral presentations in academic English. For students dominant in a language other than English.

**ESL 108 - Academic Writing I (3)**

Intermediate to advanced academic writing in English, including transition to academic writing and a review of grammar. For students dominant in a language other than English.

Prerequisite: None

**ESL 109 - Academic Writing II (3)**

Advanced academic writing in English intended to bridge students into mainstream composition courses. For students dominant in a language other than English.

Prerequisite: None

**ETC - Engineering Technology-Civil****ETC 457 - Advanced Surveying (3)**

Advanced topics in surveying including horizontal and vertical curve layout, traversing earthwork, and laser leveling. Computer applications and effective total station usage is stressed. Three hours lecture and two hours laboratory, course meets five hours per week.

Prerequisite: ETC 353 and MATH 125.

**ETC 550 - Global Positioning Systems Applications (3)**

Global Positioning System (GPS) use for control surveying, GIS data acquisition and land surveying applications. Students will gather GPS field data and perform differential processing including static, kinematic, pseudo-kinematic, and real time GPS.

Prerequisite: ETC 457.

**ETC 556 - Architectural and Civil Engineering Technology Computer Aided Design (3)**

MicroStation CAD software in practical projects applications. Introduction to 3D design and solid modeling.

Prerequisite: Admission to MSET or MSTM, or permission of E.T. department chair.

**ETC 574 - Ground Improvement Techniques (3)**

Principles of mechanical and chemical soil stabilizations, surcharging, dewatering, and deep dynamic compaction.

Prerequisite: Admission to the MSET program or permission of instructor.

**ETC 578 - Value Engineering for AEC (3)**

Applications of processes related to reducing costs; improving quality and service while increasing customer satisfaction. Concepts of value analysis, cost/benefit, cost modeling and life cycle costing in materials and systems engineering applications.

Prerequisite: ET 399 or permission of department chair.

## ET - Engineering Technology

### ET 241 - Applied Statics and Strength of Materials (3)

Introduction to applied statics and strength of materials with a non-calculus-based analytical and practical approach. Comprehensive explanation of theory and application to architectural, construction, industrial, mechanical and structural problems. May not be used to meet the requirements for a major or minor in Civil, Computer, Manufacturing, or Mechanical, or Robotics and Mechatronics Engineering Technology.

Prerequisite: PHYS 111 or PHYS 121, and MATH 115 or MATH 119 or MATH 124 (All require C- or higher)

### ET 251 - Applied Mechanics I - Statics (3)

Fundamentals of statics, including the resolution and composition of forces and the equilibrium of force systems. Analysis of forces acting on structures and machines, centroids, moments of inertia. Vector methods are used.

Prerequisite: ENGR 150 or ROBO 110; and MATH 136 (may be taken concurrently) or MATH 152; and PHYS 121 or PHYS 125 (All with C- or higher)

### ET 252 - Applied Mechanics II - Dynamics (3)

Introduction to kinematics of motion and kinetics of particles and rigid bodies.

Prerequisite: ET 251 (C- or higher)

### ET 354 - Applied Fluid Mechanics (3)

Application of fluid mechanics principles to systems. Study of fluid statics and dynamics including Bernoulli equation, momentum, energy, laminar and turbulent flow, pipe and open channel flow, pumping systems, and dimensional similarity. Lecture/lab required.

Prerequisite: ET 251 (C- or higher)

### ET 357 - Strength of Materials (3)

The study of simple and combined stress, tension, flexure, and deflection of beams, continuous and restrained beams, combines axial and bending loads, and columns. Computer applications. Not intended for engineering students.

Prerequisite: ET 251; and PHYS 121 or PHYS 125; and MATH 136 (may be taken concurrently) or MATH 152. (All with C- or higher).

### ET 361 - Engineering Technology Instrumentation (3)

Basic concepts of experimental techniques, fundamentals of measurement systems, and signal analysis. Strain pressure, velocity, flow, and temperature measurements. Data acquisition, A/D and D/A conversion, data and error analysis. Preparation of professional reports. Two hour lecture and one, two-hour laboratory per week.

Prerequisite: STAT 104 and ET 357, and ENGR 290 (all with C- or higher).

### ET 399 - Engineering Economy (3)

Economic analysis of financing technical or engineering projects and determining costs and justification of improvements as related to the construction and industrial infrastructure facilities.

Prerequisite: MATH 125 (C- or higher) or MATH 135 (C- or higher) or MATH 152 (C- or higher).

### ET 495 - Topics in Engineering Technology (3)

Provides an opportunity to present topics of interest not currently covered in the engineering technology curricula. May be taken as a different topic more than once for credit.

Prerequisite: ENGR 357 (C- or higher) or ET 357 (C- or higher).

### ET 501 - Independent Study in Engineering Technology (3)

Studies of special areas in engineering technology providing for individual research and application. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: Permission of instructor

### ET 592 - Research and Development of Experiments (3)

Concepts and procedures for obtaining, evaluating, and reporting existing and measured data.

Prerequisite: Matriculation in MSET program and 15 credits of approved graduate study.

### ET 598 - Research in Engineering Technology (3)

Technical laboratory project conducted under the supervision of project adviser. Written and oral defense of project required.

Prerequisite: ET 592, permission of project advisor, and a 3.00 overall GPA.

**ET 599 - Thesis (3)**

Preparation of thesis under supervision of advisor.  
Written and oral defense of research required.

Prerequisite: ET 592, permission of thesis advisor, and a 3.00 overall GPA.

**ETM - Engineering Technology-Mechanical Manufacturing****ETM 256 - Materials Science (3)**

Analysis of the structure of and engineering properties of ceramic, metallic, polymeric, elastomeric, and composite materials with relation to design and processing.

Prerequisite: MATH 115 or MATH 119 and CHEM 161 and CHEM 162. All prerequisites require C- or higher.

**ETM 260 - Computer Aided Design and Integrated Manufacturing CAD/CAM/CIM (3)**

Introduction to solid modeling for design, drawing, assembly, mass property analysis and manufacturing operations on a CAD/CAM/CIM system. Emphasis is on computer hardware utilization for designing products. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: None

**ETM 340 - Geometric Dimensioning & Tolerancing (3)**

Interpretation, application, and verification of GDT aspects of engineering designs per the latest ASME Y14.5. Calculations with toleranced dimensions. Concepts of datums, material condition modifiers, functional gauging, fits, dimensional and geometric tolerance zones and their application to part design, fabrication, and measurement processes. Design of functional gages and measurement setups. Comparison of ASME and ISO tolerancing standards, and common practices from foreign countries, including SI system versus US customary system.

Prerequisite: MM 121 and either ME 216 or MM 216 (all with C- or higher)

**ETM 351 - Mechanical Systems in Buildings (3)**

Overview of principles and applications of all basic mechanical systems in buildings such as HVAC, fire protection, and other auxiliary systems. Emphasis placed on the understanding of systems and governing codes and standards.

Prerequisite: MATH 115 and MATH 125; or MATH 119; or MATH 115 and MATH 116; or permission of instructor. All prerequisites require C- or higher.

**ETM 356 - Materials Analysis (3)**

Study of composition, properties, and characteristics of metallic and non-metallic materials. Structure of materials, phase diagrams, and effects of environment on materials. Laboratory includes use of standard apparatus for materials testing. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: CHEM 161, CHEM 162; ENGR 251 or ET 251 (either may be taken concurrently). All prerequisites require C- or higher.

**ETM 358 - Applied Thermodynamics (3)**

Basic principles of classical thermodynamics, equations of state, properties of pure substance, work, heat, first and second laws of thermodynamics, and power cycles.

Prerequisite: CHEM 161 and CHEM 162; MATH 136 or MATH 152; and PHYS 121 or PHYS 125. All prerequisites require C- or higher.

**ETM 360 - Computer Aided Planning (CAP) (3)**

Analysis of production problems using computers. Optimization of resources utilization, forecasting, scheduling and sequencing of activities, experience-based planning, inventory and maintenance planning for JIT environment, automated production, and project planning and analysis.

Prerequisite: STAT 104 and ENGR 240 (both with C- or higher)

**ETM 367 - Machine Design (3)**

The principles of strength of materials are applied to mechanical design. Topics include theory of failure, stress concentration factors and fatigue, the design and analysis of shafts subjected to static and dynamic loadings, and critical speed of a rotating shafts.

Prerequisite: ET 252 (C- or higher) and ET 357 (C- or higher)

**ETM 422 - Computer Systems and Integration (3)**

Laboratory-based program solving course on the installation, configuration, and diagnostics of computer hardware and software, including operating systems, networks, hardware components, and integration. Emphasis on installing and trouble shooting computer systems.

Prerequisite: ENGR 240 (C- or higher) or permission of instructor.

### **ETM 454 - Applied Heat Transfer (3)**

The principles of conduction, convection, and thermal radiation energy transfer. Conduction through walls, pipes. Forced and free convection, heat exchanges, thermal radiation of energy between surfaces, and the overall transfer of heat. Two hours lecture and two hours laboratory per week.

Prerequisite: ET 354 (C- or higher) and ETM 358 (C- or higher) or permission of instructor.

### **ETM 461 - Composites and Plastics Manufacturing Processes (3)**

Analytical study of thermoplastic, thermoset, and polymer matrix composite materials, and the manufacturing processes utilized in the plastics and composites molding and fabrication industry. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: ETM 256 or ETM 356, CHEM 161 and CHEM 162. All prerequisites require C- or higher.

### **ETM 462 - Manufacturing Process Planning and Estimating (3)**

Design and planning of production processes and operation sequence for discrete parts. Group Technology and Cellular Manufacturing. Tolerance analysis of parts and processes. Development of process plans, routings, operation sheets, and cost estimates for manufacturing operations.

Prerequisite: MM 121 (C- or higher) and MM 216 (C- or higher) and ETM 340 (C- or higher) or permission of instructor.

### **ETM 463 - Plastics and Composite Tool Design (3)**

Principles for design of molds and tooling for the production of plastic and composite products.

Prerequisite: ETM 260 (C- or higher) and ETM 461 (C- or higher) or permission of instructor.

### **ETM 464 - CAD Solid Modeling and Design (3)**

Computer-aided design and analysis of solid, surface, and sheet metal models emphasizing product design. Uses computer software for design, detailing, mass property analysis, dimensional standards, and family tables. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: ETM 260 (C- or higher); and ETM 340 (C- or higher) or ME 340 (C- or higher); or permission of instructor.

### **ETM 466 - Design for Manufacture (3)**

Design principles and contemporary industrial practices for product realization. DFX and evaluation of designs. Integration of product functions with design and manufacturing process. Mistake proofing, design for manual, automated, and robotic assembly. Product liability issues.

Prerequisite: ETM 260 (C- or higher) and ETM 340 (C- or higher) or permission of instructor.

### **ETM 467 - Applied Finite Element Analysis (3)**

Application of the finite element method using commercially available finite element software for structural engineering applications including linear, static, modal, buckling, and thermal stress analyses in addition to conductive and convective heat transfer analyses. Overview of essential topics from linear algebra including matrix multiplication, matrix inversion, and determinants. Development of the finite element stiffness method for one-dimensional spring problems. Study of truss, beam, plane stress, plane strain, axisymmetric, shell, and solid continuum finite elements; mixed element models; symmetry; stress singularities; and mesh convergence. 3 hours of lecture per week.

Prerequisite: ENGR 357 (C- or higher) or ET 357 (C- or higher)

### **ETM 468 - Composite Design & Analysis (3)**

Study of the design and analysis of composite structures using classical composite theory coupled with the finite element method. New methods of structural redesign using composite materials.

Prerequisite: ET 357 (C- or higher); and ETM 256 (C- or higher) or ETM 356 (C- or higher); or permission of instructor.

### **ETM 497 - Engineering Technology Senior Project Research (2)**

First of two-course capstone sequence involving team effort to research and plan a project as engineering technologists. Project may originate from student, instructor, and/or industrial partner. Teamwork, project management, contemporary issues, and oral and written communication skills emphasized.

Prerequisite: For Manufacturing Engineering Technology: ET 361 and ETM 462 (both may be taken concurrently or

C- or higher). For Mechanical Engineering Technology: ET 361 and ETM 367 (both may be taken concurrently or C- or higher).

### **ETM 498 - Engineering Technology Senior Project (Capstone) (2)**

Second of two-course capstone sequence completing senior team project in engineering technology. Requires oral presentations and final written reports to be submitted for archiving. Project teamwork, engineering methodology, and oral and written communication skills emphasized.

Prerequisite: For Manufacturing Engineering Technology: ETM 497 (C- or higher), ET 361 (C- or higher), ETM 462 (C- or higher), ETM 466 (may be taken concurrently or C- or higher). For Mechanical Engineering Technology ETM 497 (C- or higher), ET 361 (C- or higher), ETM 367 (C- or higher), ETM 467 (may be taken concurrently or C- or higher).

### **ETM 534 - Concepts of Group Technology (3)**

Principles and applications of group technology for the engineering and manufacturing environment. Analysis of part and coding system design for applications in CAD/CAM/CIM and process planning systems.

Prerequisite: Permission of instructor.

### **ETM 563 - Plastics Mold Engineering and Design (3)**

Plastics mold engineering principles for the manufacture of products from polymeric materials. Mold design concepts and analysis are based on fluidic, heat transfer, rheology, strength of materials, and physical properties of selected materials.

Prerequisite: Admission to the MSET or MSTM graduate program.

### **ETM 575 - Facilities Engineering (3)**

Engineering planning of production facilities that will result in efficient integration of the workforce, material flow, and compatible site location with access to adequate transportation alternatives.

Prerequisite: None

## **EXS - Exercise Science**

### **EXS 109 - Intro to Human Performance (3)**

Emphasis on concepts of fitness and general health issues that affect individuals and athletes. Students will learn skills necessary for health-related fitness evaluation and

fitness prescription. Students will also explore professions in Athletic Training and Exercise Science.

Prerequisite: Declared major in pre-Athletic Training or pre-Exercise Science.

### **EXS 112 - Foundations of Athletic Training (3)**

Acquaints student with the academic and clinical requirements by CAATE accreditation and BOC certification as an entry-level athletic trainer and state licensure. Introduces risk management, injury prevention, medical conditions and disabilities, principles of orthopedic related injuries. Requires 10-30 hours of clinical observation.

Prerequisite: EXS 109 or permission of department chair. Declare major in Pre-Athletic Training

### **EXS 113 - Foundations of Exercise Science (3)**

Examines exercise science, its associated subdisciplines, and societal influences. Reviews contributions of both historical and current leaders and future trends. Emphasizes career options, professional organizations, certifications, legal and ethical issues.

Prerequisite: EXS 109 or permission of department chair. Declare major in Pre-Exercise Science.

### **EXS 207 - Anatomy and Physiology in Exercise Science I (3)**

Open to exercise science, athletic training, and dance education majors only. Explores human structure and function of the musculoskeletal, integumentary, articular, nervous systems related to exercise. EXS 211 Lab must be taken concurrently for exercise science and athletic training majors.

Prerequisite: BIO 111 or BIO 121 or BMS 102 or BMS 111

### **EXS 208 - Anatomy and Physiology in Exercise Science II (3)**

Open to exercise science, athletic training, and dance education majors only. Explores human structure and function of the cardiovascular, respiratory, digestive, urinary, reproductive, and endocrine systems related to exercise. EXS 212 Lab must be taken concurrently for exercise science and athletic training majors.

Prerequisite: BIO 111 or BIO 121 or BMS 102 or BMS 111; CHEM 161.



**EXS 211 - Anatomy and Physiology in Exercise Science I Laboratory (1)**

Open to exercise science, athletic training, physical education and dance education majors only. Explores hands-on examination of the skeletal system, integumentary and bone histology, anatomical planes of movement, and the articular and muscle origin and insertions. EXS 207 must be taken concurrently for exercise science and athletic training majors.

Prerequisite: BIO 111 or BIO 121 or BMS 102 or BMS 111

**EXS 212 - Anatomy and Physiology in Exercise Science II Laboratory (1)**

Open to exercise science, athletic training, physical education and dance education majors only. Explores measurement of physiological variables in the nervous, respiratory, cardiovascular, and skeletal muscle systems. EXS 208 must be taken concurrently for exercise science and athletic training majors.

Prerequisite: BIO 111 or BIO 121 or BMS 102 or BMS 111; CHEM 111, or CHEM 150, or CHEM 161

**EXS 215 - Physiological Aspects of the Human Performance of the Aging (3)**

Stresses physiological responses of exercise and the psychological rationale for lifelong physical activities for the aged. Open to exercise science majors only.

Prerequisite: EXS 208 and EXS 212; Open to exercise science majors only.

**EXS 216 - Biomechanics (3)**

Analysis and application of principles of mechanics as they relate to motor skills in physical activity. Two hours of lecture and one two-hour laboratory per week. Open to exercise science, athletic training, physical education and dance education majors only

Prerequisite: PHYS 111 or PHYS 121; EXS 207. Open to exercise science, athletic training, physical education and dance education majors only.

**EXS 218 - Clinical Examination and Diagnosis of Injuries and Illnesses (4)**

Focus on concepts, theories, and techniques necessary for orthopedic clinical examination, diagnosis of injuries and illnesses common to physically active individuals. Basic understanding of mechanism and pathology of injury/illnesses will be emphasized. Includes one one-hour laboratory.

Prerequisite: Admission to the Professional Program in Athletic Training.

**EXS 240 - Therapeutic Modalities (4)**

Physiological effects of therapeutic modalities on orthopedic injuries. Topics include pain, pain control, modality principles, indications, and contradictions. Emphasis on safe operation and application, manual therapy, and foot biomechanics. Includes one one-hour laboratory. Requires to be scheduled or have completed a preclinical experience with a minimum five, 3-week CCSU sport or athletic training facility rotations. Includes weekends, unusual hours, holidays, and off-campus observations.

Prerequisite: Admission to the Professional Program in Athletic Training.

**EXS 275 - Training for Sport Performance (3)**

Develop knowledge and skills required to organize and instruct activities that enhance fitness and sport performance. Topics include, but are not limited to, strength, plyometric, speed, and agility training. Skill course. Open to exercise science and athletic training majors only.

Prerequisite: EXS 207 and EXS 211 Open to exercise science and athletic training majors only.

**EXS 280 - Leadership in Exercise & Wellness (3)**

Educates students about instructing others in group fitness setting. Provides content knowledge and practical experience in teaching group fitness classes. Covers the most current methods of group fitness. Skill course.

Prerequisite: Declared major in Pre-Exercise Science or Exercise Science.

**EXS 301 - Applied Kinesiology (3)**

Students will examine how the skeletal, muscular, and nervous systems interact to create movement. Areas of study include the osteology, arthrology, myology, and neurology of the head, neck, trunk, and limbs. Students will apply their understanding by analyzing various sports skills to determine joint motion, types of muscle contraction, and involved muscles. Open to Exercise Science and Athletic Training majors only.

Prerequisite: EXS 207 and EXS 211; Open to Exercise Science and Athletic Training majors only

**EXS 307 - Human Nutrition (3)**

Principles and concepts of normal human nutrition applied to various stages in life and activities especially as

they relate to health promotion and weight control. Motivational skills for fitness, adherence to healthy nutrition, and strategies for evaluating health and fitness claims will be discussed. Open to exercise science and athletic training majors only.

Prerequisite: CHEM 161. Open to exercise science and athletic training majors only.

**EXS 311 - Stress Management and Behavioral Strategies (3)**

Examines the physical and mental phenomena that constitute stress and the effects of negative stress on the body. Presents strategies for managing and coping with stress, increasing self-control, and adaptive behavior.

Prerequisite: PSY 112. Declared major in Pre-Exercise Science or Exercise Science.

**EXS 315 - Practicum in Athletic Training I (2)**

First aid, evaluation, taping, wrapping, design and application of protective equipment, preparing teams for competition. Minimum five, 3-week CCSU sport or training facility rotations required. Includes weekends, unusual hours, holidays, and off-campus observations.

Prerequisite: Admission to the Professional Program in Athletic Training, and current EMT-B Certification (State of CT or National Registry).

**EXS 316 - Practicum in Athletic Training II (2)**

Includes evaluating athletic injuries, establishing treatments, rehabilitation plans, maintaining medical records. Minimum five, 3-week CCSU sport or training facility rotations required. Includes weekends, unusual hours, holidays, and off-campus observation.

Prerequisite: EXS 315; admission to the Professional Program in Athletic Training, and current EMT-B Certification (State of CT or National Registry).

**EXS 317 - Therapeutic Exercise (4)**

Introduction to the theories and techniques of manual muscle testing, muscle length testing, goniometry, and isokinetic testing. Emphasis on pre-participation physicals, orthopedic screening, posture assessment, therapeutic exercise programs for the rehabilitation of injuries. Includes one one-hour laboratory. Requires to be scheduled or have completed a preclinical experience with a minimum five, 3-week CCSU sport or training facility rotations. Includes weekends, unusual hours, holidays, and off-campus observations.

Prerequisite: Admission to the Professional Program in Athletic Training.

**EXS 319 - Practicum in Athletic Training III (2)**

Preseason screening, physicals, medical conditions, neurological evaluations, advanced rehabilitation skills. Minimum five, 3-week CCSU sport or training facility rotations required. Includes weekends, unusual hours, holidays, and off-campus observation.

Prerequisite: EXS 316, and admission to the Professional Program in Athletic Training, and current EMT-B Certification (State of CT or National Registry).

**EXS 325 - Organization and Management in Exercise Science (3)**

Theories and skills to develop, administer, and manage facilities/venues in the fitness industry. Emphasizes human resources, facility design, budgeting, legal, and public relations issues. Open to exercise science majors only.

Prerequisite: 45 credits minimum. Open to exercise science majors only.

**EXS 332 - Sport-Exercise Psychology & Behavioral Coaching (3)**

Key focus areas addressed in this course include behavioral change models, motivational approaches, and behavioral coaching, which involves motivational interviewing, sound communication practices, positive reinforcement strategies, learning preferences, adherence strategies, and the optimization of skill acquisition and training conditions. Other topics include the use of mental skills and strategies needed to attain optimal performance and recovery.

Prerequisite: None.

**EXS 376 - Theories of Strength Training and Conditioning (3)**

Theoretical and practical knowledge for the development of conditioning programs. Includes training variation, program design, and organization and administration of facilities. Prepares students for the NSCA CSCS certification exam. Open to exercise science majors only.

Prerequisite: EXS 208/ EXS 212 and EXS 275. Open to exercise science majors only.

**EXS 405 - Exercise and Sport Nutrition (3)**

This course explores the physiological and psychological benefits of regular physical activity throughout the lifecycle. The special nutritional needs of a person

engaged in regular physical activity are evaluated. Emphasis is placed on planning a diet to achieve optimal performance and overall wellness. Athletic performance enhancing supplements are examined to determine the efficacy and safety of such products.

Prerequisite: EXS 307

### **EXS 407 - Exercise Physiology and Applied Biomechanics (3)**

Applied concepts introduced in exercise physiology and biomechanics. Aspects of the human body's reaction to differing exercise stressors. Emphasis on metabolic, musculoskeletal, and cardiorespiratory systems. Required laboratory class is taken in conjunction with the lecture to apply theoretical concepts of exercise physiology and biomechanics.

Prerequisite: EXS 208 (C- or higher) and PHYS 111 (C- or higher); admission to the Professional Program in Physical Education or Dance Education.

Cross-Listed as: EXS 517

### **EXS 408 - Physiology of Sport and Exercise (3)**

Study of how the body responds to acute and chronic bouts of exercise and further application of these responses to training the athlete. Two hours of lecture and one two-hour laboratory per week. Open to exercise science and athletic training majors only.

Prerequisite: EXS 307; EXS 207/EXS 211 and EXS 208/EXS 212 and admission to the Professional Program in Exercise Science.

### **EXS 409 - Clinical Exercise Physiology (3)**

Designed to modify exercise programs and to provide all individuals the opportunity to participate in physical activity programs. Emphasis is on obesity, cardiac conditions, diabetes, physical disabilities, asthma and pregnant women.

Prerequisite: EXS 408 and admission to the Professional Program in Exercise Science.

### **EXS 411 - Research Methods in Exercise Science (3)**

Emphasis on Scientific research progress, including choosing tests, calibrating equipment, testing administration, calculating statistics, evaluating results and presenting research studies. Additionally, evidenced based practice research designs will be integrated and the PICO technique (patient problem or population, intervention, comparison, and outcomes) will be

discussed. Open to exercise science and athletic training majors only.

Prerequisite: STAT 104, STAT 200, or STAT 215; Open to exercise science and athletic training majors only.

### **EXS 413 - Administration and Management in Athletic Training (3)**

Theories and skills to develop, administer, and manage facilities/venues that provide health care to athletic populations. Emphasizes organizing pre-participation physicals, healthcare delivery, medical documentation, human resources, facility design & management, risk management, insurance, and reimbursement.

Prerequisite: Admission to the Professional Program in Athletic Training.

### **EXS 415 - Fitness Assessment and Exercise Prescription (3)**

Use of laboratory and field tests for assessing physical fitness components and of test results for developing individualized exercise prescriptions to improve cardiorespiratory fitness, muscular fitness, body composition, and flexibility.

Prerequisite: EXS 408 or EXS 592 and EXS 593; and admission to the Professional Program in either Athletic Training or Exercise Science or acceptance to M.S., Physical Education.

### **EXS 416 - Graded Exercise Testing (3)**

Safely monitoring, properly administering, and accurately interpreting the results of graded exercise tests including electrocardiography, understanding the pathophysiological responses of the body to clinical exercise testing. Additional work required for graduate credit.

Prerequisite: EXS 408; admission to the Professional Program in Exercise Science. Or EXS 592 and EXS 593; admission to M.S., Physical Education

### **EXS 417 - Prevention and Care in Sports Medicine (3)**

Course provides an essential overview of injury recognition, mechanisms and characteristics of sport trauma. Students will gain knowledge in risk management strategies; environmental risk factors; basic assessment of musculoskeletal injuries and various medical conditions; and the basic management and coordination of immediate care.

Prerequisite: EXS 301 and EXS 109; Open to exercise science and athletic training majors only.

Cross-Listed as: ATR 517

**EXS 421 - Pharmacology in Sports Medicine (3)**

Basic principles of pharmacology, pharmacokinetics, and commonly prescribed therapeutic medications in an athletic population. Introduction to contemporary medications, social drugs, and performance enhancers used in sports medicine.

Prerequisite: EXS 307 and admission to the Professional Program in Athletic Training or Exercise Science.

Cross-Listed as: ATR 521

**EXS 445 - Internship in Athletic Training (6)**

Internship will take place under the direct supervision of a preceptor. Internship may occur in a sports medicine setting at the public high school, preparatory school, or college/university level. Internships may require weekends, unusual hours and holidays. Minimum 370 hours – maximum 400 hours athletic training clinical rotation plus 80-100 hours of other clinical experiences.

Prerequisite: EXS 319, completion of minimally one entire preseason clinical field experience at CCSU, and admission to the Professional Program in Athletic Training and current EMT-B Certification (State of CT or National Registry)

**EXS 450 - Practicum in Exercise Science (3)**

Provides an opportunity for students to gain 150 clock hours of field experience in an exercise setting, conducting prescribed exercise programs. Current CPR and first aid certification required.

Prerequisite: EXS 415; admission to the Professional Program in Exercise Science or to the M.S. in Physical Education.

**EXS 470 - Internship in Exercise Science (6)**

Off-campus practical experience. Includes corporate fitness, YMCA, strength and conditioning, sports medicine, cardiac rehabilitation, and research experiences. Offers opportunities to apply fundamental concepts.

Prerequisite: EXS 450; admission to the Professional Program in Exercise Science or to the M.S. in Physical Education; current CPR and first aid certification.

**EXS 507 - Sociological Foundations of Sport and Exercise (3)**

Inquiry into the nature and expression of humans in sport. Topics include: The issues of competition and winning,

amateurism vs. professionalism, values of sport, causes and results of spectator behaviors.

Prerequisite: Admission to M.S. in Physical Education.

**EXS 515 - Foundations of Sport and Exercise Psychology (3)**

Identifies principles and guidelines that professionals use to help adults and children participate in and benefit from sport and exercise activities.

Prerequisite: Admission to M.S. in Physical Education.

**EXS 516 - Foundations of Leadership for Sport and Exercise (3)**

Explores leadership and followership theories and best practices for sport and exercise professionals. Discusses leader development programming; focuses on the talents, techniques, tactics, and styles of effective leaders and followers.

Prerequisite: None

**EXS 517 - Exercise Physiology and Applied Biomechanics (3)**

Applied concepts introduced in exercise physiology and biomechanics. Aspects of the human body's reaction to differing exercise stressors. Emphasis on metabolic, musculoskeletal, and cardiorespiratory systems. Required laboratory class is taken in conjunction with the lecture to apply theoretical concepts of exercise physiology and biomechanics.

Prerequisite: EXS 208 (C- or higher) and PHYS 111 (C- or higher), or equivalents; admission to the Professional Program in Physical Education or Dance Education.

Cross-Listed as: EXS 407 Exercise Physiology and Applied Biomechanics

**EXS 519 - Sport Biomechanics (3)**

Study of the mechanical analysis of sport skills, in order to improve teaching. The student is provided with a scientific basis for teaching correct form.

Prerequisite: EXS 216 or permission of instructor.

**EXS 523 - Essentials of Sports Performance Training (3)**

Systematic approach to program design of sports performance program variables to help train athletes safely and effectively. Includes protocols for building stabilization, strength, power, speed, agility and quickness.

Prerequisite: None

**EXS 530 - Nutrition for Health, Fitness, and Sport Performance (3)**

Provides knowledge base of the major nutrients relative to the role that nutrition, complemented by physical activity, may play in the enhancement of health and sport performance. Topics include weight management and eating disorders.

Prerequisite: Permission of instructor.

**EXS 590 - Independent Study / Topics in Exercise Science or Sports Medicine (1-3)**

Work in theory or research to meet individual requirements in areas not covered by the regular curriculum. Either PE 590 and/or EXS 590 may be taken for a maximum of 6 credits.

Prerequisite: Admission to the M.S. in Physical Education with approved planned program, or permission of instructor.

**EXS 592 - Advanced Physiology of Sport & Exercise I (3)**

Using exercise physiology as a basis, examination of acute and chronic adaptations of the body to high physiological demands of physical activity and sport. Topics covered include bioenergetics, physiology of the skeletal system, cardiorespiratory system, and renal systems.

Prerequisite: Full Admission to the M.S. in Physical Education.

**EXS 593 - Advanced Physiology of Sport and Exercise II (3)**

Using exercise physiology as a basis, examination of acute and chronic adaptations of the body to high physiological demands of physical activity and sport. Topics covered include bioenergetics, physiology of the skeletal system, cardiorespiratory system, and renal system.

Prerequisite: Admission in MS in Physical Education; For Full-Admission a student should have a course in exercise physiology.

**FA - Fine Arts****FA 412 - Fine Arts Across the Curriculum (3)**

Introduction to concepts and skills in music, creative dramatics, dance/movement, physical education, and visual arts. Discussion of the basic strategies to integrate these disciplines into the school curriculum including the development of integrated lesson plans. Field experience required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect

registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies. Thirty hours of content area major field experience is required for teacher candidates.

Prerequisite: Admission to the Professional Program in Teacher Education.

**FIN - Finance****FIN 210 - Personal Finance (3)**

This course will provide a foundational understanding for making informed personal financial decisions leading to financial independence. Topics include a broad range of personal financial decisions, including, money management, education planning, tax issues, financial goal attainment, use of credit, buying decisions, basics of insurance and investment.

Prerequisite: None.

**FIN 295 - Managerial Finance (3)**

Basic course in business finance. Topics include the financial environment, analysis of financial statement, valuation of corporate stocks and bonds, and capital investment decisions.

Prerequisite: AC 211; and one of the following: STAT 104, STAT 200, STAT 215, STAT 314, or STAT 315; all with grades of C- or higher.

**FIN 300 - Personal Financial Planning (3)**

This course covers general principles of financial planning, financial statements, the basis of tax planning, time value of money, credit management, cash management, basics of risk management and insurance planning, investment planning, retirement planning, estate planning, and consumer rights and responsibilities. The course introduces fundamental concepts of personal financial planning to enhance students' financial literacy and application. Students are encouraged to participate in instructor-approved service-learning activities.

Prerequisite: FIN 295 (C- or higher)

Cross-Listed as: FIN 300 is cross-listed with AC 305. No credit granted to students with credit for AC 305.

**FIN 301 - Intermediate Managerial Finance (3)**

Designed to develop a fundamental understanding of the following major topics in finance: the capital investment

decision, capital structure and dividend policy, fund sources, working capital management, and corporate restructuring.

Prerequisite: FIN 295 (C- or higher) and admission to the upper division Business School.

### **FIN 305 - Topics in Financial Institutions (3)**

Course content varies but focused on topics in financial institutions.

Prerequisite: FIN 295 (C- or higher) and upper division status, or permission of the department chair.

### **FIN 310 - Principles of Investments (3)**

A study of investment, types of securities, sources of investment information, the securities markets, and valuation of different assets. Attention is directed to the investment of funds by individual and institutional investors.

Prerequisite: STAT 201 and FIN 295 (both with a grade of C- or higher).

### **FIN 320 - Financial Markets and Institutions (3)**

The role, functions, and operations of capital markets, banks, and other financial intermediaries in modern, global economies.

Prerequisite: FIN 295 (C- or higher) and admission to the upper division Business School.

### **FIN 321 - Insurance (3)**

Nature and organization of insurers, analysis of insurance contracts, types of insurance products, introduction to actuarial and underwriting processes, insurer portfolio management, and insurer profitability.

Prerequisite: FIN 295 (C- or higher) and admission to the upper division Business School.

### **FIN 330 - International Finance (3)**

A study of the principles and practices of finance in an international setting. Explores the primary elements of international monetary economics with emphasis on exchange rate analysis. Major topics of study include exchange risks and the international financial markets.

Prerequisite: FIN 295 (C- or higher) and admission to the upper division Business School.

### **FIN 352 - Finance Studies Abroad (3)**

Classroom and study abroad exploring finance topics from any world region. Involves travel outside the United States.

Prerequisite: FIN 295 with a C- or higher.

### **FIN 356 - Retirement Planning and Estate Planning (3)**

Retirement Planning and Estate Planning is designed to provide students with a strong and rigorous foundation in retirement planning and estate planning to begin preparation for a career as a professional in financial planning, accounting, or related fields. The purpose of this course is to educate future financial planners on how to help clients achieve four key outcomes: (1) financial independence, (2) financial security, (3) financial assets and income maximization across the life course, (4) application of estate planning methodologies and policies to financial planning. The course includes two modules: Module 1 - retirement planning covers three main topics: accumulations from retirement plans, types of retirement plans and retirement income sources, and distributions from retirement plans; Module 2 – Estate planning covers the estate planning process, probate process, estate taxes, and trusts.

Prerequisite: FIN 295 (C- or better)

Cross-Listed as: No credit granted to students with credit for AC 356

### **FIN 400 - Advanced Managerial Finance (3)**

An advanced course in financial management of the business firm. Topics include initial public offerings, investment banking, financial restructuring, lease financing, working capital management, providing and obtaining credit, bankruptcy, reorganization, and liquidation. The course utilizes a case study approach to stress the application of financial management theories.

Prerequisite: FIN 301 (C- or better, may be taken concurrently), and admission to the upper division Business School.

### **FIN 410 - Securities Analysis and Portfolio Management (3)**

An advanced course in investments with emphasis on portfolio management and security analysis of equity and fixed-income instruments. Topics include equity securities valuation, measuring and managing risk exposure of fixed income securities, and portfolio management theories and practices.

Prerequisite: FIN 310 and admission to upper division Business School.

**FIN 411 - Financial Statement Analysis (3)**

Examines how financial reports can be used by investors, lenders and financial analysts to make better economic, lending and investment decisions. Topics include: financial ratios, reported earnings, corporate performance, cash flow analysis to evaluate financial health of a company.

Prerequisite: FIN 310 (C- or higher); may be taken concurrently, and admission to upper division Business School.

**FIN 420 - Bank Management (3)**

An in-depth examination of bank management issues including deposit account funding costs and stability, creditworthiness determination, loan pricing, loan portfolio management, interest rate risk management, liquidity management, foreign exchange management, and strategic planning.

Prerequisite: FIN 320 (C- or higher), may be taken concurrently, and admission to upper division Business School.

**FIN 422 - Risk Management (3)**

Examines applications and theory of strategic and financial market choices in the management of firm risk. Students develop competency in assessing and measuring the risk of a firm as well as the use of risk management tools.

Prerequisite: FIN 321 (with C- or higher) and admission to upper division Business School.

**FIN 425 - Financial Derivatives (3)**

Valuation of financial derivatives, including options and futures, applications to portfolio, and corporate risk management.

Prerequisite: FIN 310 (C- or higher), may be taken concurrently; for graduate students, permission of Department Chair.

**FIN 433 - Real Estate Finance (3)**

An introduction to the investment principles of real estate, with emphasis on valuation techniques, assessment of investment risk, investment decision-making, residential mortgages and commercial property financing. Provides an understanding of the risk and rewards associated with the various ways of investing and lending in both residential and commercial real estate.

Prerequisite: FIN 320 (all with C- or higher), may be taken concurrently

**FIN 436 - Introduction to Fintech (3)**

The course provides an overview of the most recent technological advances that are radically changing the financial services industry. Technological breakthroughs offer new ways for people to save, invest, borrow, and transact. The course will focus on applying the fundamentals to different areas like risk modeling, banking, market microstructure, and cryptocurrencies. You will discover the impact of FinTech from multiple perspectives—investor, corporate, and consumer—and learn about the regulation behind it. We will analyze how new technologies create value in the financial industry, from reducing unit cost, increasing transparency, increasing competition, creating network effects, leveraging economies of scales, and lowering asymmetric information. We will also study the competitive landscape and the market opportunities and threats for incumbents and new entrants.

Prerequisite: C- or better in FIN 320

**FIN 440 - Financial Modeling and Analytics (3)**

Presents the theory and practice of financial management, emphasizing computer-based modeling and financial analytics. Uses spreadsheets and other software products to analyze the impact of financial decisions related to financial statement analysis, cash budgeting, and security analysis and portfolio management.

Prerequisite: FIN 301 and admission to the Upper-Division Business School

**FIN 450 - Credit analysis (3)**

This course will explore the process bank and non-bank lenders go through when analyzing a credit application. It will build on the concepts learned in Financial Statement Analysis and also consider industry and concentration risks, collateral, guarantees, legal and reputational concerns, loan structure, and other issues. Both commercial and consumer credit analysis will be explored.

Prerequisite: FIN 411 (C- or higher), may be taken concurrently, and admission to upper division Business School

**FIN 490 - Independent Study in Finance (1-3)**

Individualized readings and/or research by individual under the direction of a Finance faculty member. Topics will vary. May be repeated up to a total of 3 credits.

Prerequisite: FIN 301, FIN 310 and FIN 320 (all with C- or higher).

### **FIN 496 - Practicum in Finance (3)**

An internship is a supervised, on-the-job learning experience. Student performance is monitored and evaluated in relation to conditions set forth in an approved Project Plan. Professional duties and responsibilities must directly relate to the student's major. Minimum of 180 clock hours of work experience is required. There is no maximum number of work hours. Students are expected to complete the internship period for the semester in which they are enrolled. Students already in a Finance position may not receive credit for continuing in the same position. This course is for Finance majors and can be used as a business elective course only.

Prerequisite: Permission of Department chair

### **FIN 498 - Finance Seminar (3)**

Course content varies.

Prerequisite: Permission of instructor.

### **FIN 499 - CFA Seminar (3)**

Focuses on the advanced investment concepts which are the foundation of Chartered Financial Analyst (CFA) professional designation. Topics include ethical and professional standards, quantitative methods, global markets and instruments, analysis of stock and bond investments, and portfolio management.

Prerequisite: FIN 410 or FIN 411 (both with C- or higher); or permission of Department Chair.

### **FIN 500 - Managerial Finance (3)**

A fundamental understanding of the basic principles, concepts and analytical tools of finance. Emphasizes corporate decision-making and skills applicable to personal finance and small business decision making.

Prerequisite: None

### **FIN 531 - Corporate Finance (3)**

The basics of the corporate financial decision-making process. Provides a framework, concepts, and tools for analyzing financial decisions based on fundamental principles of modern financial theory.

Prerequisite: Admission to a School of Business graduate program, permission of the Associate Director of Graduate Programs, or permission of the Department of Finance Chairperson.

### **FIN 535 - Advanced Financial Management (3)**

An advanced study of empirical topics in corporate finance with application to real world situations. Topics include corporate valuation and financial planning, corporate governance, multinational financial management, public and private financing, lease and hybrid financing, mergers and corporate control, and other special topics.

Prerequisite: FIN 531, or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Finance Chairperson.

### **FIN 540 - Financial Statement Analysis and Valuation (3)**

How to extract and synthesize information from financial statements for investing in business and how to conduct fundamental analysis to determine the underlying value of the firm. Students should have knowledge of financial accounting and valuation theory. Cross-listed with AC 544. No credit for those who took FIN 411 undergraduate.

Prerequisite: FIN 531; (may be taken concurrently), or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Finance Chairperson.

Cross-Listed as: AC 544

### **FIN 545 - Real Estate Finance & Investment (3)**

This course provides students with a comprehensive understanding of the fundamental concepts and analytical methods for making real estate investment and finance decisions. The course focuses on commercial real estate, primarily office, retail, and multifamily properties. The topics may include valuation methods, business cycles, development risks, market/submarket analysis, tenant risk, mortgage debt, ownership structures and other special topics.

Prerequisite: FIN 531, or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Finance Chairperson.

### **FIN 546 - Sports Finance (3)**

Sports Finance is designed to provide students with an in-depth understanding of the financial aspects that drive the sports industry. The course employs a blend of theoretical knowledge and practical case studies, enabling students to grasp the intricacies of sports finance. In this course, students delve into the unique economic models



and financial practices prevalent in sports organizations. Key topics include (1) revenue generation and allocation, (2) financial management of sports facilities, (3) budgeting for sports teams and events, (4) sponsorship and broadcasting rights deals, and (5) the financial impact of sports marketing. Students will also explore current trends and challenges in sports finance, including issues like financial fair play and the economic effects of global events on sports. By the end of this course, students are expected to acquire critical financial skills and insights, positioning them to be effective financial strategists in the dynamic world of sports management.

Prerequisite: FIN 531 (may be taken concurrently), or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Finance Chairperson.

### **FIN 550 - Money, Capital Markets and Banking (3)**

Analyzes operations of financial institutions, especially commercial banks, including the role they play in financial markets, how operations affect the economic system, and the role of regulation in influencing their behavior. Examines money, credit and interest rates, contemporary monetary theories, the function of central banks in the economy, and the interaction of central bank actions with asset markets.

Prerequisite: FIN 531 (may be taken concurrently), or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Finance Chairperson.

### **FIN 555 - International Finance (3)**

This course will cover topics in international financial markets and international financial management. The topics may include international monetary systems, international trade, exchange rate determination, managing currency exposure, international financial markets, international capital budgeting, working capital management, country risk analysis, and other special topics.

Prerequisite: FIN 531 (may be taken concurrently), or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Finance Chairperson.

### **FIN 560 - Commercial Lending (3)**

Studies the present structure of banking with emphasis on the relationship between commercial banking and economic stabilization goals. Reviews the basics of risk and financial statement analysis in assessing credit quality. Examines advanced loan structure and cash flow techniques, the 5 C's of credit, regulatory issues affecting banking, predicting portfolio credit performance, and managing risk in commercial real estate lending.

Prerequisite: FIN 531 (may be taken concurrently), or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Finance Chairperson.

### **FIN 570 - Investments and Securities Analysis (3)**

Examines the theory and practice of investment analysis in a global environment, including risk/return analysis, asset valuation, and the use of derivatives and financial engineering for risk management and portfolio management.

Prerequisite: FIN 531, or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Finance Chairperson.

### **FIN 580 - Derivatives and Risk Management (3)**

An in-depth analysis of derivative instruments, including options, futures, swaps, credit derivatives, and exchange traded products. Examines product characteristics, valuation, hedging applications, trading strategies and market infrastructure. Applies an understanding of derivatives to case studies in risk management, corporate finance, and investment portfolio hedging.

Prerequisite: FIN 531, or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Finance Chairperson.

### **FIN 590 - Finance Seminar (3)**

Focus on current topics and developments in finance, banking, financial technology, insurance, investments, real estate finance or financial services. Course content will vary by semester. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: Admission to a School of Business graduate program, permission of the Associate Director of Graduate Programs, or permission of the Department of Finance Chairperson.

## FR - French

### FR 111 - Elementary French I (3)

Open only to students with one year or less of high school study. Foundations of the French sound system and structure are established through an aural-oral approach. CSUS Common Course.

Prerequisite: None

### FR 112 - Elementary French II (3)

No credit given to students with previous credit for more advanced course work in French except by permission of the department chair. Continuing the presentation of the elements of French language structure. Dictation and aural comprehension are stressed as well as conversation. CSUS Common Course.

Prerequisite: FR 111 or equivalent (normally, two years high school study).

### FR 125 - Intermediate French I (3)

Taught in French. French language structure is reviewed. Short stories and plays. Conversation and composition based on topics of general interest. No credit will be given to students with previous credit for more advanced course work in French except by permission of the department chair. CSUS Common Course.

Prerequisite: Three years of high school French or one year of college French or equivalent.

### FR 126 - Intermediate French II (3)

Continuation of FR 125. Taught in French. No credit will be given to students with previous credit for more advanced course work in French except by permission of the department chair. CSUS Common Course.

Prerequisite: FR 125 or equivalent.

### FR 225 - Intermediate French III (3)

Taught in French. Extensive use of technology and French language films, with emphasis on development of listening, speaking and writing skills.

Prerequisite: FR 125 or FR 126 or French placement exam.

### FR 226 - Intermediate French IV (3)

Taught in French. Improvement of the reading and writing of French through the use of contemporary texts, narratives, plays, and poems.

Prerequisite: FR 126 or FR 225 or French placement exam.

### FR 304 - Introduction to French Literature (3)

Taught in French. Introduction to selected literary works and discussion of literary genres and important aspects of French literary history.

Prerequisite: FR 225 or FR 226 (either may be taken concurrently) or permission of instructor.

### FR 305 - Introduction to Francophone Literature (3)

Introduction to literature written in French from Francophone countries other than France.

Prerequisite: FR 225 or FR 226 (either may be taken concurrently) or permission of instructor.

### FR 315 - Aspects of Francophone Cultures (3)

Taught in French. Topics include relevant features of French speaking countries, with emphasis on physical and political geography, history, and culture.

Prerequisite: FR 225 or FR 226 or permission of instructor.

### FR 316 - Contemporary France (3)

Taught in French. Politics, social structures, and cultural life of France today. France in relation to Western Europe and in a broader international framework.

Prerequisite: FR 225 or FR 226 or FR 315.

### FR 335 - Advanced French for Oral Practice (3)

Taught in French. Development of grammar and idiom for oral proficiency through discussion of readings, films, and other documents.

Prerequisite: FR 225.

### FR 336 - Advanced French Composition (3)

Taught in French. Advanced training in the use of French based on readings, translation, and composition.

Prerequisite: FR 226.

## FYE - First Year Experience

### FYE 100 - First Year Experience (1)

Offers first year students an overview of fundamental skills required to take full advantage of the college experience, make the transition from high school to college and connect to the CCSU community. Includes; developing a mindset for academic success, information literacy, health and wellness, financial literacy, and career exploration.

Prerequisite: Participation in FIPSE grant

**FYE 101 - First Year Experience (1)**

Students will discuss issues and learn about campus resources relevant to first-year students as they make the transition from high school to college learning environments. Sections of this course will be complementary of specific sections of designated first-year experience courses for which the student must register concurrently.

Prerequisite: First-year, first-time status.

**FYE 200 - Second Year Experience (1)**

Builds on skills introduced in FYE 100 by connecting the CCSU experience to larger goals beyond adjusting to college life and courses. Includes; building a sense of purpose and meaning, developing evaluative information literacy skills, learning how to build wealth, planning for your future career, and choosing sustainable health and wellness habits.

Prerequisite: FYE 100 and participation in FIPSE grant

**FYE 301 - Peer Leadership Seminar (2)**

Required for all peer leaders working with First Year Experience classes. Provides peer leaders with skills required to help new students become proficient in using academic, support and other resources of the university. Includes meetings and other experiences outside of scheduled class time. May be repeated for up to eight credits.

Prerequisite: Permission of First Year Experience Faculty Director.

**FYI - First Year Inquiry****Additional Proposals 100 - First Year Inquiry: College Success ()**

An exploration of the different sorts of academic inquiry conducted in the College of Liberal Arts and Social Sciences. Students will be introduced to the skills of university-level reading, writing, speaking, and critical thinking in their pursuit of a common theme through the lenses of two disciplines, one drawn from Fine Arts and Humanities and one from Social and Behavioral Sciences. The course will also focus on laying a groundwork for career planning and success.

Prerequisite: Admission as a FTFT student who identifies as "Undecided CLASS," or permission of the CLASS Dean's office

**FYS - First Year Seminar****FYS 103 - First Year Seminar - Behavioral Sciences (2-4)**

Series of topical seminars in Behavioral Sciences for incoming first-year students. Topics will vary by semester according to interests of faculty teaching each semester.

Prerequisite: First-year, first-time status.

**FYS 104 - First Year Seminar - Natural Sciences (2-4)**

Series of topical seminars in Natural Sciences for incoming first-year students. Topics will vary by semester according to interests of faculty teaching each semester.

Prerequisite: First-year, first-time status.

**FYS 105 - First Year Seminar - Communication Skills (2- 4)**

Series of topical seminars in Communication Skills for incoming first-year students. Topics will vary by semester according to the interest of faculty teaching each semester.

Prerequisite: First-year, first-time status.

**GEOG - Geography****GEOG 100 - Search in Geography (3)**

Introduction to processes and value systems in geography. Theme and title may vary from section to section. Course may be repeated one time with a different topic.

Prerequisite: None

**GEOG 110 - Introduction to Geography (3)**

Basic patterns of physical environment and relationship of human patterns to them are explained. CSUS Common Course.

Prerequisite: None

**GEOG 120 - World Regional Geography (3)**

Survey of the lands, people, and places in the world's major culture regions. Reliance on case studies, investigations of development problems, or other approaches to develop concepts. CSUS Common Course.

Prerequisite: None

**GEOG 130 - Introduction to Geographic Information Science (3)**

Introduction to basic within the fields of cartography, geodesy, spatial statistics, remote sensing, and geographic information systems.

Prerequisite: None

**GEOG 160 - Geography of Global Contemporary Migration (3)**

This course will use a geographic lens to examine different aspects and trends of contemporary international migration. The focus will be global, and the students will examine how, why, when, and where individuals migrate. We will focus on current issues in international movements, including the impact of climate change, gender, children's migration, international student migration, and health and migration.

Prerequisite: None

**GEOG 220 - Human Geography (3)**

Survey of the world's people and their culture. Topics studied may include population, religion, language, settlement, architecture, land tenure, ideologies, social problems, behavior, resource utilization, and environmental change.

Prerequisite: None

**GEOG 241 - Introduction to Planning (3)**

Introduction to the principles and practice of planning at various spatial scales-regional, metropolitan, urban, and neighborhood.

Prerequisite: None

Cross-Listed as: Cross listed with AMS 241.No credit given to students with credit for AMS 241.

**GEOG 244 - Economic Geography (3)**

Spatial and ecological aspects of the economic development of world regions, resource and population balance, international trade issues, and geopolitics of the post-Cold War era.

Prerequisite: None

**GEOG 266 - Introduction to Remote Sensing (3)**

Lecture, exercises and a discussion of the basics of remote sensing including characteristics of remote sensors and remote sensing applications in academic disciplines and professional industries. Emphasis is placed on image acquisition and data collection in the electromagnetic spectrum and data set manipulations. Remote sensing imagery will be interpreted using a variety of tools.

Prerequisite: None.

**GEOG 270 - Geography of Hazards (3)**

Examines human and environmental generation of risks and hazards. Discussion will focus on both the social and

physical aspects of causality, risk perception and mitigation.

Prerequisite: None

**GEOG 272 - Physical Geography (3)**

Analysis of the landforms at the earth's surface, their distribution, genesis, and relationships to the other natural phenomena.

**GEOG 275 - Soils and Vegetation Sustainability (3)**

Analysis of major soil groups and vegetation zones and their relationship to sustainability and geographic factors, including land use and rural or urban planning. Field experiences are part of this course.

Prerequisite: None

Cross-Listed as: SUST 275

**GEOG 276 - Elementary Cartography (3)**

Introduces the basic theory and practice of cartography as a communication device for geographic and other spatially distributed phenomena. Emphasis on the fundamentals of map construction, design, and symbolization using GIS and cartographic software.

Prerequisite: None.

**GEOG 290 - Geography of Tourism (3)**

Physical and cultural factors affecting the locations and relative importance of recreational areas and tourist attractions, both foreign and domestic. Spatial analysis of tourist flows, modes of transportation, effects on regional economies, and impacts on environments.

Prerequisite: None

**GEOG 291 - National Parks and World Heritage Sites (3)**

Examination of sustainability issues for tourism development in preserved areas. Comparative analysis of national park systems globally. Case studies of individual national parks and UNESCO World Heritage sites included.

Prerequisite: None

**GEOG 330 - United States and Canada (3)**

The environmental, cultural, and economic patterns that give character to the different parts of the United States and Canada. Analysis of the internal structure and functions of cities such as New York and Los Angeles and regional planning in problem areas such as Appalachia, Alaska, and Southern California.

Prerequisite: None

**GEOG 333 - Political Geography (3)**

Geographical bases of political organization, conflict and international relations. Emphasis will be on power and conflict in the regional framework.

Prerequisite: None

**GEOG 374 - Climatology (3)**

Earth's climate with an emphasis on the physical processes and dynamics of the atmosphere. Topics include regional, urban and historical climatologies, atmospheric pollution, and climate change. Some class time will be devoted to practical exercises.

Prerequisite: None

**GEOG 378 - Geographic Information Systems (3)**

Introduction to raster and vector geographic information systems, with a focus on spatial data management, manipulation, and analysis.

Prerequisite: None.

**GEOG 447 - Geographic Perspective on Israel/Palestine (3)**

This course is intended to introduce students to the regional geography of Israel/Palestine. It will provide students with an understanding of the geographical processes at work in the country, how geography has shaped the country's history, and how geographical forces will influence its future.

Prerequisite: None.

**GEOG 430 - Internship in Geography (3)**

Students will work in an environment directly related to the track or planned program they are following, under the supervision of a geography faculty member. Written reports are required. No credit given to students with credit for GEOG 420.

Prerequisite: Permission of the department chair.

**GEOG 433 - Issues in Environmental Protection (3)**

Issues in the environmental protection planning process. Topics include air quality, noise, solid waste, hazardous materials, wilderness areas, endangered species, wetlands, and land use issues. A single field trip may be required.

Prerequisite: None

**GEOG 434 - Mexico, Central America, and the Caribbean (3)**

Study of our nearest neighbors south of the border, concentrating on people, the land on which they live, and related problems, primarily from a regional point of view.

Prerequisite: None

Cross-Listed as: Cross listed with LAS 434. No credit given to students with credit for LAS 434.

**GEOG 435 - Japan and Korea (3)**

Study of the physical framework, resources, economic activities, and characteristic landscapes of Japan and Korea. Activities of the people of Japan and Korea in relation to their environment and resources, and the differing problems of development facing both nations.

Prerequisite: None

**GEOG 436 - South America (3)**

A survey of the countries of South America with emphasis on people, places, and problems.

Prerequisite: None

Cross-Listed as: Cross listed with IS 436 and LAS 436. No credit given to students with credit for IS 436 or LAS 436.

**GEOG 437 - China (3)**

Physical, economic, political, and historical geography of China. Special consideration of her population, resources, agricultural growth, and industrial expansion. Discussion of the geographic bases and the expansion of the Chinese State and the contemporary foundation of Chinese national power.

Prerequisite: None

**GEOG 438 - Australia, New Zealand, and Oceania (3)**

Survey of the important human and environmental features of Australia, New Zealand, and the island regions of Polynesia, Melanesia, and Micronesia. Introduces the historical and contemporary cultural, political, economic, and physical processes that have shaped Oceania. Topics include regional biogeography, island formation, natural disasters, cultural diversity, indigenous migration and settlement patterns, impacts of European and American colonization, natural resource distributions, economic linkages and development, and political systems.

Prerequisite: None

**GEOG 439 - Urban Geography (3)**

Form, function, and evolution of urban settlements with reference to attributes of place. Emphasis is also placed on internal structure and regional relationships of cities. Provides a methodological basis for thought involving the planning process, including preservation planning and systems analysis. Personal on-site study of a current urban problem within the state is expected.

Prerequisite: None

**GEOG 441 - Community & Regional Planning (3)**

Philosophies, theories, and principles involved in planning of regions and urban areas.

Prerequisite: GEOG 241 or permission of instructor.

**GEOG 442 - Field Methods in Geography (3)**

Design and execution of field research in physical and human geography. Techniques include field notes, sketching, area sampling, planetable mapping, questionnaire design and administration, design of coding forms, soil and vegetation surveying. Both team and individual field research projects.

Prerequisite: 3 credits in Geography or permission of instructor.

**GEOG 444 - European Union (3)**

Environmental, cultural, and economic patterns that give character to the different countries, regions, and cities of the European union. Analysis of spatial changes associated with European integration.

Prerequisite: None

Notes:

**GEOG 445 - Environmental Planning (3)**

Examines the environmental impacts of land development and natural constraints on planning and public policy decision-making. Case studies and field work will emphasize aspects of environmental planning in the Greater Hartford region.

Prerequisite: GEOG 110 or permission of instructor.

**GEOG 446 - Sub-Saharan Africa (3)**

Relationships between physical environment and human development in Africa south of the Sahara.

Prerequisite: None

**GEOG 448 - Russia and Neighboring Regions (3)**

Environmental, cultural, and economic patterns that give character to the various regions of Russia and the N.I.S. Its contemporary political economy viewed in a spatial and historical context. Examination of Russia's relationship with Central Asia, East Asia, Eastern Europe and the EC.

Prerequisite: None

**GEOG 450 - Tourism Planning (3)**

Integrated and sustainable development approach to tourism planning explored through lectures, seminars and case studies at the national, regional, and community levels. Focus on public and private initiatives in tourism planning.

Prerequisite: GEOG 241 or GEOG 290 or Permission of Chair

**GEOG 451 - Tourism Development in Southern New England (3)**

Study of the tourism industry, including perspectives on supply, demand, and socio-economic impacts. Focus on issues, problems, and opportunities in tourism, including functions of state and regional tourism agencies in southern New England.

Prerequisite: GEOG 290 or GEOG 291 or permission of instructor or department chair.

**GEOG 453 - Recreation and Resort Planning (3)**

Study of the supply, location, distribution, use, planning, management, and impact of recreation facilities in both urban and rural situations.

Prerequisite: GEOG 450 or permission of instructor or department chair.

**GEOG 454 - Geography of Tourism Marketing (3)**

Examination of geographic elements and issues within the tourism industry, with a focus on how these may influence the spatial aspects of tourist behavior and industry development strategies.

Prerequisite: GEOG 290 and MKT 295 or permission of instructor.

**GEOG 455 - New Directions in Tourism (3)**

Study of contemporary forms of tourism including ecotourism, heritage tourism, and educational travel, which have their own impacts, management, and planning needs, and which differ notably from the traditions of mass tourism.

Prerequisite: GEOG 450 or permission of instructor or department chair.

### **GEOG 456 - Tourism Management (3)**

Overview of the tourism management process, with an emphasis on similarities and differences among tourism products. Topics may include visitor management strategies, tourist impacts, tourism business operations, service quality measures, tourist satisfaction assessments, cross cultural encounters in the service context, the role of travel intermediaries, and tourist transportation management.

Prerequisite: GEOG 290 or GEOG 291

### **GEOG 458 - Cultural Heritage Tourism (3)**

Overview of issues associated with the identification, interpretation, protection, and management of cultural heritage tourism sites, drawing on a range of examples from across geographic scales. Topics may include cultural heritage politics, cultural authenticity, cultural heritage protection laws, the National Register of Historic Places, Connecticut cultural heritage attractions and policies, and challenges associated with managing cultural heritage sites.

Prerequisite: GEOG 290 or GEOG 291

### **GEOG 459 - Field Studies in Regional Geography (3-6)**

On-site group studies in regional geography. This course normally involves travel outside the United States. Only 3 credits may be applied to General Education requirements. May be repeated for a maximum of twelve credits but only six of these credits may be used toward the Geography major.

Prerequisite: Permission of instructor.

### **GEOG 460 - GIS Applications in Crime Mapping (3)**

Study crime data preparation, the spatial and temporal patterns of crime, the theoretical and practical aspects of crime mapping, and spatial analysis of crime using GIS.

Prerequisite: GEOG 276 or GEOG 378 or permission of instructor or department chair

### **GEOG 463 - GIS Applications in Public Health (3)**

Use GIS in the context of carrying out projects for visualizing and analyzing health-related spatial data from infectious diseases, cancer, to environmental effects, health care accessibility, and community involvement in public health.

Prerequisite: GEOG 276 or GEOG 378 or permission of instructor or department chair

### **GEOG 464 - GIS Applications in Resource Assessment (3)**

GIS and quantitative techniques that can be applied to support the spatial allocation of social, economic, and natural resources involving geographic data.

Prerequisite: GEOG 276 or GEOG 378 or permission of instructor or department chair

### **GEOG 466 - Advanced Remote Sensing (3)**

Computer analysis and interpretation of satellite remote sensing data for inventorying, mapping, and monitoring earth's resources.

Prerequisite: GEOG 266 or GEOG 378

Cross-Listed as: N/A

### **GEOG 468 - GIS Applications in Urban Planning (3)**

Study the city in the GIS context and the usage of GIS to plan for growth in the urban environment. Emphasis on GIS analysis techniques used by planners and the methods of spatial analysis and their applications to urban issues.

Prerequisite: GEOG 276 or GEOG 378 or permission of instructor or department chair

### **GEOG 469 - Readings in Geography (1-3)**

Directed independent studies in geography. May be taken more than once for credit.

Prerequisite: Permission of instructor.

### **GEOG 470 - Geography of Health & Disease (3)**

Investigation of health-related topics using geographical frameworks and methodological techniques. Themes include disease distribution, health care access, and HIV/AIDS in a global context.

Prerequisite: GEOG 220 or permission of instructor.

### **GEOG 471 - Topics in Human Geography (3)**

Selected topics in human geography. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: GEOG 220 or permission of instructor.

Cross-Listed as: Cross listed with MKT 471. No credit given to students with credit for MKT 471.

### **GEOG 472 - Topics in Physical Geography (3)**

Selected topics in physical geography including urban climates, microclimatology, global change, coastal environments, and the impact of glacial and periglacial

processes on landforms. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: GEOG 272 or GEOG 275 or GEOG 374 or permission of instructor.

### **GEOG 473 - Geography of Natural Resources (3)**

Examines the definition, location, and evaluation of management. Focus on management strategies and cost benefit analyses of environmental degradation associated with resource use. Examples illustrated with GIS and remote sensing techniques.

Prerequisite: GEOG 110 or permission of instructor.

### **GEOG 475 - Energy Resources and Climate Change (3)**

Seminar on geographical bases of energy resources and global climate change. Emphasis on the geographical, physical, environmental, economic, and social impacts of energy resource development and use and their effects on global climate regions and sustainability.

Prerequisite: GEOG 272 or GEOG 374 or ESCI 129 or permission of instructor.

Cross-Listed as: SUST 475

### **GEOG 476 - Advanced Cartography (3)**

Design and production of maps using GIS. Emphasis on spatial data acquisition, analysis, and effective visual communication.

Prerequisite: GEOG 276 or GEOG 378 or permission of instructor

### **GEOG 478 - GIS Design and Implementation (3)**

Advanced study of geographic information systems and applications. Students will prepare a proposal to develop GIS for a municipality or non-profit organization. Portions of the database will be implemented. Concentration on vector software.

Prerequisite: GEOG 276 or GEOG 378 or permission of instructor or department chair.

### **GEOG 479 - Geographic Information Systems Applications (3)**

Advanced study of applications in geographic information systems. Applications will vary but will include urban/regional planning, natural resources management, and public safety. May be taken twice for credit under different content.

Prerequisite: GEOG 276 or GEOG 378 or permission of instructor or department chair

### **GEOG 480 - Topics in GIS (3)**

Selective topics in Geographic Information Science. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: GEOG 276 or GEOG 378 or permission of instructor or department chair.

### **GEOG 481 - Topics in Regional Geography (3)**

Selected topics in regional geography. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

### **GEOG 483 - Topics in Planning (3)**

Selected topics in planning. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: GEOG 241 or permission of instructor.

### **GEOG 500 - Graduate Studies in Geography (3)**

History and philosophy of geographic thought with emphasis on current research trends in physical and human geography.

Prerequisite: Permission of advisor.

### **GEOG 501 - Geographic Information Systems: Basics and Beyond (3)**

This course offers an introduction to the contemporary methods of storing, managing, analyzing and displaying geographic information. Emphasis will be placed on the nature of geographic information, GIS data models and structures, geographic data manipulation and storage, spatial analysis and modeling approaches associated with GIS software.

Prerequisite: Admission to a graduate program, GIS certificate holder, or permission of instructor.

### **GEOG 514 - Studies in Systematic Geography (3)**

Advanced study in one of systematic specialties of the department. May be repeated under different topics for a maximum of 9 credits. This is a link course with GEOG 450, GEOG 470, GEOG 471, GEOG 472, GEOG 475, and GEOG 483.

Prerequisite: Permission of advisor and instructor.

### **GEOG 516 - Studies in Regional Geography (3)**

Advanced study in one of regional specialties of the department. May be taken more than once for credit.

Prerequisite: Permission of advisor and instructor.



**GEOG 518 - Studies in Geographical Techniques (3)**

Advanced study in one of the geographical techniques. May be repeated under different topics for a maximum of 9 credits. This is a link course with GEOG 441, GEOG 445, GEOG 466, GEOG 476, GEOG 478, GEOG 479 and GEOG 480.

Prerequisite: Permission of advisor and instructor.

**GEOG 530 - Graduate Internship in Geography (3)**

Site-based internship. Work in an environment directly related to the planned program of study under the supervision of a geography faculty member. Written reports and plan of activity required.

Prerequisite: Two graduate courses in geography and permission of advisor.

**GEOG 542 - Graduate Field Methods in Geography (3)**

Advanced field research in physical and human geography. Team and individual research projects. This is a bridge course with GEOG 442.

Prerequisite: 3 credits of graduate study or permission of instructor.

**GEOG 544 - The Geography of World Economic Development (3)**

Spatial patterns of world economic development with consideration of contemporary changes in selected developing countries.

**GEOG 559 - Advanced Field Studies in Regional Geography (3 OR 6)**

On-site group studies in regional geography. Normally involves travel outside the United States.

Prerequisite: Permission of graduate advisor.

**GEOG 569 - Graduate Readings in Geography (1-3)**

Directed graduate level independent studies in geography. May be taken more than once for a maximum of 6 credits.

Prerequisite: Permission of instructor.

**GEOG 578 - Advanced GIS and Mapping (3)**

Advanced study of principles and practices of GIS and Mapping.

Prerequisite: Admission to the M.S. In Geography or permission of instructor.

**GEOG 579 - Topics in GIS Applications (3)**

Advanced topics in geographic information systems application. Applications will vary. May be taken twice for credit under different content.

**GEOG 595 - Special Project in Geography (Plan C) (3)**

Completion of an advanced project in geography under the supervision of a faculty member. Requirements include preparation of a paper and an oral presentation on the project.

Prerequisite: GEOG 598, permission of graduate advisor, and a 3.00 overall GPA.

**GEOG 597 - Geography Capstone Seminar (Plan B) (3)**

Directed readings seminar for Geography graduate students taking the comprehensive exam (Plan B). Comprehensive exam will be taken following completion of the course.

Prerequisite: GEOG 598, completion of 21 credits in the M.S. program in geography, and permission of graduate advisor.

**GEOG 598 - Research in Geography (3)**

Designed to familiarize student with techniques and resources associated with research in field of geography. Practical application.

Prerequisite: GEOG 500, and 15 additional graduate credits in geography.

**GEOG 599 - Thesis (Plan A) (3)**

Preparation of the thesis under the supervision of the thesis advisor.

Prerequisite: GEOG 598, permission of graduate advisor, and a 3.00 overall GPA.

**GER - German****GER 111 - Elementary German I (3)**

Open only to students with one year or less of high school study. Functional approach to grammar. Facility in understanding spoken German and in reading is developed. CSUS Common Course.

Prerequisite: None

**GER 112 - Elementary German II (3)**

No credit given to students with previous credit for more advanced course work in German except by permission of the department chair. Presentation of elements of German grammar is completed. Further practice in

conversation; writing and speaking based on collateral reading. CSUS Common Course.

Prerequisite: GER 111 or equivalent (normally, two years high school study).

### **GER 125 - Intermediate German I (3)**

Grammar, including subjunctive and passive, composition and conversation. No credit will be given to students with previous credit for more advanced course work in German except by permission of the department chair.

Prerequisite: One year of college German or equivalent.

### **GER 126 - Intermediate German II (3)**

Intensive practice in oral and written German expression, as well as grammar review and reading. No credit will be given to students with credit for more advanced course work in German except by permission of department chair.

Prerequisite: GER 125 or equivalent.

### **GER 225 - Intermediate German III (3)**

Designed to help students improve speaking skills through the discussion of contemporary texts. Further study of grammar.

Prerequisite: GER 125 or GER 126 or permission of instructor.

### **GER 226 - Intermediate German IV (3)**

Designed to help students improve writing skills by means of frequent composition in German. Further study of grammar.

Prerequisite: GER 125 or GER 126 or permission of instructor.

### **GER 315 - German Civilization to 1800 (3)**

Taught in German. Cultural development of Germany from its beginnings to 1800.

Prerequisite: GER 225 or GER 226 (either may be taken concurrently).

### **GER 316 - German Civilization from 1800 to Present (3)**

Taught in German. Cultural development of Germany from 1800 to the present.

Prerequisite: GER 225 or GER 226 (either may be taken concurrently).

### **GER 441 - Advanced Oral Practice (3)**

Taught in German. Further development of oral proficiency for the advanced student.

Prerequisite: Permission of instructor.

## **GERO - Gerontology**

### **GERO 101 - Introduction to Gerontology (3)**

Introduction to the interdisciplinary study of gerontology and the implications of aging in our society. Includes a review of social, psychological, economic, cultural, health, and policy issues. Discussion of normal vs. abnormal (disease-related) aspects of aging.

Prerequisite: None

### **GERO 491 - Independent Reading and Research in Gerontology (1-3)**

Directed independent studies in Gerontology. May be repeated for a total of 6 credits.

Prerequisite: Permission of instructor

### **GERO 495 - Internship in Gerontology (4)**

Seminar and internship in gerontology. Students participate in a classroom seminar on issues relevant to careers in aging and also work 120-140 hours for agencies or organizations providing a variety of services to older adults. Required for gerontology minors.

Prerequisite: Permission of instructor and GERO 101 or PSY 364 or SOC 340

### **GERO 498 - Special Topics in Gerontology (3)**

Analysis and evaluation of special topics in the field of gerontology. Topics announced each semester. May be repeated with different topics for a total of 6 credits.

Prerequisite: GERO 101 or permission of instructor.

### **GERO 500 - Current Perspectives in Gerontology (3)**

This foundational seminar will examine issues of aging in contemporary society utilizing gerontological frameworks. Focus will be on the interdisciplinary study of gerontology and the implications of aging in our society. Includes a review of social, psychological, economic, cultural, health, and policy issues.

Prerequisite: Admission to School of Graduate Studies.

**GERO 510 - Policy, Aging, and Ethics (3)**

Examination of the major ethical/social/political issues arising domestically and globally regarding the care and treatment of the aging person. Issues surrounding client autonomy, the level of self-care, financial, social and governmental support, along with caregiver and familial roles will be the focus of the course. Existing health care policies will be analyzed in light of these issues.

Prerequisite: Admission to School of Graduate Studies

**GERO 590 - Special Topics in Gerontology (3 to 4)**

Study of advanced topics in gerontology. Topics will vary and will be announced each semester. May be repeated under different topics for a total of 8 credits.

Prerequisite: Admission to School of Graduate Studies

**GERO 591 - Advanced Independent Reading and Research in Gerontology (1 to 3)**

Directed advanced independent studies in gerontology. May be repeated for a total of 6 credits.

Prerequisite: Permission of instructor.

**GERO 595 - Graduate Internship in Gerontology (3)**

Supervised internship at an agency or institution that provides services to older adults. Minimum of 120 hours per semester required. Evaluations will be conducted by faculty and field supervisors. Participation in seminar/meetings to discuss issues relevant to internship and careers in aging is also required.

Prerequisite: Permission of instructor

**GMST-Game Studies****GMST 100 - Introduction to Game Studies (3)**

Introduction to Game Studies provides students with a firm foundation for an understanding of games and the game industry in the contemporary world. The course gives an overview for students who are interested in topics such as game design, game studies theory, digital storytelling, games in education, and an overview of tools for game development.

**GMST 200 - Topics in Game Studies (3)**

GMST 200: Topics in Games Studies is a cross-list designator for courses in which the primary focus is directly related to any of the following fields: Game Studies, Game Design, Games in Practice, Game Development, Games and Education, Games and Business. The cross-listed course with this designator may serve as GMST 200 required course for the Game Studies Minor.

**GMST 300 - Gaming and History (3)**

One of the most important tools for our understanding of past is our ability to imagine a different time and space from our own lived experience. History-inspired video games are one modern medium for the exploration of an imagined past, just as is done with film, television, historical fiction, and other artistic works. This course works with students to examine how history is presented in gaming (game design, game mechanics, digital storytelling, world building) and discuss pedagogical uses, teaching effectiveness, historical representation, and criticism of each game. By the end of the course, building off discussions throughout the semester, students will design a historical game proposal pitch deck with a group and code a simple historical text-based digital story with Twine building off historical sources. This project will be the culmination of what students have learned in the course related to game design/mechanics, historical representation, and effective teaching strategies. No previous coding experience is necessary for this course project. The units of the course will be built around playing these games together with interspersed contextual historical lectures, reading materials, think pieces on historical gaming, discussion, and occasional guest lectures with game developers themselves. The goal is that by the end of this course students will be able to both critique and understand the place of historical gaming for education and within public imaginations of history more broadly. This course also contributes to the Game Studies minor.

**GRT - Graphics Technology****GRT 102 - Smart Phone Photography (3)**

Introduction to the use of a smart phone camera and supporting applications to create high quality photographs. Emphasis on improving photos through better composition and use of editing tools. Topics include creative techniques for documenting various life experiences using photography. Smart Phone required.

**GRT 112 - Digital Imaging for Graphics Technology (3)**

Techniques of drawing and digital imaging for graphics technology. Emphasis on computer operations and the use of image editing software programs (Lab). Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: None

**GRT 212 - Graphics Technology Systems (3)**

Overview and study of the production systems in the graphics and associated industries (Packaging, Printing, Publishing and Digital Publishing) and hands-on introduction to graphics production workflow from graphics creation to output distribution. Digital pre-press (for print and non-print), digital interactive platforms for content distribution, analog and digital printing (color electrophotography, inkjet and screen) processes, post-press operations, and finishing, raw materials, buying and specifying printed products and non-print graphics services. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: None

**GRT 222 - 2D Animation for Graphics Technology (3)**

The integration of graphic technology applications and the study of electronic visual images. Emphasis will be on 2D animation. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: GRT 112 with a grade of C- or higher or permission of department chair.

**GRT 232 - Introduction to 3D Animation Technology (3)**

Wire frame modeling applications will be introduced. Topics include the creation of basic geometric shapes; editing the model structure; animating and rendering the animation. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: GRT 112 and CS 110 both with a grade of C- or higher; or permission of instructor.

**GRT 242 - Creative Media Industries Experience I (3)**

The course provides students with an innovative approach on content creation for digital interface formats within the context of Graphics Technology (Print and Non-Print formats). Use of desktop computing platforms, bitmap/vector data acquisition, digital color creation, static and variable layouts for database/on-line publishing, interactive publications, digital output devices and data

distribution methods for cross-digital interface channels studied. *Two hours lecture and two hours laboratory, course meets four hours per week.*

Prerequisite: GRT 112 or GRT 212 with a grade of C- or higher; or permission of instructor.

**GRT 272 - Packaging Technology (3)**

The designing of pre-media graphic e-file creation by utilizing various bitmap, vector, and computer aided packaging design (CAPD) tools for professional package printing. Production of multi-color graphics activities for labels, cartons, corrugated and flexible packages with an emphasis on digital flat-ups, laser engraving, die-cuts, flexography and rotogravure processes. Present and future technology trends in the package printing industry. Contact hours: 2 hour lecture & 2 hour lab.

Prerequisite: GRT 212 Graphic Arts Processes OR GRT 242 Digital Color Cross Media Workflow (C- or better)

**GRT 312 - Post-Press Operations & Planning (3)**

Current and emerging production processes for postpress operations in bindery and finishing. Postpress production and job planning from the postpress perspective. Quality control tools and techniques as applied to postpress operations or bindery operations. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: GRT 212 or GRT 242 or Permission from Instructor

**GRT 332 - Advanced 3D Modeling & Animation Technology (3)**

2D and 3D animation methods: project planning, scripting, storyboards, advanced modeling, lighting, materials mapping, and motion. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: GRT 232 with a grade of C- or higher.

**GRT 342 - Screen & Specialty Printing Manufacturing (3)**

Application and techniques for screen and specialty printing on a variety of substrates. Issues and processes control concerns related to the image transfer methods. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: GRT 212 and GRT 242 both with a grade of C- or higher; or permission of instructor.

**GRT 352 - Color Management & Analysis (3)**

Scientific study of color, perception and measurement principles, protocol for tolerances and targeting, and

quality control practices of graphic color systems. Emphasis on the connection of color science to the graphic industry and state-of-the-art measurement equipment and software. Students will deploy color profiling, color management, color targeting and tolerance development to industry relevant applications. Two hour lecture and three hour laboratory, course meets five hours per week.

Prerequisite: GRT 112 and GRT 242 both with a grade of C- or higher.

### **GRT 362 - Estimating & Scheduling for Graphics Technology (3)**

Emphasis placed on the many factors which must be considered when estimating a printing job. Actual estimates will be prepared, using a variety of fixed and variable costs, through manual techniques and computer estimating software. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: GRT 212 with a grade of C- or higher; or permission of department chair.

### **GRT 402 - Topics in Graphics Technology (1 to 3)**

An individualized inquiry of comprehensive study into a selected technical area. The student may elect to examine processes, products or developmental aspects of graphics technology. May be used as an elective on a graduate student's planned program of study with the permission of the program advisor. Course may be repeated for a maximum of 6 credits for different topics.

Prerequisite: Permission of department chair.

### **GRT 405 - Applied Topics in Graphics Technology (3)**

A laboratory oriented course providing comprehensive study of a selected technological topic. May be used as an elective on a graduate student's planned program of study with the permission of the program advisor. Course may be repeated for a maximum of 6 credits for different topics. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: Permission of department chair.

### **GRT 422 - Print and Package Distribution (3)**

Industry workflow systems and processes used to distribute and deliver the print and media related products. Print planning, bindery and finishing. Logistical shipping methods, such as United States Postal Service (USPS), parcel delivery, shipping, warehousing and fulfillment operations in order to successfully deliver the

products to end users. 2 hour lecture and 2 hour lab. Course meets four hours per week

Prerequisite: GRT 362 Estimating and Scheduling

### **GRT 432 - Customization & Development in Animation Technology (3)**

Advanced imaging, development, and documentation of 3D animation models. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: GRT 332 with a grade of C- or higher.

### **GRT 442 - Print Production (3)**

Applied study of pre-production, production, and post-production in the printing industry. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: GRT 212 with a grade of C- or higher; or permission of instructor.

### **GRT 462 - Workflow Automation (3)**

Advanced study of pre-production, production and post-production, materials and processes in the printing industry. Emphasis will be geared towards production and workflow management, ISO standards/systems and cloud computing/applications used in the industry. 2 hour lecture and 2 hour lab. Course meets four hours per week.

Prerequisite: GRT 442

### **GRT 472 - Digital Photography (3)**

Principles of digital camera techniques. Includes camera handling, exposure, composition, developing, printing, and software editing. Student must provide 35mm digital camera. Field trips to selected photography studios. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: None

## **HIST - History**

### **HIST 100 - Search in History (3)**

Introduction to intellectual processes and value systems in history. Titles and themes may vary from section to section. May be repeated for up to 6 credits.

Prerequisite: None

### **HIST 101 - History Matters (1)**

A reading class on the pleasures of history and history writing.

Prerequisite: Limited to History Majors and History Minors. Students wishing to take History 101 and History 301 concurrently should contact the department chair for approval.

**HIST 121 - World Civilization I (3)**

World civilization to the 17th century.

Prerequisite: None

**HIST 122 - World Civilization II (3)**

World civilization from the 17th century.

Prerequisite: None

**HIST 161 - American History to 1877 (3)**

Political, economic, social, and cultural development to 1877. No credit given to students who have credit for HIST 261. CSUS Common Course.

Prerequisite: None

**HIST 162 - American History from 1877 to Present (3)**

Political, economic, social, and cultural development since 1877. No credit given to students who have credit for HIST 262. CSUS Common Course.

Prerequisite: None

**HIST 200 - Topics in History (3)**

Introduction to selected topics in history. Titles and themes may vary from section to section. May be repeated under different topics for up to six credits.

Prerequisite: None.

**HIST 231 - Ancient Mediterranean World (3)**

Cultures of ancient Near East and Mediterranean.

Prerequisite: None

**HIST 232 - Medieval Europe (3)**

European history and institutions from the fall of Rome to 1300.

Prerequisite: None

**HIST 233 - Renaissance and Enlightenment Europe (3)**

European history from the fifteenth to eighteenth centuries. Topics include the Renaissance, the Reformation, European Expansion, the Scientific Revolution, and the Enlightenment.

Prerequisite: None

**HIST 234 - Modern Europe (3)**

European history from the 18th century to the present.

Prerequisite: None

**HIST 263 - The History & Culture of African Americans to 1900 (3)**

The purpose of this course is to explore the role of Blacks in the United States from their African origins to the beginning of the 20th century, while considering their relationship to people throughout the African Diaspora. The course will examine Black survival and resistance to enslavement, emancipation, citizenship, and the struggle for equality.

Cross-Listed as: AFAM 263

**HIST 264 - The History & Culture of African Americans Since 1900 (3)**

This course surveys the economic, social, cultural, and political facets of the African American experience from 1900 to the present. Topics in Black history will be examined, such as Jim Crow laws, the Harlem Renaissance, the Civil Rights Movement and Black Power Movement to Black Lives Matter.

Cross-Listed as: AFAM 264

**HIST 271 - Introduction to African History and Culture (3)**

Focuses on some of the enduring aspects of African material culture and technologies. Also examines social and political issues related to African civilization over time.

Prerequisite: None

**HIST 272 - Africa @ the Movies (3)**

This course explores aspects of Africa's social, economic, and cultural past and present through a wide range of cinematic productions.

**HIST 281 - History of Latin America to 1823 (3)**

Social, economic, political, and cultural development of Latin American countries to 1823. Cross-listed with LAS 281. No credit given to students with credit for LAS 281. No credit given to students with credit for HIST 381.

Prerequisite: None

Cross-Listed as: Cross listed with LAS 281 and LAS 381. No credit given to with credit for LAS 281 or LAS 381.

Notes:

**HIST 282 - History of Latin America since 1823 (3)**

Social, economic, political, and cultural development of Latin American countries since 1823. Cross-listed with LAS 282. No credit given to students with credit for LAS 282.

Prerequisite: None

Cross-Listed as: Cross listed with LAS 282. No credit given to students with credit for LAS 282.

**HIST 291 - Modern Middle East (3)**

Historical developments in the 20th century with a special emphasis on political, social, and economic conflicts. No credit will be given to students with credit for HIST 472.

Prerequisite: None

Notes:

**HIST 298 - History and Travel (1 to 3)**

Introductory historical field study exploring special topics taken from any world region. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: Permission of instructor.

**HIST 300 - Topics in History (3)**

An intermediate course exploring specific areas of historical inquiry and research. Topics vary. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: Sophomore standing

**HIST 301 - The Historical Imagination (4)**

Students will practice history rather than simply study it in a passive sense. By honing research, analytical and writing skills students will be better prepared for upper level classes and work outside the university. History majors, history minors and International Studies majors only.

Prerequisite: HIST 101 (may be taken concurrently) and a minimum of 6 credits in History. Sophomore Standing.

**HIST 302 - Introduction to Public History (3)**

Studies issues in, and teaches professional skills for, the practice of Public History. Explores career opportunities in museums, historic societies, and other institutions.

Prerequisite: Sophomore standing

**HIST 303 - Creating Digital History (1)**

This course will provide students with technological skills needed to conduct online historical research and to present the results of their research online. It will also

introduce students to issues in digital history such as copyright, intellectual property, text encoding, information abundance, and how the Web changes the relationship between historians and their audience.

**HIST 308 - Topics in Ancient History (3)**

Examines selected topics in the ancient Mediterranean world. Student may take course with different topics for up to 6 credits.

Prerequisite: Sophomore standing

**HIST 316 - History of the American West to 1890 (3)**

Surveys the history of the American West and its people to 1890. Provides a general structure of the American West and its political, economic, and social history with emphasis on the interaction of diverse cultures including Native Americans, Hispanics and Asians as America expanded its borders. The course will compare popular conceptions of the historical American West to the region's realities, diversity, and complexity.

Prerequisite: Sophomore standing

Cross-Listed as: Cross-listed with LTN 316. No credit may be received by students who have received credit for LTN 316.

**HIST 317 - History of the American West, 1890 to Present (3)**

Surveys the history of the American West and its people from 1890 to the 21st century. Provides a general structure of the American West and its political, economic, and social history with emphasis on the interaction of diverse cultures including Native Americans, Hispanics, and Asians in areas known today as the Plains, Southwest, and Northwest. Material will also examine the West and its myths as central to American culture and popular culture.

Prerequisite: Sophomore standing

Cross-Listed as: Cross-listed with LTN 317. No credit may be received by students who have received credit for LTN 317.

**HIST 319 - Race, Ethnicity and Migration in the U.S. (3)**

A social and cultural history of the U.S. that explores race, ethnicity, and migration in the formation of American identities. From colonial period to the present.

Prerequisite: Sophomore standing

Cross-Listed as: Cross-listed with LTN 319. No credit may be received by students who have received credit for LTN 319.

**HIST 321 - Political History of the United States, 1776-1876 (3)**

Focuses on the development of political parties in the United States. Examines the contrasting economic, social, and foreign policy views of the parties, with special attention to the intersection of ideology and partisanship.

Prerequisite: Sophomore standing

**HIST 323 - Native Americans of the Eastern Woodlands, 1520-Present (3)**

Examines North America's indigenous peoples living east of the Mississippi River at the time of European contact, including the Five Civilized Tribes, the Iroquois Confederacy, and the First Nations of New England.

Prerequisite: Sophomore standing

**HIST 329 - History of Working America (3)**

Origins and development of the American working class from the colonial period to the present.

Prerequisite: Sophomore standing

**HIST 330 - History of Women in the United States, 1607-1865 (3)**

Survey of women in the United States from the colonial period through the Civil War, with special emphasis on how race, class, and ethnicity shaped women's experiences.

Prerequisite: Sophomore standing

Cross-Listed as: Cross listed with WGSS 330.

**HIST 331 - History of Women in the United States, 1865-Present (3)**

Survey of women in the United States from Reconstruction to the present with special emphasis on how race, class, and ethnicity shaped women's experiences.

Prerequisite: Sophomore standing

Cross-Listed as: Cross listed with WGSS 331.

**HIST 337 - History of the Late Middle Ages (3)**

The Crusades to the Great Schism.

Prerequisite: Sophomore standing

**HIST 347 - History of Russia I (3)**

History of Russia from the ninth century to 1861.

Prerequisite: Sophomore standing

**HIST 348 - History of Russia II (3)**

History of Russia from 1861 to the present.

Prerequisite: Sophomore standing

**HIST 354 - History of Modern Japan (3)**

Japan during the 19th and 20th centuries. No credit given to students who have credit for HIST 454.

Prerequisite: Sophomore standing

Notes:

**HIST 371 - Race and Immigration in CT (4)**

This course will focus on race and immigration/migration in particular communities in Connecticut within the context of the broader North American experience. The course will trace the demographic transformation in the city in the past century and on the impact it has had in many arenas, including civil, social, cultural, economic, and political institutions in the area and in the rest of the United States. This course will work closely with a local high school classroom and students will be able to better understand the origin, experiences, conditions, and aspirations of the diverse population.

Corequisite: This course is cross-listed with RJ 371 and SOC 371. No credit given if any of these other courses have been taken.

**HIST 375 - History of Africa to 1800 (3)**

Examination of economic, social, and political developments in Africa to the end of the 18th century.

Prerequisite: Sophomore standing

**HIST 376 - History of Africa since 1800 (3)**

Examination of economic, social, and political developments in Africa from the end of the 18th century to the present.

Prerequisite: Sophomore standing

**HIST 380 - Modern Poland (3)**

Examination of the course of modern Polish history, including the restoration of independence in 1918, World War II, communist rule, Solidarity, and the recovery of sovereignty in 1989.



Prerequisite: Sophomore standing

### **HIST 383 - History of Brazil (3)**

Surveys the history of Latin America's largest country from its pre-Columbian roots to the present. Topics include: Indigenous Peoples, African enslavement, European immigration, and economic development.

Prerequisite: Sophomore standing

### **HIST 401 - U.S. History for Teachers (3)**

Survey of U.S. History from colonial era to present designed for future teachers.

Prerequisite: Admission to the Professional Program; HIST 301

### **HIST 480 - Latinos in North America (3)**

Examines Latinos and their ancestors in North America with concentration on civil rights, women, military service, labor, immigration, politics, and violence.

Prerequisite: HIST 301 or permission of the chair.

Cross-Listed as: LTN 480 and HIST 495

### **HIST 402 - Topics in History (3)**

Historical focus on a facet of history in order to help clarify current domestic and/or world developments. May be repeated with different topics for up to 6 credits.

Prerequisite: HIST 301 or permission of chair.

### **HIST 403 - Public History Project (3)**

Theoretical and practical issues confronting public historians explored by involving students in public history projects. Projects vary. May be repeated with different projects for a maximum of 6 credits.

Prerequisite: HIST 301 or permission of instructor.

### **HIST 404 - American Material Culture (3)**

Studies material culture of artifacts such as, household utensils, furniture, buildings, and landscapes, throughout American history. Linked to HIST 504.

Prerequisite: HIST 301 or permission of instructor.

### **HIST 405 - Local History and Community Development (4)**

Research techniques and methodologies of local and community history. Explores the relationship between local and national developments. Students conduct research projects in New Britain and other area communities for an additional 3 hours per week. Linked with HIST 505.

Prerequisite: HIST 301 or permission of instructor.

### **HIST 410 - World History for Teachers (3)**

Survey of modern world history, with a regional geography focus, designed for future teachers.

Prerequisite: Admission to the Professional Program

### **HIST 411 - Atlantic World, 1500-1880 (3)**

Explores the history of the Atlantic World from 1500-1880. Topics can focus on North America, Latin America, Europe and Africa as they interacted in such activities as trade, slavery, the exchange of ideas, revolution, and colonialism.

Prerequisite: HIST 301 or permission of instructor.

### **HIST 416 - The Vietnam Wars, Home and Abroad (3)**

Examines the Vietnam War from a variety of perspectives. Topics will include the process of American involvement, military campaigns, Vietnamese strategy, anti-war movements, national memories of Vietnam, and how the war has shaped American culture and politics since 1975.

Prerequisite: HIST 301 or permission of instructor.

### **HIST 420 - Imperialism (3)**

Explores the nature and experience of imperialism in a variety of countries and a number of time periods.

Prerequisite: HIST 301 or permission of instructor.

### **HIST 422 - Topics in Japanese History (3)**

Examines selected topics in Japanese history. Student may take this course with different topics for up to 6 credits.

Prerequisite: HIST 301 or permission of instructor.

### **HIST 431 - Ancient Northeast Africa (3)**

Aspects of the history and legacies of ancient northeast Africa with focus upon Nubia, Egypt, and Aksum.

Prerequisite: HIST 301 or permission of instructor.

### **HIST 432 - History of South Africa (3)**

Ancient South Africa; the creation of settler communities in the 17th century; the impact of minerals in the 19th century; apartheid and its demise; and ongoing democratization processes.

Prerequisite: None

### **HIST 443 - Revolution and Reformation in Europe (3)**

Political, economic, and social institutions in relation to rise of liberalism, nationalism, socialism, and imperialism.

Prerequisite: HIST 301 or permission of instructor.

**HIST 444 - Mass Politics and Total War in Europe (3)**

National and international problems of European states.

Prerequisite: HIST 301 or permission of instructor.

**HIST 447 - History of the Soviet Union (3)**

Study of the rise and fall of Soviet Communism, 1917-1991.

Prerequisite: HIST 301 or permission of instructor.

**HIST 448 - Stalin and Stalinism (3)**

Historical study of Stalin and Stalinism stressing multidisciplinary perspectives, considered in the light of the collapse of the Soviet Union.

Prerequisite: HIST 301 or permission of instructor.

**HIST 451 - World War I in Europe and the United States (3)**

Explores the First World War with an emphasis on Europe and the United States.

Prerequisite: HIST 301 or permission of instructor.

**HIST 452 - World War II in Europe (3)**

Explores the Second World War in Europe.

Prerequisite: HIST 301 or permission of instructor.

**HIST 455 - Topics in Latin American History (3)**

Examines selected topics in Latin American history. Student may take this course with different topics for up to 6 credits.

Prerequisite: HIST 301 or permission of instructor.

**HIST 460 - African Enslavement in the Americas (3)**

Comparative history of slavery in Latin America, the Caribbean, and the United States from 1492-1888.

Prerequisite: HIST 301 or permission of instructor.

**HIST 467 - Topics in Twentieth-Century U.S. History (3)**

Examines selected topics in twentieth-century U.S. history. Student may take this course with different topics for up to 6 credits.

Prerequisite: HIST 301 or permission of chair.

**HIST 490 - Senior Seminar (4)**

Senior seminar. Meets 4 hours per week. Undergraduate history majors only.

Prerequisite: 24 credits in history including HIST 301 and 6 credits at the 400 level.

**HIST 492 - Public History Intern Experience (3 OR 4)**

Gives students practical experience in museums, historical societies, and other public history institutions. Students will gain work experience while participating in the practice of public history making. Accepted students are assigned to work in a public history institution for 110-140 hours and will also participate in a classroom seminar. Not available for graduate credit.

Prerequisite: Permission of instructor.

**HIST 493 - Directed Readings in History (1 to 3)**

Individual program of studies for students with special interests and abilities. Topics to vary from semester to semester. Not more than 3 credits to be taken in one semester. May be repeated once.

Prerequisite: HIST 301 and 6 credits in 400-level history courses; or permission of Department Chair.

**HIST 494 - Directed Readings in Non-Western History (1 to 3)**

Individual program of study for students with special interests in non-Western history, including the study of Asia, Africa, and Latin America. Topics to be developed in consultation with individual faculty member. Not more than 3 credits to be taken in one semester. May be repeated once.

Prerequisite: HIST 301 and 6 credits of 400-level history courses; or permission of instructor.

**HIST 495 - Advanced Topics in History (3)**

May be repeated with different topics for a maximum of six credits.

Prerequisite: Admission to the M.A. in History or the M.A. in Public History, and permission of Department Chair.

Cross-Listed as: Must be cross-listed with a 400-level History course.

**HIST 496 - Historical Field Studies in the US (3)**

Classroom and historical field study of themes in US history. Normally involves travel outside of Connecticut. May be taken two times with different topics.

Prerequisite: Permission of instructor.

**HIST 498 - Historical Field Studies Abroad (3)**

Classroom and study abroad exploring special historical topics taken from any world region. Normally involves

travel outside the United States. Part of course taught abroad; can be taken two times with different topics.

Prerequisite: Permission of instructor.

### **HIST 501 - Thinking Historically (3)**

Introduces students to the intellectual currents that have informed the development of the historical profession and to the major turning points that have (re)shaped how historians research and write about the past. This is a mandatory course for all MA History and MA Public History graduate students and should be taken within the first year of acceptance to these programs.

Prerequisite: Acceptance into the MA program in history or public history, or permission of department chair.

### **HIST 502 - Writing History (3)**

Introduces students to the skills necessary to write a research paper at the graduate level: selecting a topic, developing a research plan, creating a bibliography, surveying the secondary literature, interpreting primary sources, identifying the original contribution of their project, and writing the paper. This is a mandatory course for all MA History and MA Public History graduate students and should be taken within the first year of acceptance to these programs

Prerequisite: Admission to the M.A. Program in History or Public History or permission of department chair.

### **HIST 504 - American Material Culture (3)**

Studies material culture of artifacts, such as household utensils, furniture, buildings, and landscapes, throughout American history. This is a linked course with HIST 404. No credit given to students with previous credit for HIST 404.

Prerequisite: Acceptance into MA program in history or public history, or permission of department chair.

### **HIST 505 - Local History and Community Development (3)**

Research techniques and methodologies of local and community history. Explores the relationship between local and national developments. Students conduct research projects in New Britain and other area communities. This is a linked course with HIST 405. No credit given to students with previous credit for HIST 405.

Prerequisite: Acceptance into MA program in history or public history, or permission of department chair.

### **HIST 510 - Seminar in Public History (3)**

Exploration of development, methodologies, and employment opportunities of the field public history.

Prerequisite: None

### **HIST 511 - Topics in Public History (3)**

Topical knowledge and hands-on experiences in the practice of public history in fields such as oral history, museums, archives, and historical editing. May be repeated with different topics for a total of 9 credits.

Prerequisite: None

### **HIST 512 - Connecticut Encounters (3)**

Experience Connecticut's history through its buildings, landscapes, objects, and three-dimensional artifacts. Fieldwork and travel experience are an important part of the curriculum and narrative instruction will be carefully tied to site visits. May be repeated with different topics for a total of 6 credits.

Prerequisite: None

### **HIST 530 - Seminar in Ancient or Medieval History (3)**

History 501 or 502 or permission of department chair or M.A. coordinator. Examines selected topics in ancient or medieval history. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: Program in History or Public History or permission of department chair.

### **HIST 540 - Seminar in European History (3)**

Examines selected topics in early modern or modern European history. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: Prereq. or coreq.: HIST 501 or HIST 502 or permission of the department chair or M.A. coordinator.

### **HIST 560 - Seminar in American History (3)**

Examines selected topics in American History. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: Prereq. or coreq.: HIST 501 or HIST 502 or permission of the department chair or M.A. coordinator.

### **HIST 580 - Seminar in Non-Western History (3)**

Selected problems in historical research specific to areas of the world other than the United States and Europe. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: Prereq. or coreq.: HIST 501 or HIST 502 or permission of the department chair or M.A. coordinator.

**HIST 583 - Seminar in Latin American History (3)**

Selected historical, political, social, cultural, or economic topics. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: Prereq. or coreq.: HIST 501 or HIST 502 or permission of the department chair or M.A. coordinator.

**HIST 595 - Public History Research Project (Plan C) (3)**

Hands-on experience in the practice of public history. Students complete specialized projects based on client-oriented research and communicate their findings to non-academic audiences.

Prerequisite: Permission of instructor; completion of 18 credits; and a 3.00 overall GPA.

**HIST 596 - Directed Advanced Readings in History (3)**

Selected readings appropriate to student's program. May be repeated once.

Prerequisite: Permission of department chair.

**HIST 599 - Thesis (Plan A) (6)**

Preparation of thesis under the supervision of the thesis advisor and second reader.

Prerequisite: Permission of advisor and completion of 18 credits and a 3.00 overall GPA.

**HON - Honors****HON 110 - Western Culture I (4)**

Introduction to western culture including its foundation in the ancient world.

Prerequisite: Honors Program participant.

**HON 115 - Writing & Research I (3)**

Principles of critical thinking and persuasive writing, with applications to written and oral presentations

Prerequisite: Honors Program participant

**HON 120 - Science & Society I (4)**

Satisfies non-laboratory requirement of Study Area IV. Selected topics from the natural sciences and their relation to society.

Prerequisite: Honors Program participant.

**HON 130 - World Cultures I (4)**

Introduction to the study of world cultures.

Prerequisite: Honors Program participant.

**HON 140 - Writing & Research I (4)**

Principles of critical thinking and persuasive writing, with applications to written and oral presentations.

Prerequisite: Honors Program participant.

**HON 201 - Honors Seminar (1)**

An exploration of issues related to equity, justice, and inclusion in the United States through the study of a text common to all sections. The course utilizes texts and disciplinary perspectives from the arts and humanities. Students may repeat the course with different topics up to 6 credits

Prerequisite: HON 115 (may be taken concurrently); Honors Program participant or permission of Honors Program Director

**HON 210 - Western Culture II: Topics in Western Culture (4)**

Selected topics in western culture including discussion of historical contexts.

Prerequisite: Honors Program participant.

**HON 220 - Science and Society II: Social Sciences and Society (4)**

Selected topics from the social sciences and their relation to society, including the important intersections of these topics with equity, social justice, and inclusion.

Prerequisite: Honors Program participant.

**HON 221 - Arts & Culture (3)**

Selected topics in the Arts & Humanities and their relation to society. May be repeated with a different topic for up to 6 credits.

Prerequisite: Honors Program participant

**HON 222 - World Cultures (3)**

Selected topics in world culture including discussion of historical contexts. May be repeated with a different topic for up to 6 credits.

Prerequisite: Honors Program participant

**HON 223 - Human Experience (3)**

Selected topics focused on the interaction(s) between and among individuals and/or groups and social and/or cultural institutions. May be repeated with a different topic for up to 6 credits

Prerequisite: Honors Program participant

**HON 224 - Science and Society (3)**

Selected topics from the STEM disciplines and their relation to society. May be repeated with a different topic for up to 6 credits.

Prerequisite: Honors Program participant

**HON 230 - World Cultures II: Topics in World Cultures (4)**

Selected topics from world cultures.

Prerequisite: Honors Program participant.

**HON 250 - Western/World Culture III: Comparative Topics (4)**

Selected topics in comparative cultures from western and world perspectives.

Prerequisite: Honors Program participant.

**HON 315 - Writing and Research II (2)**

Focus on disciplinary genres, approaches to research, and academic communities. Students will learn how to find sources, evaluate their credibility, and integrate them into academic writing. Students will consider audience and purpose with focus on rhetorical components of genre relevant to chosen field.

Prerequisite: Honors Program participant and completion of 45 credits

**HON 431 - Honors Capstone I (1)**

Planning, preparation, and initial background work for capstone project. Student will work with an approved advisor on a project that adds to the breadth of knowledge in their discipline, serves the community at large, and/or produces a novel creative work.

Prerequisite: HON 315, may be taken concurrently

**HON 440 - Writing & Research II (1)**

Methodology of thesis writing and presentation of thesis proposal.

Prerequisite: Honors Program participant or permission of Program Director.

**HON 441 - Writing & Research III: Honors Thesis (2)**

Independent research developed from previous Honors Program courses.

Prerequisite: Honors Program participant or permission of Program Director.

**HON 442 - Writing & Research IV: Thesis Workshop (1)**

Problems and solutions in thesis writing.

Prerequisite: Member of Honors Program or permission of program director, and HON 441 (taken concurrently).

**HON 450 - Special Project (1-3)**

Follow up research on topics related to student's undergraduate thesis and/or policy implications of undergraduate thesis; including involvement in community outreach activities and/or presentations to scholarly conferences.

Prerequisite: HON 455 or permission of program director.

**HON 451 - Honors Capstone II (1)**

Continuation of HON 431 with student performing planned work and completing the capstone under the supervision of an approved advisor.

Prerequisite: HON 431 or permission of program director.

**HON 455 - Writing and Research III (1)**

Methodology of capstone writing and presentation of completed project.

Prerequisite: HON 451 (may be taken concurrently)

**HUM - Humanities****HUM 100 - Search in the Humanities (3)**

Introduction to the intellectual processes and value systems in the humanities. Titles and themes may vary from section to section.

Prerequisite: None

**HUM 230 - Topics in International Studies (3 OR 6)**

Interdisciplinary study of global cultures as reflected in the arts, national traditions, institutions, and values of selected region(s). Area or period may vary from semester to semester. Offered in English.

Prerequisite: None

Cross-Listed as: Cross-listed with IS 230. No credit given to students with credits for IS 230 focusing on the same topic.

**HUM 250 - Topics in World Literature (3)**

A literary figure, movement or theme in World Literature studied in translation. Topic may vary from semester to semester.

Prerequisite: ENG 110.

**HUM 270 - Studies of World Culture Through Cinema (3)**

Introduction to the cultures of other lands through the medium of film. Emphasis on the history and the structures of contemporary society of other lands, and on the cultural meaning of film. Use of basic tools of film analysis and analysis of the specific aesthetic qualities of a film. Offered in English. Area or topic may vary from semester to semester. May be taken for up to 6 credits with a different topic.

Prerequisite: None

Cross-Listed as: Cross-listed with CINE 270. No credit may be received by students who have received credit for CINE 270.

**HUM 330 - Selected Topics in Global Cultures (3 OR 6)**

Advanced interdisciplinary approach of selected topics in the culture of a particular country as reflected in its language, music, literature, art, folklore, politics and history. The country covered may vary from section to section. Offered in English. May be repeated with different topics or country.

Prerequisite: None

Cross-Listed as: Cross-listed with IS 330. No credit will be given to students with credits for IS 330 on the same topic.

**HUM 360 - International Studies Through Travel (3 OR 6)**

Classroom and study abroad exploring special cultural topics taken from any world region. Offered in English. May be repeated with different topics or countries.

Prerequisite: None

Cross-Listed as: Cross-listed with IS 360. No credit will be given to students with credit for IS 360 focusing on the same topic.

**ID - Interdisciplinary****ID 102 - Master Student (1)**

Techniques for taking notes, reading, preparing for and taking tests, using a university library, task management, awareness and application of learning styles; developing group supports and positive self concepts; the nature of relationships, communications, selected social issues. Graded on pass/fail basis. Interdisciplinary Sciences

Prerequisite: Freshman standing or permission of instructor.

**Industrial Engineering****IE 110 - Industrial Engineering and Professionalism (3)**

The concepts of industrial engineering systems, principles, the evolution of engineering materials, ethics, and professional practices. Skills in introductory programming, quality assurance concept, oral and written communication, and department-specific curriculum. Case study reviews and analysis.

Prerequisite: None

**IE 350 - Industrial Simulation (3)**

Introduction to the application of simulation modeling for the analysis of complex industrial and manufacturing service systems. Use 'Arena' software to demonstrate examples from real-life cases. Verification/validation as well as statistical analysis of both input/output data are introduced.

Prerequisite: STAT 201

**IE 370 - Deterministic Processes and Optimization (3)**

The deterministic techniques of operations research. Topics include the applications of linear, nonlinear, integer, and dynamic programming methods and network flow analysis to solve industrial and systems engineering problems.

Prerequisite: MATH 226

**IE 372 - Human Relations (3)**

This course introduces the basics of individual differences in interpersonal communication and facilitates a better understanding of the importance of developing positive relationships with others in the work setting. The problem-solving skills, decision-making skills, teamwork skills, motivating skills, and other management skills help students prepare for a successful career in an innovative organizational environment.

Prerequisite: IE 110

**IE 470 - Stochastic Processes and Applications (3)**

Probabilistic techniques of operations research. Topics include the applications of Markov chains, queueing and inventory control models to analyze and evaluate systems performance. Design of experiment, salient features of industrial systems to predict the short- and long-term effects.

Prerequisite: STAT 455

**IE 496 - Internship (2)**

This course is to provide students with a “real-world” industry project experience. The student will learn how to work effectively in teams, develop the ability to communicate (oral and written), develop a capstone project proposal, planning to solve a real problem of importance to his sponsor.

Prerequisite: None

**IE 497 - Senior Project (3)**

This capstone course will require the application of several IE design principles to a project. Students implement data analysis, testing, research and applications to solve a real problem. A paper-designed report, skills of technical writing, and oral presentation to complete a project.

Prerequisite: IE 496

**IS - International Studies****IS 150 - Introduction to International Studies (3)**

Exploration of core issues related to international studies, including social, geographical, historical, cultural, political, economic, and environmental factors.

Prerequisite: None

**IS 225 - The World as a Total System (3)**

Examination of global interdependence in its historic, ecological, economic, cultural, and political dimensions. Analysis of selected contemporary global issues. Consideration of impact of global interdependence on our own local communities.

Prerequisite: None

**IS 230 - Topics in International Studies (3 OR 6)**

Interdisciplinary study of global cultures as reflected in the arts, national traditions, institutions, and values of selected region(s). Area or period may vary from semester to semester. Offered in English.

Prerequisite: None

Cross-Listed as: Cross listed with HUM 230. No credit given to students with credits for HUM 230 focusing on the same topic. May be repeated with different topics for up to 6 credits.

**IS 240 - Caribbean Cultures (3)**

Multi-disciplinary study of the people who inhabit the islands and margins of the Caribbean Sea, with a focus on

aspects such as history, identity, culture, and artistic and literary productions.

Prerequisite: None

**IS 245 - Puerto Rico (3)**

Multi-disciplinary study of the island of Puerto Rico and its people. Topics to be studied may include cultural development, international relations, problems, and prospects. This course may be taught in Spanish.

Prerequisite: Permission of instructor or program coordinator when course is offered in Spanish.

**IS 300 - Global Community Engagement (3)**

IS 300 Global Community Engagement aims to help students understand the important concepts in community engagement beyond the local community and in the wider world. This course examines the major organizations seeking to impact and develop communities globally, and considers the dynamics of that engagement on political, economic, and humanitarian levels. Critical questions about our own role in global development and responsible engagement in cultures different from our own are explored. This is a service-learning course that engages with international residents of our own community, and when possible includes a field trip to the United Nations Headquarters in New York City.

Cross-Listed as: Cross-listed with CEN 300.

**IS 330 - Selected Topics in Global Cultures (3 OR 6)**

Advanced interdisciplinary approach of selected topics in the culture of a particular country as reflected in its language, music, literature, art, folklore, politics, and history. The country covered may vary from section to section. Offered in English. May be repeated with different topics or country.

Prerequisite: None

Cross-Listed as: Cross-listed with HUM 330. No credit will be given to students with credits for IS 330 on the same topic.

**IS 360 - International Studies Through Travel (3 OR 6)**

Classroom and study abroad exploring special cultural topics taken from any world region. Offered in English. May be repeated with different topics or countries.

Prerequisite: None

Cross-Listed as: Cross-listed with HUM 360. No credit will be given to students with credit for HUM 360 focusing on the same topic.

**IS 400 - Practicing International Studies (3)**

Introduction to the field of international studies, in preparation for the International Studies capstone requirement (IS 498 or IS 499). Defines the scope of the questions and the nature of practice in the field, and how scholars find materials for their research and writing. Addresses issues of intellectual integrity common to the scholarly community.

**IS 450 - Internship in International Studies (3)**

Permission of the program director. Students will work in an environment directly related to the regional specialization or global studies program, under supervision of an International Studies faculty member. Classroom portion and written reports are required.

Prerequisite: None

**IS 461 - Topics in African Studies (3)**

May be repeated with different topics or country for up to 6 credits.

Prerequisite: None

**IS 462 - Topics in East Asian Studies (3)**

May be repeated with different topics or country for up to 6 credits

Prerequisite: None

**IS 463 - Topics in European Studies (3)**

May be repeated with different topics or country for up to 6 credits.

Prerequisite: None

**IS 464 - Topics in Latin American Studies (3)**

May be repeated with different topics or country for up to 6 credits.

Prerequisite: None

**IS 465 - Topics in Middle East Studies (3)**

May be repeated with different topics for up to 6 credits.

Prerequisite: None

**IS 470 - Topics in Global Studies (3)**

May be repeated with different topics for up to 6 credits.

**IS 490 - Field Study Abroad (3-6)**

Course taught abroad. May be repeated for a maximum of 6 credits. International credit

Prerequisite: None

**IS 497 - Seminar in International Studies (3)**

Interdisciplinary seminar on one of the world's regions or countries. Aspects of its anthropology, economics, geography, history, government, politics, and sociology will be considered in a synthetic approach.

Prerequisite: None

**IS 498 - Research In International Studies (3)**

A capstone course designed to familiarize students with the techniques and resources associated with research in their specialization in International Studies. Opportunity for practical applications of research will be provided.

Prerequisite: IS 400.

**IS 499 - International Studies Senior Project (3)**

Independent project developed by the student in consultation with International Studies advisor. The semester's work will integrate the geographic area and academic focus of the student's previous course work.

Prerequisite: IS 400; Senior standing and declared IS major.

**IS 500 - Advanced Practice in IS (3)**

Introduction to the field of international studies for graduate students. Defines the scope of the questions and the nature of practice in the field, and how scholars find materials for their research and writing. Addresses issues of intellectual integrity common to the scholarly community.

Prerequisite: Admission to MS in International Studies. No credit given to students who have taken IS 400.

**IS 501 - Advanced Studies in International Studies (3)**

Linked course with Interdisciplinary Studies.

Prerequisite: None

**IS 550 - Graduate Internship in International Studies (3)**

Students will work in an environment directly related to the regional specialization or global studies program, under supervision of an International Studies faculty member.

Prerequisite: Permission of program director

**IS 570 - Modern World Issues (3)**

Analysis of current global issues, with primary focus on power, institutions and sustainability concerns. Consideration of resources and environment



challenges, sociocultural tensions, socioeconomic trends, international security, and the impacts of technological innovation.

Prerequisite: None

### **IS 590 - Graduate Field Study Abroad (3 OR 6)**

Course taught abroad. May be repeated for a maximum of 6 credits.

Prerequisite: None

### **IS 595 - Special Project in International Studies (3)**

Advanced project in international studies under the supervision of a faculty member. Requirements include preparation of a paper and an oral presentation on the project.

Prerequisite: IS 598, permission of instructor, and a 3.00 overall GPA.

### **IS 596 - Independent Studies (3)**

Independent work in International Studies to meet individual interest in regions or topics not covered in the regular curriculum. Work will be under the supervision of an assigned faculty member.

Prerequisite: Permission of advisor.

### **IS 597 - Graduate Seminar in International Studies (3)**

Interdisciplinary seminar on one of the world's regions or countries. Aspects of its anthropology, economics, geography, history, government, politics, and sociology will be considered in a synthetic approach.

Prerequisite: None

### **IS 598 - Advanced Research in International Studies (3)**

Designed to familiarize graduate students with the techniques and resources associated with research in their specialization. Opportunity for practical applications will be provided.

Prerequisite: IS 500 or permission of program director. No credit given to students who have taken IS 498.

### **IS 599 - Thesis in International Studies (3)**

Preparation of the thesis under supervision of the thesis advisor. Plans A, C, D, and E require completion of 18 credits for programs with 30-35 credits, or 24 credits for programs with greater than 35 credits, and a 3.00 overall GPA.

Prerequisite: None

## **ITAL - Italian**

### **ITAL 111 - Elementary Italian I (3)**

Open only to students with one year or less of high school study. No credit for students who have received credits for ITAL 118. Fundamentals of Italian pronunciation and grammar taught from the beginning by the direct method. Students participate in conversation. CSUS Common Course.

Prerequisite: None

### **ITAL 112 - Elementary Italian II (3)**

No credit given to students with previous credit for more advanced course work in Italian or who have received credit for ITAL 118. Study of spoken and written Italian is continued. Further practice in conversation, pronunciation and analysis of Italian language structure. CSUS Common Course.

Prerequisite: ITAL 111 or equivalent (normally, two years high school study).

### **ITAL 125 - Intermediate Italian I (3)**

Principles of Italian language structure are reviewed. Short stories and plays are read and discussed. Conversation and composition on topics of general interest are practiced to improve oral and written expression. No credit will be given to students with previous credit for more advanced course work in Italian except by permission of the department chair.

Prerequisite: One year of college Italian or equivalent.

### **ITAL 126 - Intermediate Italian II (3)**

Continuation of ITAL 125. No credit will be given to students with previous credit for more advanced course work in Italian except by permission of the department chair.

Prerequisite: ITAL 125 or equivalent.

### **ITAL 225 - Intermediate Italian III (3)**

Designed to help students improve speaking skills and develop correct idiomatic usage and fluency of expression through discussion of contemporary texts. Further study of grammar.

Prerequisite: ITAL 125 or ITAL 126 or permission of instructor.

### **ITAL 226 - Intermediate Italian IV (3)**

Further study of grammar.

Prerequisite: ITAL 125 or ITAL 126 or permission of instructor, Designed to help students improve writing skills by means of frequent composition in Italian.

**ITAL 304 - Introduction to Italian Literature I (3)**

Taught in Italian. Introduction to major works in Italian literature from the Middle Ages to 1700.

Prerequisite: ITAL 225 or ITAL 226 (either may be taken concurrently) or permission of instructor.

**ITAL 305 - Introduction to Italian Literature II (3)**

Taught in Italian. Introduction to major works in Italian literature since 1700.

Prerequisite: ITAL 225 or ITAL 226 (either may be taken concurrently) or permission of instructor.

**ITAL 315 - Italian Civilization to 1861 (3)**

The cultural development of Italy from its beginnings to unification.

Prerequisite: ITAL 225 or ITAL 226 (either may be taken concurrently) or permission of instructor.

**ITAL 316 - Italian Civilization from 1861 to the Present (3)**

Cultural development of Italy from 1861 to the present.

Prerequisite: ITAL 225 or ITAL 226 (either may be taken concurrently) or permission of instructor.

**ITAL 335 - Advanced Italian for Oral Expression (3)**

Additional practice for student development of oral proficiency in Italian through discussion of readings, films and other authentic materials.

Prerequisite: ITAL 226.

**ITAL 336 - Advanced Italian Composition (3)**

Additional practice for student development of oral proficiency in Italian through discussion of readings, films, and other authentic materials.

Prerequisite: ITAL 226.

**ITAL 441 - Advanced Oral Practice (3)**

Taught in Italian. Development of fluency in oral self-expression. Speech analysis to improve pronunciation and intonation.

Prerequisite: Permission of instructor.

**ITAL 470 - 14th-Century Italian Literature (3)**

Taught in Italian. Study of the period with special emphasis on Dante, Petrarch, Boccaccio.

Prerequisite: ITAL 304 or permission of instructor.

**ITAL 476 - 16th-Century Italian Literature (3)**

Taught in Italian. Major works of Italian renaissance.

Prerequisite: ITAL 304 or permission of instructor.

**ITAL 488 - Italian Life and Culture (3)**

Discussion of contemporary Italian society, traditions and values. ITAL 560 Advanced Written Italian 3 Written expression of Italian, particularly in idiomatic free composition, to establish an appreciation for Italian style and develop the ability to express shades of meaning.

Prerequisite: Permission of instructor.

**ITAL 560 - Advanced Written Italian (3)**

Written expression of Italian, particularly in idiomatic free composition, to establish an appreciation for Italian style and develop the ability to express shades of meaning.

Prerequisite: None

**ITAL 561 - Topics in Italian Literature (3)**

Taught in Italian. Study of selected Italian literary works, authors, themes and movements. May be repeated with different topics for a maximum of 9 credits.

Prerequisite: Permission of instructor.

**ITAL 571 - 20th-Century Italian Literature (3)**

Taught in Italian. Representative authors and literary movements of the 20th century.

Prerequisite: Permission of instructor.

**ITAL 588 - Topics in Italian Cultural Studies (3)**

Taught in Italian. Selected topics in Italian cultural history, media studies, social and demographic changes, gender issues, and film analysis. May be repeated for a maximum of nine credits.

Prerequisite: Permission of instructor.

**ITAL 599 - Thesis (3)**

Preparation of thesis under the supervision of thesis advisor.

Prerequisite: Fifteen credits of approved graduate study, permission of graduate advisor, and a 3.00 overall GPA.

## JAPN - Japanese

### JAPN 111 - Elementary Japanese I (3)

Open only to students with one year or less of high school study. Basic sounds and structure patterns of Japanese are established through a direct audio lingual approach. CSUS Common Course.

Prerequisite: None

### JAPN 112 - Elementary Japanese II (3)

No credit given to students with previous credit for more advanced course work in Japanese except by permission of the department chair. A continuation of JAPN 111. CSUS Common Course.

Prerequisite: JAPN 111 or equivalent (normally, two years high school study).

### JAPN 125 - Intermediate Japanese I (3)

Continuation and review of grammar and structure. Development of reading skills.

Prerequisite: One year of college Japanese or equivalent.

### JAPN 126 - Intermediate Japanese II (3)

Further study of grammar and structure. Readings in literary and cultural areas.

Prerequisite: JAPN 125 or equivalent.

### JAPN 225 - Intermediate Japanese III (3)

Designed to improve speaking skills through discussion of contemporary texts. Further study of grammar.

Prerequisite: JAPN 126 or permission of instructor.

### JAPN 226 - Intermediate Japanese IV (3)

Designed to develop current idiomatic usage and fluency of expressions. Further study of grammar.

Prerequisite: JAPN 126 or permission of instructor.

### JAPN 335 - Japanese for Oral Expression I (3)

Taught in Japanese. Designed to further develop oral proficiency through the discussion of contemporary texts.

Prerequisite: JAPN 226 or equivalent.

### JAPN 336 - Japanese for Oral Expression II (3)

Taught in Japanese. Designed to continue developing oral proficiency through further study of grammar and discussion of contemporary texts.

Prerequisite: JAPN 335 or permission of instructor.

## JLI - John Lewis Institute

### JLI 301 - Introduction to Social Justice (1)

The course introduces the John Lewis Scholars to the legacy of John Lewis and other social activists both local and global while investigating discrimination that prevent humans from reaching their full potential. This course may be repeated up to three times.

Prerequisite: Acceptance into the John Lewis Institute Scholar Program

## JRN - Journalism

### JRN 101 - News Literacy (3)

An analysis of the credibility of news and other information, with a focus on the importance of being critical consumers of information in a democracy. Students will learn to recognize misinformation, with emphasis on verification methods for social media.

Prerequisite: None

### JRN 200 - Introduction to Journalism (3)

Introduction to the principles of journalism. Instruction in writing the basic news story; overview of issues such as journalistic ethics, the First Amendment, and the role of journalists in a democratic society. This is a prerequisite for all journalism courses.

Prerequisite: ENG 110.

### JRN 235 - News Writing and Reporting I (3)

Intensive introduction to fundamentals of reporting and writing news and feature stories. Covers interviewing, reporting methods, ethics, news judgement, and newsroom practices. Students must enroll in an accompanying section of JRN 255 Multimedia Journalism.

Prerequisite: JRN 200.

Corequisite: JRN 255.

### JRN 237 - Introduction to the Profession (1)

Overview of career opportunities in print, broadcast and online journalism.

Prerequisite: Majors and minors only. First semester at CCSU as a declared Journalism major or minor.

### JRN 255 - Multimedia Journalism (3)

Students will learn to tell journalistic stories tailored for digital platforms and mobile devices during this introduction to photojournalism, audio reporting,

mapping, videography and video editing for the web. Some skills will be applied to assignments in the accompanying JRN 235 section.

Prerequisite: JRN 200.

Corequisite: JRN 235.

### **JRN 336 - News Writing and Reporting II (3)**

Builds on JRN 235. Emphasizes news-gathering procedures and the challenges of writing on government, the law, and other areas of journalistic specialization. Formerly ENG 236; no credit given to students with credit for ENG 236 or JRN 236.

Prerequisite: JRN 235 or permission of instructor.

### **JRN 340 - Introduction to Broadcast News (3)**

Introduction to the writing, production, and performance requirements of TV news.

Prerequisite: JRN 200 and JRN 235 (COMM 330 recommended) or permission of instructor.

### **JRN 345 - Photojournalism (3)**

An introduction to the use of photography to document and convey knowledge and ideas about people, places and events. Students will focus on journalistic reporting practices to capture and edit images. In addition to technical skills, we will also study the ethical and social implications of photojournalism.

Prerequisite: JRN 255

### **JRN 350 - Professional Seminar (1)**

Examination of professional topic through lecture, readings, discussion and experiential activities. Course runs eight weeks. Students may take up to three times for credit.

Prerequisite: JRN 200 and Journalism majors or minors, or permission of instructor.

### **JRN 360 - Multimedia Sports Journalism (3)**

Explores different approaches to covering sports across different media. Students will focus on previews, games, features, issues, and investigations across platforms, as well as the ethical and broader societal issues that inform quality sports journalism

Prerequisite: JRN 235/JRN 255

### **JRN 361 - Data Analysis for Sports Journalism (3)**

Examines how probability and statistics are used to analyze sports performance and develop sports strategies. Students will learn how to compile and analyze sports statistics in sports reporting, and study the fundamentals of Sabermetrics.

Prerequisite: MATH 101 (C- or higher) or MATH 102 (C- or higher) or MATH 103 (C- or higher)

### **JRN 370 - Global News in Context (3)**

Examines International journalism and current events. Students will study the forces underlying issues such as the global economy, war and peace, politics, the environment and coverage in global news media.

Prerequisite: JRN 200

### **JRN 371 - Reporting Cultural Diversity (3)**

Students explore scholarly research and journalistic commentary on the challenges of reporting about race, gender, ethnicity, religious differences, and other aspects of cultural diversity; read exemplary work; and apply what they learn by reporting and writing journalistic articles.

Prerequisite: JRN 235 or JRN 236.

### **JRN 380 - Feature Writing (3)**

Writing and analysis of human interest articles; exploration of the newspaper and magazine markets. No Credit given to students with credit for ENG 380.

Prerequisite: JRN 235 or permission of instructor.

### **JRN 381 - Opinion Writing (3)**

Study, evaluation, and writing of opinion pieces for newspapers, magazines, and online publications. Focus is mainly on public affairs issues.

Prerequisite: JRN 235 or JRN 236.

### **JRN 383 - Responsibilities of Journalism (3)**

Examination of the principles and practices of journalists with reference to various ethical systems and the law. Topics will include fairness, courage, conflict of interest, libel and privacy.

Prerequisite: JRN 235 or 236 or permission of instructor.

### **JRN 384 - Journalism History (3)**

Examination of the history of American journalism from colonial times to the late 20th century.

Prerequisite: JRN 235 or JRN 236 or permission of instructor.

**JRN 385 - Social Media and Mobile Journalism (3)**

Students use social media and mobile technologies (smartphones, tablets, handheld video cameras) to report in the field. Examines best practices for mining social media for reporting and engaging with audience.

Prerequisite: JRN 200 and JRN 235 and JRN 255, or permission of instructor

**JRN 387 - Data Journalism and Visualization (3)**

Students will learn to use data to create graphics, images and databases that enhance journalistic storytelling. Students will gain experience collecting, scraping, formatting and analyzing data to accompany reporting assignments throughout the semester.

Prerequisite: JRN 235 or Permission of Instructor

**JRN 400 - Journalism Theory (3)**

Survey of major theories on the production and consumption of journalism, and implications for democracy. Covers established theories on the role of the press as well as more recent perspectives on the nature of news; and civic journalism.

Prerequisite: JRN 235 and JRN 236 and JRN 383 or JRN 384; or permission of instructor.

**JRN 412 - Editing (3)**

Emphasis on copy editing, headline writing, news judgment, photo handling, newspaper layout, and electronic desktop publishing. No credit given to students with credit for ENG 412.

Prerequisite: JRN 235 or permission of instructor.

**JRN 416 - Magazine Writing (3)**

Introduction to the magazine industry. Students get experience researching and writing various types of magazine articles. No credit given to students with credit for ENG 416.

Prerequisite: JRN 235 and JRN 236 or permission of the instructor.

**JRN 418 - Studies in Journalism (3)**

Selected topics in journalism. Students may take this course under different topics for a maximum of 6 credits. No credit will be given to students who previously have earned 6 credits for ENG 418.

Prerequisite: JRN 235 or permission of instructor.

**JRN 440 - TV News Practicum (4)**

May be repeated for up to 6 credits.

Prerequisite: JRN 200; JRN 235 and JRN 255 OR JRN 235 and COMM 227; JRN 340; or permission of instructor

**JRN 450 - Journalism Studies Abroad (3)**

Course involves mandatory travel to a foreign country for study of contemporary issues and journalism practices. Students may take the course more than once for different locations and topics.

Prerequisite: JRN 200 or permission of instructor.

**JRN 462 - Issues in Sports Journalism (3)**

Examines how issues such as crime, race, gender, sexuality, nationalism, capitalism, and social justice impact sports journalism. Students will learn how sports stories are selected, produced, and told, as well as practical issues and skills such as ethical dilemmas, interviewing, and navigating the sports environment.

Prerequisite: JRN 360 or permission of instructor

**JRN 465 - Longform Sports Journalism (3)**

Focuses on in-depth sports reporting for print, web, and multimedia. Students will learn how to find, write, produce, and edit high-impact sports journalism. (e.g., E:60, 60 Minutes Sports, SI, etc.)

Prerequisite: JRN 235/JRN 255, JRN 336

**JRN 490 - Individual Guided Projects (1-3)**

Conference course for students who want to pursue an individually designed project. May be repeated for a maximum of 6 credits.

Prerequisite: Senior standing, G.P.A. of at least 3.0 and permission of instructor.

**JRN 491 - Campus Newspaper Critique (1)**

Open to editors and regular staff on the Recorder only. Weekly session at which participants critique the most recent issue of the student newspaper. Students address current organization problems and plan future issues. May be repeated for a maximum of 3 credits.

Prerequisite: Permission of instructor.

**JRN 493 - Sports Journalism Practicum (1-3)**

On-campus sports publications and media projects.

Prerequisite: Permission of Instructor

### **JRN 495 - Internship in Journalism (3)**

Students work in a professional news or media organization and meet regularly with a faculty advisor.

Prerequisite: JRN 235 and JRN 236.

### **JRN 498 - Capstone Preparation (1)**

Students will work with course instructor and an adviser to develop the proposal for the capstone project.

Prerequisite: Senior status. A minimum GPA of 3.0 overall and in the major, and approval from both an adviser and the department chair.

### **JRN 499 - Capstone (3)**

Completion of a substantive journalism project that has been developed in JRN498. Students will present projects to faculty and students prior to graduation. Latin

Prerequisite: JRN 498 (C- or higher).

## **LAS - Latin American Studies**

### **LAS 281 - Latin American History to 1823 (3)**

Cross listed with HIST 281. See HIST 281 for detailed description. No credit given to students with credit for HIST 281.

Prerequisite: None

Cross-Listed as: HIST 281

### **LAS 282 - Latin American History Since 1823 (3)**

Social, economic, political, and cultural development of Latin American countries since 1823. Cross-listed with HIST 282. No credit given to students with credit for HIST 282.

Prerequisite: None

Cross-Listed as: Cross listed with HIST 282.

### **LAS 316 - Latin American Civilization (3)**

Taught in Spanish, Cultural evolution of Latin America with emphasis on modern period. Cross listed with SPAN 316. No credit given to students with credit for SPAN 316.

Prerequisite: SPAN 226 or SPAN 291 (may be taken concurrently)

### **LAS 375 - Spanish American Literature I (3)**

Cross listed with SPAN 375; see SPAN 375 for detailed course description. No credit given to students with credit for SPAN 375.

Prerequisite: SPAN 300 or permission of instructor.

### **LAS 376 - Spanish-American Literature II (3)**

Prerequisite: SPAN 300 or permission of instructor.

Cross-Listed as: Cross listed with SPAN 376. See SPAN 376 for detailed description. No credit given to students with credit for SPAN 376.

### **LAS 420 - Government and Politics of Latin America (3)**

Historical, social, economic, and ideological factors impacting contemporary government and politics in Latin America

Prerequisite: None

Cross-Listed as: Cross-listed with PS 420, no credit given to student with credit for PS 420

### **LAS 428 - Cultures of Latin America (3)**

Introduction to modern and pre-Columbian societies in Latin America. Objectives include tracing the historical roots of social and economic relations in Latin America today, and the diverse responses Latin Americans have made and are making to rapid social change.

Cross-Listed as: Cross listed with ANTH 428. No credit given to students with credit for ANTH 428.

Notes:

Course may be taken for Graduate credit.

### **LAS 434 - Mexico, Central America and the Caribbean (3)**

Prerequisite: None

Cross-Listed as: Cross listed with GEOG 434. See GEOG 434 for detailed description. No credit given to students with credit for GEOG 434.

### **LAS 436 - South America (3)**

A survey of the countries of South America with emphasis on people, places, and problems.

Prerequisite: None

Cross-Listed as: Cross listed with GEOG 436 and IS 436. No credit given to students with credit for GEOG 436 or IS 436.

## **LAT - Latin**

### **LAT 111 - Elementary Latin I (3)**

Open only to students with one year or less of high school study. Study of the elements of Latin grammar. CSUS Common Course.

Prerequisite: None

**LAT 112 - Elementary Latin II (3)**

No credit given to students with previous credit for more advanced course work in Latin except by permission of the department chair. Continuation of LAT 111; development of reading skills. CSUS Common Course.

Prerequisite: LAT 111 or equivalent (normally, two years high school study).

**LAW - Law****LAW 250 - The Legal and Ethical Environment of Business (3)**

The course provides an introduction to the legal environment of business organizations, including principles that affect management, marketing, accounting, finance and technology. Included is a review of corporate social responsibility, formation of businesses, international legal environment, administrative law, torts, contracts, agency, intellectual property and litigation.

**LAW 400 - Advanced Business Law (3)**

Advanced legal principles pertaining to commercial transactions and business organizations. Topics include contracts, sales, negotiable instruments, partnerships and corporations, accountant's legal liability, and bankruptcy.

Prerequisite: LAW 250 (C- or higher).

**LAW 500 - Business Law and the Legal Environment (3)**

Legal principles affecting management, marketing, accounting, finance and technology. Review of the social responsibility of business, constitutional and administrative law, torts, contracts, commercial transactions, agency, business organizations and bankruptcy.

Prerequisite: None

**LAW 550 - Advanced Business Law & Ethical Leadership (3)**

Advanced legal principles pertaining to business organizations and ethical leadership. Topics may include the legal and ethical environment of business, commercial contracts, smart contracts, sales, partnerships and corporations, intellectual property, product liability law, organizational ethics, financial services regulation, data protection, confidentiality, privacy and security of personal data, social and ethical responsibility of business, and legal principles affecting Fintech, accounting, finance, banking and technology.

Prerequisite: Admission to a School of Business graduate program, permission of the Associate Director of Graduate Programs, or permission of the Department of Finance Chairperson.

**LLA - Literacy & Language Arts****LLA 140 - Reading Efficiency (3)**

Student's reading is analyzed and training is provided to improve vocabulary, comprehension, and rate. Study skills needed in college work are given attention.

Prerequisite: None

**LLA 201 - Language and Literacy in Early Childhood (3)**

This course addresses language and literacy development in early childhood. Emphasis is placed on the connections between language and culture, stages of language development, emergent literacy, and early decoding and oral/listening comprehension instruction for first and second language speakers and children with exceptionalities.

Prerequisite: Declared major in Early Childhood Studies and Infant/ Toddler Mental Health and EDEC 101

**LLA 302 - Literacy for Early Childhood (3)**

This course provides critical understandings central to birth-3 language and literacy development. Analysis of different theoretical views on the connections between language and culture, use of children's literature, and play-based curriculum. Application of scientifically-based research and best practices aligned with the Common Core State Standards to language and literacy instruction for all children, with emphasis on language development, vocabulary, comprehension, and fluency for English and non-English first language speakers, and children with exceptionalities. 30 hours of Field Experience required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Early Childhood Education.

**LLA 309 - Literacy & Literature in Early Childhood (3)**

Study of the literary merits of early childhood literature used with infants, toddlers, and preschool to gr. 3 students. Emphasis on strategies for sharing high-quality

literature to support language and literacy skills, such as decoding and comprehension, and foster cognitive, moral, social, intellectual, aesthetic, and creative development in young children, including second language learners and children with exceptionalities.

Prerequisite: Declared major in Early Childhood Studies and Infant/Toddler Mental Health

### **LLA 315 - Comprehensive Reading Instruction I (3)**

Taken concurrently with EDEL 315 (Elementary Education majors). Concentrates on early literacy processes, with an emphasis on word identification skills. Topics include emergent literacy, reading instructional frameworks common in PreK-2 classrooms, early writing experiences as they relate to reading, concepts about print, phonological awareness, phonics, structural analysis, sight word knowledge, context knowledge, and fluency. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: For Special Education majors or for students admitted to the Professional Program in Elementary Education, or by approval of department chair.

Corequisite: Taken concurrently with SPED 315 (elementary education)

### **LLA 316 - Comprehensive Reading Instruction II (3)**

Theories, instructional applications, and materials for the teaching, learning and assessment of literacy processes in K-6 classrooms. Topics include handwriting, spelling, reading and writing connections, vocabulary development, comprehension strategies, assessment, ELL instruction, reading assessment, and theories of reading. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: LLA 315

### **LLA 400 - Writing Instruction for Teachers (2)**

Course will explore writing as it relates to the teacher as writer and the impact of his/her writings on writing

instruction in elementary classroom. Focus will be on developing the teacher as writer.

Prerequisite: Permission of Teacher Education chair and Reading and Language Arts chair.

### **LLA 412 - Literacy instruction in the Elementary School (3)**

Taken concurrently with EDEL 420 (Elementary Education majors). Introduction to foundational, philosophical and theoretical underpinnings of literacy education. an integrated approach to teaching the Language Arts: reading, writing, listening, speaking, viewing,visually representing, the new literacies and multimodalities. Special emphasis on writing instruction and evidence based practices.

Prerequisite: LLA 316.

Corequisite: EDEL 420

### **LLA 440 - Literacy instruction in the Secondary School (3)**

Fundamentals of literacy instruction to support instructional design and learning across disciplines and grade levels. Emphasis is placed on evidence-based practices and literacy processes. Designed for pre-service content area teachers. Field experience in content area required. Recommended to be taken concurrently with EDSC 425. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Teacher Education and EDTE 316 or permission of Reading Department chair.

### **LLA 500 - Independent Study in Reading and Language Arts (3)**

Independent study in the reading and language arts area not covered by regular course offerings. Supervision is given through periodic conferences with the student. Oral presentations are required.

Prerequisite: 15 credits in Reading and Language Arts; permission of program advisor; and admission to the Master's or Sixth-Year program in Reading and Language Arts.



**LLA 502 - Developmental Reading in PreK-12 (3)**

Focus on historically shared knowledge of the profession and changes over time, theoretical foundational understandings that inform research, and evidence-based instructional practices involved in teaching reading readiness/emergent literacy, reading in primary grades, word study, fluency, vocabulary, and comprehension, as well as means of assessing literacy progress as readers and writers move from emergent literacy to learning to read and into the reading to learn stages.

Prerequisite: Open to sixth-year, MS, or OCP in Reading and Language Arts, or by permission of the chair of the Department of Reading and Language Arts.

**LLA 503 - Middle School Level Literacy Development (3)**

Foundations, approaches, materials, and techniques for developmental literacy programs at the middle school level. Attention is given to literacy strategies and the use of study skills in both regular and content classrooms.

Prerequisite: Open to sixth-year, MS, or OCP in Reading and Language Arts, or by permission of the chair of the Department of Reading and Language Arts.

**LLA 504 - Language Arts for First and Second Language Speakers (2)**

Taken concurrently with LLA 506. Study of instructional models and language arts activities for first language speakers who struggle with academic language and for English learners in the general education classroom. Focus is placed on instruction and activities that support content knowledge and academic language development. Further, study of theories and stages of first and second language acquisition as they relate to literacy development and differentiation of instruction in whole and small group settings.

Prerequisite: Admission to MS or 6th Year Certificate in Reading and Language Arts, or permission by department chair

Corequisite: Taken concurrently with LLA 506

**LLA 505 - Developmental Literacy in the Secondary Schools (3)**

Study of the need for continuing systematic instruction in literacy for students throughout grades 7-12. Emphasis on the integration of literacy with the content areas. Organization of programs, materials, and methods currently in use, and means of evaluation are considered. No credit will be given to students who have credit for RDG/LLA 440, RDG 505, or RDG 593.

Prerequisite: Open to students in pre-certification or certification status in secondary or PK-12 post baccalaureate certification programs, or permission of department chair.

**LLA 506 - Decoding and Spelling Instruction (1)**

Taken concurrently with LLA 504. The course focuses on the development of decoding and spelling skills from early childhood to intermediate grades. Emphasis is placed on content knowledge, evidence-based instructional strategies, and formative assessments as they relate to phonological awareness, phonics, sight word knowledge, structural analysis and context knowledge, and the stages of spelling development. The instruction of diverse students, including struggling readers, dyslexic students, and English learners, is also addressed.

Prerequisite: Admission to MS or 6th Year Certificate in Reading and Language Arts, or permission by department chair.

Corequisite: Taken concurrently with LLA 504

**LLA 507 - Topics in Language, Literacy and Culture (1)**

Study of selected topics in areas of language, literacy, and culture. Topics will vary each time the course is offered. May be taken more than once under different topics for a maximum of 3 credits.

Prerequisite: None

**LLA 508 - Teaching Literacy in the Content Areas (3)**

This course invites investigation of materials and procedures for teaching literacy in the content areas as it interfaces with disciplinary literacy and the language arts (reading, writing, speaking, listening, viewing, and visually representing) PK-12. Further, this course examines ways in which comprehension strategies, vocabulary, and new literacies, including technology, can be integrated with content area literacy.

Prerequisite: LLA 501 or LLA 502 or LLA 503 or LLA 505 and admission to M.S. or Sixth-Year program in reading and language arts.

**LLA 509 - Comprehensive Reading Instruction (3)**

The course addresses reading instruction with special emphasis on emergent literacy, phonemic awareness, phonics, sight word knowledge, structural analysis, context knowledge, fluency, vocabulary, and comprehension. Sixty hours of certification specific field experience is expected for graduate students in the MS Elementary Education. In accordance with CT law, districts may require criminal background and/or DCF child abuse

and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to a graduate program in the Dept. of Special Education or Literacy, Elementary & Early Childhood Education, or department chair approval.

### **LLA 510 - Teaching Writing in K-8 (3)**

Theories, practices and techniques as related to teaching writing in grades K-8 will be discussed. There will be a focus on evidenced-based writing instruction including student engagement, process writing, writer's craft across genres, and assessments options. Teachers will design a model curriculum that integrates theory, classroom practice, and instructional techniques of effective writing instruction.

Prerequisite: Admission to MS Program or permission by department chair

### **LLA 512 - The Pedagogy of Literature PK-12 (3)**

Study of a wide variety of children's and young adult literature PK-12. Selection, evaluation and the role of literature to support literacy instruction while taking into account genre, artistic, and visual literacy considerations.

Prerequisite: Admission to MS Program or 6th Year Certificate Program or permission by department chair

### **LLA 513 - Technology in Reading & Language Arts Instruction (3)**

Intersection of literacy learning and instruction with technology. Assists teachers in transforming technology to meet, support and enhance literacy development of their students. Competencies in web-based, computer and multimedia-based reading and language arts instruction will be developed.

Prerequisite: Admission to M.S. or Sixth-Year program in reading and language arts, or permission or department chair.

### **LLA 514 - Diagnosis and Intervention of Reading and Language Arts Difficulties I (3)**

This course focuses on principles of diagnosis and intervention of reading and language arts, including diagnostic procedures for those who struggle with reading and writing at the pre-K, elementary, and secondary levels.

Prerequisite: LLA 504, LLA 506, and 3 credits from LLA 502, LLA 508, LLA 520 or permission by department chair

### **LLA 515 - Literacy Instruction for the English Learners (3)**

Students are introduced to theories, stages of second language acquisition, and social and academic challenges English Learners (ELs) often face. Special emphasis is placed on specific models and literacy activities for teaching ELs and on differentiating instruction for ELs in the general education classroom in order to support their content knowledge and academic language development.

Prerequisite: Admission to M.S. in Reading and Language Arts, TESOL, Teacher Education, Special Education, Sixth-Year Program, or permission of department chair.

### **LLA 516 - Diagnosis and Intervention of Reading and Language Arts Difficulties II (3)**

This course focuses on principles of diagnosis and intervention of reading and language arts, including specialized diagnostic procedures for those who struggle with reading and writing, including English language learners and students with exceptionalities

Prerequisite: LLA 502, LLA 504, LLA 506, LLA 508, LLA 514

### **LLA 517 - Introduction to Critical Literacy (3)**

Critical investigation of literacy. Examines literacy instruction, the relationship between classroom literacy practices and the curriculum, and the relationship among knowledge, equity, empowerment, class, race, resistance, and literacy.

Prerequisite: Admission to M.S or Sixth-Year program in reading and language arts, or permission of department chair.

### **LLA 518 - Clinical Practices in Literacy and Language Arts (6)**

This course is the practical application of diagnosis and intervention principles and knowledge. Students who struggle with reading and writing are assessed and taught in the literacy center.

Prerequisite: LLA 516 or permission by the department chair

Cross-Listed as: LLA 618 or permission by the department chair

### **LLA 519 - Teaching Writing Across The Curriculum I (3)**

Participants will explore research-based approaches to the teaching of writing, present successful teaching strategies in the area of writing across the curriculum, and write

extensively in different genres. The emphasis is on personal and professional writing, and development of teacher as writer. Only 3 credits may be counted towards the Master's in English or in Reading and Language Arts with the permission of the CCWP director and advisor.

Prerequisite: Acceptance to the Central Connecticut Writing Project (CCWP) or permission by department chair

Cross-Listed as: Cross listed with ENG 583.

### **LLA 520 - Seminar in Literacy Research (3)**

The course focuses on developing students' research skills through in-depth review and analysis of reading and language arts research studies. Emphasis is also placed on the articulation between research findings and practices in elementary, middle, and secondary education classrooms.

Prerequisite: 6 credits in reading/language arts graduate courses or elementary education graduate courses or approval of department chair.

### **LLA 521 - Literacy Instruction for Diverse Populations (3)**

Current trends and issues on language, ethnicity, and social class as they impact on literacy instruction for children of diverse backgrounds with an emphasis on sociolinguistic perspectives.

Prerequisite: Admission to MS program or 6th Year Certificate program or permission by department chair

### **LLA 522 - Organization, Administration, and Supervision of Reading & Language Arts Programs (3)**

This course focuses on the study of the basic principles and functions of organization, administration, evaluation, and supervision as they apply to various types of reading and language arts programs in PK-12 schools in diverse contexts—urban, suburban, or rural. Cross-listed with RDG 694.

Prerequisite: LLA 518

### **LLA 523 - Social Emotional Learning Through Literacy Instruction (3)**

Identification, selection, and effective planning of social and emotional strategies through literacy instruction in PK-12. Integration of self-awareness, self-management, social awareness, relationship skills, and responsible decision-making will be used in designing literacy activities towards interpersonal, intrapersonal, and cognitive competence.

Prerequisite: Admission to MS program or 6th Year Certificate program or permission by department chair

### **LLA 524 - Practicum for Reading Specialist/Literacy Coach I (3)**

A multifaceted and comprehensive project that is completed in one semester and demonstrates candidates' ability to meet ILA Standards 1, 2 and 3, particularly at the coaching and leadership levels. Candidates collaborate in planning, leading, and evaluating professional development activities with individuals or groups of administrators, teachers, other education professionals, and parents; model and coach teachers and other education professionals in school and classroom on best literacy practices; communicate information about theories, historically shared knowledge, and empirical research on areas of curriculum and instruction, assessment and evaluation, diversity, and literate environment to various audiences; actively engage in professional literacy organizations, conferences and/or workshops; and advocate with various groups for instructional changes to promote effective literacy instruction. As coach and leader candidates are expected to demonstrate strong background knowledge and understanding of ILA Standards 1, 2 and 3. Cross-listed with RDG 696.

Prerequisite: LLA 518

### **LLA 525 - Creative Language Arts (3)**

Creative aspects of language activities both written and oral for elementary school children are considered toward stimulating such work in the classroom. Essential goals of language arts programs will be studied.

Prerequisite: LLA 502 or LLA 503 or LLA 504 or LLA 506 and admission to M.S. or Sixth-Year program in reading and language arts.

### **LLA 526 - Practicum for Reading Specialist/Literacy Coach II (3)**

A multifaceted and comprehensive project that is completed in one semester and demonstrates candidates' ability to meet ILA Standards 4, 5 and 6 particularly at the coaching and leadership levels. Candidates collaborate in planning, leading, and evaluating professional development activities with individuals or groups of administrators, teachers, other education professionals, and parents; model and coach teachers and other education professionals in school and classroom on best literacy practices; communicate information about theories, historically shared knowledge, and empirical research on areas of curriculum and instruction, assessment and evaluation, diversity, and literate environment to various audiences; actively engage in

professional literacy organizations, conferences and/or workshops; and advocate with various groups for instructional changes to promote effective literacy instruction. As coach and leader candidates are expected to demonstrate strong background knowledge and understanding of ILA Standards 4, 5 and 6. Cross-listed with RDG 697.

Prerequisite: LLA 524

### **LLA 528 - Multisensory Structured Language Instruction (3)**

Design and Implementation of a multisensory, structured phonetic approach to teaching reading, writing, and spelling for all students, including struggling learners and those with disabilities. This approach can be incorporated into an already existing literacy program.

Prerequisite: Admission to a Master's program and LLA 514 or permission to the Department Chair.

Cross-Listed as: SPED 528

### **LLA 529 - Multisensory Structured Language Instruction Practicum (3)**

Supervised practicum in elementary or secondary classrooms, agencies, or institutions focused on the design and implementation of multisensory structured language instruction.

CT law requires fingerprinting and a criminal background check for the field experiences in this class which must be completed prior to the beginning of class.

Prerequisite: B or better in Multisensory Structured Language Instruction (LLA/SPED 528)

Cross-Listed as: SPED 529

### **LLA 531 - Literacy and Language Issues in the Classroom (3)**

Principles in developing literacy in the disciplines within the context of specific domains. Course content focuses heavily on supporting struggling adolescent learners across the content.

Prerequisite: Admission to the M.A.T. program, and MAT 520 (C or better).

Corequisite: MAT 533

### **LLA 599 - Thesis (3- 6)**

Preparation of the thesis under the supervision of thesis advisor and second reader. Oral and written presentation required. RDG 598 required if RDG 599 taken for only 3 credits.

Prerequisite: 24 credits of graduate study in Reading & Language Arts; admission to the master's program in reading; and language arts, and a 3.00 overall GPA.

### **LLA 601 - Current Trends and Issues in Reading and Language Arts (3)**

Study of current trends, issues, and recent research in reading and language arts and their applications in school settings.

Prerequisite: Admission to Sixth-Year Certificate Program or permission by department chair

### **LLA 603 - Teaching Multicultural Literature in the Classroom (3)**

A diversity of teaching methods will be studied and applied using multicultural books for students in PK-12. The implementation of various teaching frameworks and multicultural methodologies will be explored.

Prerequisite: Admission to Sixth-Year Certificate Program or permission by department chair.

### **LLA 614 - Diagnosis and Intervention of Reading and Language Arts Difficulties I (3)**

This course focuses on principles of diagnosis and intervention of reading and language arts, including diagnostic procedures for those who struggle with reading and writing at the pre-K, elementary, and secondary levels. No credit for this course if you have credit for the cross-listed equivalent.

Prerequisite: LLA 504, LLA 506, and 3 credits from LLA 502, LLA 508, LLA 620 or permission by department chair

Cross-Listed as: LLA 514

### **LLA 616 - Diagnosis and Intervention of Reading and Language Arts Difficulties II (3)**

This course focuses on principles of diagnosis and intervention of reading and language arts, including specialized diagnostic procedures for those who struggle with reading and writing, including English language learners and students with exceptionalities. No credit for this course if you have credit for the cross-listed equivalent.

Prerequisite: LLA 614 or permission by department chair

Cross-Listed as: LLA 516

### **LLA 617 - Critical Literacy in Practice (3)**

The course further develops the philosophical and theoretical foundations informing critical literacy. Students will examine how critical literacy

related topics such as social injustice, racial inequity, sociocultural and socioeconomic inequities, and problem posing questions can be integrated with current literacy curricula.

Prerequisite: Admission to M.S or Sixth-Year program in reading and language arts, or permission of department chair.

### **LLA 618 - Clinical Practices in Literacy and Language Arts (6)**

This course is the practical application of diagnosis and intervention principles and knowledge. Students who struggle with reading and writing are assessed and taught in the literacy center. No credit given if already have credit in LLA 518. No credit for this course if you have credit for the cross-listed equivalent.

Prerequisite: LLA 616 or permission by department chair

Cross-Listed as: LLA 518

### **LLA 605 - Reading and Writing as Integrated Process (3)**

Integration of theories, practices, and techniques as related to the teaching of reading and writing in K-12 grades. The course examines how reading and writing work together to develop students as readers, writers, and thinkers with a focus on writing to learn, argument writing, and multimodal texts. Candidates facilitate professional conversations with colleagues about balancing reading and writing instruction.

Prerequisite: Admission to Sixth-Year Certificate Program or permission by department chair

### **LLA 620 - Research Seminar (3)**

The course focuses on developing students' research skills through in-depth review and analysis of contemporary research to learn various methods and procedures for designing and conducting research in literacy and language development with emphasis on quantitative research. It is organized largely around working on a research proposal, its implementation, and writing a research paper, with the goal of making it a conference-presentable and journal-publishable work.

Prerequisite: Admission to a 6th Year Certificate Program or permission by department chair

### **LLA 621 - Family and Community Literacy through Engagement & Collaboration (3)**

This course provides students with the knowledge and skills to advocate for socially, culturally, and linguistically diverse families and communities in promoting,

supporting, and/or enhancing children's literacy and language development. Theoretical, pedagogical, and research issues as well as significant historic perspectives on family and community literacy that have influenced the development of programs and policy are examined. Finally, participants examine different frameworks, approaches, and programs to family and community literacy. A proposal for family-community and school partnership is completed.

Prerequisite: Admission to Sixth-Year Certificate Program or permission by department chair

### **LLA 622 - Organization, Administration, and Supervision of Reading and Language Arts Programs (3)**

Study of patterns of organization, administration, evaluation, and supervision of various types of reading and language arts programs in school.

Prerequisite: 15 credits of graduate study in the 6th Year Certificate Program or admission to the Advanced Official Certificate Program in Reading and Language Arts or approval by department chair

### **LLA 624 - Practicum for Reading Specialist/Literacy Coach I (3)**

Work experience under guidance of certified reading and language arts consultant for an academic year. Experience includes supervision of reading programs, consultation with school personnel, assessment, clinical practice, professional development, and applied research.

Candidates work with teachers and school administrators under the guidance of a certified reading and language arts consultant for an academic year. The work is equivalent to 3 credits of graduate level coursework and includes supervision of reading programs, consultation with school personnel, assessment, clinical practice, professional development, and applied research.

Prerequisite: LLA 622 and admission to Sixth-Year Program or Advanced Official Certificate Program in Reading and Language Arts, or permission by department chair.

### **LLA 626 - Practicum for Reading Specialist/Literacy Coach II (3)**

Continuation of LLA 624 work experience under guidance of certified Reading and Language Arts consultant for an academic year. Experience includes supervision of reading programs, consultation with school personnel, assessment, clinical practice, professional development.

Prerequisite: LLA 624

**LLA 692 - Specialized Diagnosis and Intervention (3)**

Advanced studies related to the role of reading and language arts consultant. Candidates coordinate and lead professional learning in administering, analyzing, and utilizing data for instructional decision making for students needing specialized literacy diagnosis and intervention. Candidates also advocate for appropriate literacy and language practices to instructional staff, administration and parents/guardians.

Prerequisite: Admission to Sixth-Year Certificate Program or Advanced Official Certificate Program in Reading and Language Arts, or permission by department chair

**LLA 700 - Seminar in Literacy (3)**

Studies in literacy research are reviewed. Emphasis on the articulation between research findings and literacy curriculum and practices in schools. Significance of research findings is studied through prescribed reading, written and oral reports and seminar discussions, culminating with an open hearing on a major research presented by the student.

Prerequisite: Admission to the Ed.D. program.

**LING - Linguistics****LING 200 - Introduction to Linguistics (3)**

The structure and system of language, primarily focused on English: history, phonology, morphology, syntax, semantics, usage. No credit for those who have already completed LING 400.

Prerequisite: None

**LING 230 - The Study of Language (3)**

Theories of human language as have evolved in thought, society, and scientific analysis, with emphasis on selected models and on English.

Prerequisite: None

**LING 300 - Language Acquisition (3)**

Models and theories of language acquisition with an emphasis on first language(s), including developmental stages, regional and social variation, register, style, and idiolect.

Prerequisite: LING 200.

**LING 400 - Linguistic Analysis (3)**

Intensive analysis (syntactic, morphological, phonological) of selected data from English and other languages, with

particular emphasis on analytical skills and dominant theories.

Prerequisite: None

Cross-Listed as: This course will be bridged with a new graduate-level version of the course (LING 500), for which an ADD course form will be submitted.

**LING 406 - TESOL Methods (3)**

Principles, methods, and materials for teaching English as an additional language at all levels, including basic skills in lesson planning and implementation. Students will plan and implement mini-lessons, integrating pedagogical and linguistic principles, assessment strategies, and concepts of intercultural communication in the TESOL classroom.

Prerequisite: None

Cross-Listed as: This course will be cross-listed with a graduate-level bridged equivalent (LING 506), for which an ADD course form will be created.

**LING 407 - Second Language Acquisition (3)**

Major theories of language acquisition and their potential application to language learning, with an emphasis on additional language acquisition in adolescence and adulthood. Students explore foundational theories of psychology, cognitive linguistics, and sociolinguistics that underlie second language instruction.

Prerequisite: None

Cross-Listed as: This course will be cross-listed/bridged with a new grad-level equivalent (LING 507), for which a separate ADD course form will be submitted.

**LING 412 - Syntax ( )**

Concepts and formalisms in grammar. Problem solving in English syntax. Contemporary developments in syntactic theory.

Prerequisite: Students need a background in basic linguistic analysis in order to be prepared for this course.

Cross-Listed as: This course will be a bridge/cross-listed course with the graduate-level equivalent (LING 512), which already exists.

**LING 413 - Phonology ( )**

Characteristics of the sound systems of human languages. Special attention to the sound system of English and how it fits into universal patterns. Generative and post-generative phonologies.

Prerequisite: The content of this course requires a solid foundation in basic principles of linguistic analysis.

Cross-Listed as: This course will be bridged/cross-listed with the existing LING 513, an equivalent graduate course.

#### **LING 414 - Variation and Discourse ()**

Examination of the interlocking nature of language and society, with particular emphasis on linguistic variation (dialectology) and the analysis of linguistic interaction (discourse). Students explore variation at all levels of linguistic structure and produce analyses of conversations that they record and transcribe.

Prerequisite: The content of this course requires a background in the principles of linguistic analysis (LING 400).

Cross-Listed as: This course will be bridged with another new course at the grad level that covers equivalent content (LING 514).

#### **LING 415 - Language Policy and Planning ()**

The theories and processes of language policy and planning, with particular emphasis on language education in diverse contexts. Students explore corpus and status planning and produce a research paper on a selected policy position.

Cross-Listed as: This course will be bridged/cross-listed with a grad-level equivalent (LING 515), which will be revised to better match this course.

#### **LING 430 - Topics in Applied Linguistics (3)**

Selected topics in applied and theoretical linguistics. Students may take this course under different topics for a maximum of 6 credits.

Prerequisite: None

Cross-Listed as: Linked to the graduate equivalent, LING 530.

#### **LING 431 - The History of the English Language (3)**

Linguistic and sociolinguistic features of the English language across its recorded history, with emphasis on linguistic changes from its Germanic roots to the pluricentric global language of today.

Prerequisite: None

Cross-Listed as: To make it accessible to graduate students a bridge to a new LING 531 version of the content will be added.

#### **LING 435 - Second Language Testing ()**

Linguistic and academic assessment of non-native speakers of any language, with an emphasis on English learners. Determination of language dominance and proficiency of bilinguals. Preparation of language tests.

Prerequisite: This course requires foundational knowledge of linguistics analysis (LING 400) and L2 acquisition (LING 407)

Cross-Listed as: This course will be linked to a grad-level bridge course, LING 535.

#### **LING 437 - Introduction to Multilingualism (3)**

Exploration of what it means to speak more than one language from both theoretical and applied perspectives, focusing on how multiple languages share the space in one brain. Students will examine contributions from linguistics and psychology, as well as the implications of these contributions to education.

Prerequisite: None

Cross-Listed as: LING 537

#### **LING 438 - Content-Based Second Language Instruction ()**

Practical strategies for teaching language learners (including English learners) of varying ages and backgrounds in a wide range of content (i.e. non-language-specific) areas.

Prerequisite: Students in this teaching methods course will need a foundation in basic language teaching methods (LING 406)

Cross-Listed as: This course will have an associated bridge course at the grad level, LING 538.

#### **LING 450 - Internship in Applied Linguistics ()**

Students will teach or work in an environment directly related to TESOL or applied linguistics, under supervision of an Applied Linguistics faculty member.

Prerequisite: Permission of the program coordinator.

#### **LING 500 - Advanced Linguistic Analysis ()**

Intensive analysis (syntactic, morphological, phonological) of selected data from English and other languages, with particular emphasis on analytical skills and dominant theories. No credit given to those with credit in LING 400.

#### **LING 506 - Methods in TESOL I ()**

Principles, methods, and materials for teaching English as an additional language at all levels, including basic skills in lesson planning and implementation. Students will plan

and implement mini-lessons, integrating pedagogical and linguistic principles, assessment strategies, and concepts of intercultural communication in the TESOL classroom. No credit given to those with credit in LING 406 or LING 496.

### **LING 507 - Second Language Acquisition Theory ( )**

Major theories of language acquisition and their potential application to language learning, with an emphasis on additional language acquisition in adolescence and adulthood. Students explore foundational theories of psychology, cognitive linguistics, and sociolinguistics that underlie second language instruction. No credit given to those with credit in LING 407 or LING 497.

### **LING 512 - Syntactic Theory (3)**

Concepts and formalisms in grammar. Problem solving in English syntax. Contemporary developments in syntactic theory. No credit given to those with credit in LING 412.

Prerequisite: LING 500

Cross-Listed as: Bridge course with LING 412.

### **LING 513 - Phonological Theory (3)**

Characteristics of the sound systems of human languages. Special attention to the sound system of English and how it fits into universal patterns. Generative and post-generative phonologies. No credit will be given to those with credit in LING 413.

Prerequisite: LING 500

Cross-Listed as: Bridge course with LING 413.

### **LING 514 - Variation and Discourse Theory ( )**

Examination of the interlocking nature of language and society, with particular emphasis on linguistic variation (dialectology) and the analysis of linguistic interaction (discourse). Students explore variation at all levels of linguistic structure and produce analyses of conversations that they record and transcribe. No credit given to those with credit in LING 414.

Prerequisite: LING 500

Cross-Listed as: Bridge with LING 414

### **LING 515 - Language Policy and Planning Theory (3)**

The theories and processes of language policy and planning, with particular emphasis on language education in diverse contexts. Students explore corpus and status planning and produce a research paper on a selected policy position. No credit given to those with credit in LING 415.

Cross-Listed as: Bridge with LING 415.

### **LING 521 - Meeting the Needs of ELLs in the Classroom (1)**

Research-based practices and strategies to support ELLs in classroom settings. Taught in an intensive workshop format.

Prerequisite: Admission to the MAT Program

### **LING 530 - Advanced Topics in Applied Linguistics (3)**

Selected topics in applied and theoretical linguistics. Students may take this course under different topics for a maximum of 6 credits, including topics taken under LING 430. No credit given to those with credit in LING 430 on the same topic.

Prerequisite: None

Cross-Listed as: Bridge with LING 430

### **LING 531 - English Historical Linguistics ( )**

Linguistic and sociolinguistic features of the English language across its recorded history, with an emphasis on theories of language change and temporal variability. No credit given to those with credit in LING 431.

Cross-Listed as: Bridge course with LING 431.

### **LING 533 - Second Language Composition (3)**

Psycholinguistics of writing in a second language. Principles, methods, and materials for teaching writing to students of English as a second or foreign language. The second language writing curriculum.

Prerequisite: LING 500 and LING 507

### **LING 535 - Second Language Assessment (3)**

Linguistic and academic assessment of non-native speakers of any language, with an emphasis on English. Determination of language dominance and proficiency of bilinguals. Preparation of language tests. No credit given to those with credit in LING 435.

Prerequisite: LING 500 and LING 507

Cross-Listed as: Bridge with LING 435.

### **LING 537 - Advanced Issues in Multilingualism (3)**

Advanced exploration of what it means to speak more than one language from both theoretical and applied perspectives, focusing on how multiple languages share the space in one brain. Students will examine contributions from linguistics and psychology, as well as the implications of these contributions to education. A



research project will be required as part of the course. This is a bridge course with LING 437.

Prerequisite: None

Cross-Listed as: LING 437

### **LING 538 - Methods in Second Language Content Instruction ()**

Practical strategies for teaching language learners (including English learners) of varying ages and backgrounds in a wide range of content (i.e. non-language-specific) areas. No credit given for those with credit in LING 438.

Prerequisite: LING 506

Cross-Listed as: Bridge with LING 438

### **LING 550 - Internship ()**

Students will teach or work in an environment directly related to TESOL or applied linguistics, under supervision of an Applied Linguistics faculty member.

Prerequisite: Permission of the program coordinator.

Cross-Listed as: Bridge with LING 450.

### **LING 596 - Methods in TESOL II (3)**

Advanced theories, methods, and materials for teaching English to non-native-speaking students at all levels. Students will also apply this knowledge in practical teaching experiences as part of the course.

Prerequisite: LING 496 or LING 506

### **LING 598 - Research in Applied Linguistics (3)**

Covers research topics and methods in applied linguistics and TESOL. Students produce a research proposal with detailed introduction and methodology.

Prerequisite: LING 500, LING 506, and LING 507

### **LING 599 - Thesis (3)**

Preparation of the thesis under supervision of the thesis advisor.

Prerequisite: Admission to the M.S. program in TESOL, a minimum of 15 credits of graduate coursework in TESOL and applied linguistics, permission of department chair, and a 3.00 overall GPA.

## **LSC - Library Science**

### **LSC 150 - Library Research in the Digital Age (1)**

Introduction to the process of finding, evaluating and using information resources available across all formats (e.g., digital, print, video) that facilitate undergraduate research. Emphasis is placed on concepts and techniques required to determine information need, develop search strategies, access and evaluate information resources, interpret citations, and understand issues of copyright. Additional topics may include research topic selection, digital literacy and using information ethically. Highly recommended for sophomores and juniors. This course is offered in an online, on-ground, and hybrid classroom environment.

Prerequisite: Open to all CCSU students.

### **LSC 160 - Information Exploration in the AI Era (3)**

This course provides a critical understanding of artificial intelligence (AI) within the broader information landscape. Emphasis is placed on ethically and effectively applying AI tools in finding, evaluating, and using information resources available across all formats (e.g., digital, print, video) that facilitate information exploration and discovery to make more informed decisions throughout life. Focal points include general education concepts such as ethical dimensions, information literacy, and critical thinking. This course explores the impact of cultural biases on algorithms and equitable access to information.

Prerequisite: None

## **LTN - Latino Studies**

### **LTN 110 - Introduction to Latino Studies (3)**

Introduction to the interdisciplinary study of the experience and condition of United States Latinos and Latinas, with focus on U.S. populations of Puerto Rican, Cuban, Central American, and Mexican Descent. Uses primarily social science models and scholarship in history, sociology, anthropology, economics, and political science but also considers arts, media, and humanities.

Prerequisite: None

### **LTN 250 - Latina Identity and Empowerment (3)**

This course focuses on Latina identity construction and social practices that can foster empowerment among Latino/a communities. The epistemological approach encourages students to assess course material and their own experiences from a critical viewpoint that seeks truth and knowledge (about Latinas and empowerment

strategies). Thus, the knowledge gained through course material will seek to be justified through research and through experiences with Latinas and community organizations. Topics that will be covered throughout the semester will revolve around the Latina population and include some of the following: sexuality, sexual behavior, youth and adolescence, portrayal in mass media, immigration, family, culture and the arts, music, the construction of identity, education, body image, work and globalization, and dance.

Cross-Listed as: Cross-listed with SOC 250. No credit for this course if you have credit for the cross-listed equivalent.

### **LTN 270 - Topics in Latino and Puerto Rican Studies (3)**

An interdisciplinary topics course for Latino and Puerto Rican Studies at the 200 level to be

Prerequisite: None

Cross-Listed as: Cross-listed with new and/or existing courses that focus on U.S. Latinos as offered by participating departments and affiliated Latino Studies Faculty.

### **LTN 309 - U.S. Immigration (4)**

Explores the sociological dynamics of coming to the U.S. and changing it. Includes such issues as undocumented immigration, the impact of immigration on the economy, and questions of assimilation. Cross-listed with SOC 309. No credit received by students who have received credit for SOC 309.

Prerequisite: SOC 110

Cross-Listed as: SOC 309

### **LTN 316 - History of the American West to 1890 (3)**

Surveys the history of the American West and its people to 1890. Provides a general structure of the American West and its political, economic, and social history with emphasis on the interaction of diverse cultures including Native Americans, Hispanics and Asians as America expanded its borders. The course will compare popular conceptions of the historical American West to the region's realities, diversity, and complexity.

Prerequisite: None

Cross-Listed as: Cross-listed with HIST 316. No credit may be received by students who have received credit for HIST 316.

### **LTN 317 - History of the American West from 1890 (3)**

Surveys the history of the American West and its people from 1890 to the 21st century. Provides a general structure of the American West and its political, economic, and social history with emphasis on the interaction of diverse cultures including Native Americans, Hispanics, and Asians in areas known today as the Plains, Southwest, and Northwest. Material will also examine the West and its myths as central to American culture and popular culture.

Prerequisite: None

Cross-Listed as: Cross-listed with HIST 317. No credit may be received by students who have received credit for HIST 317.

### **LTN 319 - Race, Ethnicity, and Migration in the U.S. (3)**

A social and cultural history of the U.S. that explores race, ethnicity, and migration in the formation of American identities from the colonial period to the present.

Prerequisite: None

Cross-Listed as: Cross-listed with HIST 319. No credit may be received by students who have received credit for HIST 319.

### **LTN 322 - Race and Ethnic Relations (3)**

Examines selected racial and ethnic groups, their history, social and ethnic patterns, and position in the social structure in the United States. Cross-listed with SOC 322. No credit received by students who have received credit for SOC 322.

Prerequisite: SOC 110 and SOC 212.

Cross-Listed as: Cross-listed with SOC 322.

### **LTN 347 - Latino/a Literature (3)**

Important U.S. Latino/a literary works in prose, poetry, drama, and essay.

Prerequisite: ENG 110.

Cross-Listed as: Cross-listed with ENG 347. No credit may be received by students who have received credit for ENG 347.

### **LTN 370 - Topics in Latino and Puerto Rican Studies (3)**

An interdisciplinary topics course for Latino and Puerto Rican Studies at the 300 level to be cross-listed with new and/or existing courses that focus on U.S. Latinos as offered by participating departments and affiliated Latino Studies Faculty.

Prerequisite: None

### **LTN 410 - Individual Study Project in Latino Studies (3)**

Upper-level undergraduate course focused on specific issue in Latino Studies using either disciplinary or interdisciplinary approaches. Special topics may be cross-listed with participating departments or developed specifically for Latino Studies. May be repeated with different topics.

Prerequisite: LTN 110; enrollment in Latino Studies Minor program.

### **LTN 470 - Topics in Latino Studies (3)**

Upper-level undergraduate course focused on specific issue in Latino studies using either disciplinary or interdisciplinary approaches. Special topics may be cross-listed with participating departments or developed specifically for Latino studies.

Prerequisite: None

### **LTN 480 - Latinos in North America (3)**

Examines Latinos and their ancestors in North America with concentration on civil rights, women, military service, labor, immigration, politics, and violence.

Prerequisite: HIST 301 or permission of Director of Latino Studies

Cross-Listed as: HIST 480

## **MATH - Mathematics**

### **MATH 099 - Elementary Algebra (3)**

Review of fundamental algorithms of whole numbers, integers, rational numbers, and elementary algebra. Students who are required to take MATH 099 must pass this course with a C- or better before successful completion of 24 hours of regular coursework. Letter grade will affect GPA as if MATH 099 were a three credit course, but these credits may not be used to fulfill the number of credits required for graduation. This course may not be used to meet the General Education requirement nor requirements for a major, a minor, or certification in mathematics. Remedial.

Prerequisite: None

### **MATH 101 - Intermediate Algebra (3)**

Credit for MATH 101 shall be granted only to transfer students and only in cases where there is no other appropriate algebra course transfer articulation. Review and extension of elementary algebra. A study of functions

including their algebraic properties and graphs. Quadratic equations and inequalities are solved and graphed. Graphing calculator required. No credit given to students with credit for MATH 115, MATH 116, MATH 119, MATH 123, MATH 124, MATH 125, MATH 135 or MATH 152. This course may not be used to meet the General Education requirement nor requirements for a major, a minor, or certification in mathematics.

Prerequisite: MATH 099 (C- or higher) or placement exam.

### **MATH 102 - Applied Algebra (3)**

An introduction to algebraic reasoning through quantitative analysis, problem solving, and modeling with linear, exponential, and quadratic functions. Students planning to take MATH 116 or MATH 119 must take MATH 103. No credit given to students with credit for MATH 115, MATH 116, MATH 119, MATH 123, MATH 124, MATH 125, MATH 135 or MATH 152. This course can be used to meet the General Education credit for Skill Area II but may not be used to meet requirements for a major, a minor, or certification in mathematics. General Education credits will not be given for both MATH 102 and MATH 103. No credit given for both MATH 101 and MATH 102.

Prerequisite: MATH 099 (C- or higher) or placement exam

### **MATH 103 - College Algebra (3)**

An enhancement of algebraic skills including factoring polynomials, simplifying rational expressions, solving quadratic equations, and reasoning with basic functions. This course is a prerequisite for MATH 116 and MATH 119. No credit given to students with credit for MATH 115, MATH 116, MATH 119, MATH 123, MATH 124, MATH 125, MATH 135 or MATH 152. This course can be used for General Education credit for Skill Area II but may not be used to meet requirements for a major, a minor, or certification in mathematics. General education credits will not be given for both MATH 102 and MATH 103. No credit given for both MATH 101 and MATH 103.

Prerequisite: MATH 099 (C- or higher) or placement exam

### **MATH 105 - Survey of Mathematics for Liberal Arts (3)**

This course is intended for those students who are not majoring in mathematics or the natural sciences. Provides students with an introduction to a broad range of topics in mathematics. No credit given to students with credit for MATH 218. May not be used to meet the requirements for a major, a minor, or certification in mathematics. CSUS Common Course.

Prerequisite: MATH 101 (C- or higher) or MATH 102 (C- or higher) or MATH 103 (C- or higher) or placement exam.

**MATH 106 - Mathematical Topics for Liberal Arts (3)**

Topics in mathematics suitable for students majoring in other disciplines and not covered in other courses. Topics may include: the mathematics of music, mathematics and the arts, game theory, cryptography, and mathematical modeling. May be repeated with different topics for a maximum of six credits.

Prerequisite: MATH 101 (C- or higher) or MATH 102 (C- or higher) or MATH 103 (C- or higher) or placement exam.

**MATH 110 - Finite Mathematics (3)**

Topics to include those chosen from logic, theory of sets, counting techniques, probability theory, linear equations, linear programming, matrix algebra, graph theory, and Markov chains. Emphasis placed on the construction of mathematical models and their applications. Can be used to meet requirements of a major or minor in mathematics only for students seeking elementary, early childhood or middle level certification. Not recommended for use in meeting certification requirements for secondary school mathematics.

Prerequisite: MATH 101 (C- or higher) or MATH 102 (C- or higher) or MATH 103 (C- or higher) or placement exam.

**MATH 113 - Structure of Mathematics I: Number Systems (3)**

Methods of teaching inductive reasoning, sets, numeration, number theory, integer properties and operations, rational number properties, and numeration, through a problem solving approach. Observations in elementary mathematics classrooms are required. No credit given to those with credit for MATH 313. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: MATH 101 (C- or higher) or MATH 102 (C- or higher) or MATH 103 (C- or higher) or placement exam; open only for students seeking elementary certification.

**MATH 115 - Trigonometry (3)**

Study of relations, functions (special emphasis on the six trigonometric functions), inverses, and graphs. An analytic approach to trigonometry using circular functions, angular measures, identities, graphs and inverses. No credit given to students with credit for MATH 119, MATH 124, MATH 135, or MATH 152. Can be used to meet requirements of a

major or minor in mathematics only for students seeking elementary, early childhood or middle level certification. Not recommended for use in meeting certification requirements for secondary school mathematics.

Prerequisite: MATH 101 (C- or higher) or MATH 102 (B- or higher) or MATH 103 (C- or higher) or placement exam.

**MATH 116 - Pre-Calculus Mathematics (3)**

Properties of the real numbers, relations and functions, exponential and logarithmic functions, mathematical induction, and conics. No credit given to students with credit for MATH 119, MATH 124, MATH 125, MATH 135 or MATH 152.

Prerequisite: MATH 101 (C- or higher) or MATH 103 (C- or higher) or placement exam.

**MATH 119 - Pre-Calculus with Trigonometry (4)**

Intensive preparation course for the calculus sequence. Properties of functions including polynomial, rational, periodic, exponential and logarithmic, and rate of change change. Also covers trigonometry, including the unit circle, right triangles, and analytic trigonometry. No credit given for students with credit for MATH 115, MATH 116, MATH 124, MATH 135 or MATH 152. CSUS Common Course.

Prerequisite: MATH 101 (B- or higher) or MATH 103 (B- or higher) or placement exam.

**MATH 120 - Problem Solving I (1)**

Polya's four-step approach to problem solving applied to non-routine problems in algebra, geometry, and trigonometry. Strong emphasis placed on clarity, comprehensiveness, and correct use of mathematical terminology in student solutions. One two-hour lab per week.

Prerequisite: MATH 115 (C- or higher) or MATH 119 (C- or higher) or placement exam.

**MATH 123 - Applied Business Mathematics (3)**

Elements of calculus and finite mathematics with emphasis on applications to problems arising in business. Topics include polynomial and rational functions, modeling, limits, continuity, derivatives, maxima and minima of functions, matrices, systems of linear equations, linear inequalities, and linear programming. Exponential and logarithmic functions will be studied if time permits. No credit given for students with credit for MATH 124, MATH 125, MATH 135 or MATH 152.

Prerequisite: MATH 101 (C- or higher) or MATH 102 (C- or higher) or MATH 103 (C- or higher) or placement exam.

**MATH 124 - Applied Calculus with Trigonometry (4)**

Polynomial, rational, exponential, logarithmic and trigonometric functions. and their application to the natural sciences. The concepts of rate of change, limit, and derivative are emphasized. Integration is introduced. No credit given to students with credit for MATH 115, MATH 119, MATH 125, MATH 135, or MATH 152. Can be used to meet requirements of a major or minor in mathematics only for students seeking elementary, early childhood, or middle level, certification. Not recommended for use in meeting certification requirements for secondary school mathematics.

Prerequisite: MATH 101 (C- or higher) or MATH 102 (B- or higher) or MATH 103 (C- or higher) or placement exam.

**MATH 125 - Applied Calculus (3)**

This course is for students majoring in the social, biological, behavioral, and managerial sciences. Topics include review of algebra, differentiation, and integration. Graphing calculator required. No credit given to students with credit for MATH 124, MATH 135, or MATH 152. Can be used to meet requirements of a major or minor in mathematics only for students seeking elementary, early childhood or middle level certification. Not recommended for use in meeting certification requirements for secondary school mathematics.

Prerequisite: MATH 101 (C- or higher) or MATH 102 (B- or higher) or MATH 103 (C- or higher) or placement exam.

**MATH 135 - Applied Engineering Calculus I (3)**

This course is for students majoring in engineering technology. Topics include analytical geometry, limits, and differentiation. Exponential, logarithmic, and trigonometric functions are included. Applications to physics and engineering problems will be emphasized. No credit given to students with credit for MATH 124, MATH 125, or MATH 152.

Prerequisite: MATH 119 (C- or higher) or MATH 115 (C- or higher) and MATH 116 (C- or higher) or MATH Placement Exam.

**MATH 136 - Applied Engineering Calculus II (3)**

Continuation of MATH 135. Topics include the integral, techniques of integration, application of integrals, and multivariate calculus. No credit given to students with credit for MATH 221. Engineering Technology students with credit for MATH 125 prior to Spring 2003 will be admitted.

Prerequisite: MATH 135 (C- or higher) or permission of instructor.

**MATH 152 - Calculus I (4)**

Limits and continuity, derivatives, applications of derivatives including transcendental functions. Antiderivatives, definite integrals with applications. CSUS Common Course.

Prerequisite: MATH 115 (C- or higher) and MATH 116 (C- or higher), or MATH 119 (C- or higher).

**MATH 211 - Clinical Experience in Mathematics Education I (1)**

Provides prospective teachers of mathematics with an opportunity to gain practical experience in a tutorial setting. Students are trained as tutors for level 1 CRLA (College Reading and Learning Association) certification and are assigned to work a minimum of 3 hours per week in the Learning Center primarily helping students taking MATH 099 and MATH 101.

Prerequisite: MATH 152 and MATH 120 (C- or higher).

**MATH 213 - Structure of Mathematics II: Probability & Geometry (3)**

Problem solving approach to deductive reasoning and logic, probability, descriptive statistics, point set, metric, analytic and transformational geometry; and properties of plane and solid figures. Observations in elementary mathematics classrooms are required. No credit given to those with credit for MATH 313. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: MATH 113 (C- or higher); open only for students seeking elementary certification.

**MATH 217 - Discrete Mathematics for Computer Science (4)**

This course is designed to serve Computer Science majors. Its goal is to familiarize the students with notions like basic logic theory, set theory (including here functions and relations), graphs and trees, and discrete probability, which will be dealt with in depth in future Computer Sciences classes. Proof-writing techniques are also discussed. The course topics follow the Curricula

Recommendations of the ACM (Association for Computing Machinery).

MATH 217 cannot be taken as credit for MATH 218. Math majors or double majors in CS and Math must take MATH 218.

Prerequisite: MATH 119 with grade of C- or higher, or MATH 115 and MATH 116 both with grade C- or higher.

#### **MATH 218 - Discrete Mathematics (4)**

Topics include logic, induction, recursion, combinatorics, matrices, graph theory, set theory, and number theory.

Prerequisite: MATH 152 with a grade of C- or higher.

#### **MATH 220 - Problem Solving II (1)**

Polya's four-step approach to problem solving applied to non-routine problems in algebra, geometry, trigonometry, and calculus. Strong emphasis placed on clarity, comprehensiveness, and correct use of mathematical terminology in student solutions. One two-hour lab per week.

Prerequisite: MATH 120 and MATH 152 both with grades of C- or higher.

#### **MATH 221 - Calculus II (4)**

Further application of integration and techniques of integration. Improper integrals and L'Hopital's. Infinite series including Taylor series and representation of functions.

Prerequisite: MATH 152 (C- or higher).

#### **MATH 222 - Calculus III (4)**

Continuation of MATH 221. Parametric equations, polar coordinates, two- and three-dimensional vectors, three-dimensional analytic geometry, functions of several variables, partial differentiation, double and triple integrals.

Prerequisite: MATH 221 (C- or higher).

#### **MATH 226 - Linear Algebra and Probability for Engineers (4)**

Introduction to the mathematics required for engineering, including basic linear algebra and topics in probability and statistics. Emphasis on applications.

Prerequisite: MATH 221 (C- or higher).

#### **MATH 228 - Introduction to Linear Algebra (4)**

Vector spaces, systems of linear equations, determinants, linear transformations, and matrices are considered. CSUS Common Course.

Prerequisite: MATH 152 and MATH 218 both with grades of C- or higher.

#### **MATH 300 - Mathematics Internship (3)**

Designed to provide students an opportunity to work in a business environment directly related to their major or specialization. Each student will apply his/her classroom knowledge in mathematics, actuarial science, operations research, and/or statistics in an appropriate business setting. Graded on pass-fail basis only.

Prerequisite: Permission of the department and a 3.00 GPA in mathematics.

#### **MATH 305 - Structure of Mathematics III: Number Patterns (3)**

Exploratory approach to number patterns and functions. Topics include prime and composite numbers, perfect numbers, Fibonacci numbers, figurative numbers, Pythagorean triples, and sequences. Calculators will be used.

Prerequisite: MATH 213, and at least one of the following: MATH 115, MATH 116 (formerly MATH 121), or MATH 119 (all with C- or higher); only open for students seeking elementary certification.

#### **MATH 306 - Structure of Mathematics IV: Development of Geometric Ideas (3)**

Exploration of geometric concepts via hands-on activities and computer software. Topics include congruence, similarity, transformations, tessellations, and fractals.

Prerequisite: MATH 213, and at least one of the following: MATH 115, MATH 116, or MATH 119 (all with C- or higher); open only for students seeking elementary certification.

#### **MATH 307 - Topics in Elementary Mathematics (1-3)**

Selected elementary topics in mathematics covering specialized areas not offered in the regular curriculum. May be repeated with different topics for a maximum of 3 credits. Can be used to meet requirements of a major or minor in mathematics only for students seeking elementary, early childhood or middle level certification. Not recommended for use in meeting certification requirements for secondary school mathematics.

Prerequisite: Permission of instructor.

**MATH 311 - Clinical Experience in Mathematics Education II (1)**

Tutors are trained at level 2 (CLRA certification) and assigned to tutor in a middle school or high school setting. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: MATH 211 (B- or higher).

**MATH 313 - Number Systems from an Advanced Viewpoint (3)**

Examination of the content of elementary school mathematics from the point of view of teachers of secondary mathematics. Taken concurrently with either MATH 327 or MATH 328. Due to field experience in this class, proof of fingerprinting is required prior to the beginning of class. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: MATH 211 and MATH 218 and MATH 221 (all with a grade of C- or higher).

**MATH 320 - Problem Solving III (1)**

Polya's four-step approach to problem solving applied to non-routine problems in algebra, geometry, trigonometry, calculus, discrete mathematics, and linear algebra. Strong emphasis placed on clarity, comprehensiveness, and correct use of mathematical terminology in student solutions. One two-hour lab per week.

Prerequisite: MATH 220 (C- or higher) and MATH 228 (C- or higher).

**MATH 327 - Curriculum & Technology in Secondary Mathematics I (3)**

Intended for students seeking certification to teach mathematics at the secondary level. Examination of the content of the mathematics curriculum in grades 7-12, with emphasis on the development of algebraic thinking across grade levels, probability and statistics, and the use of explorations, Geometer's Sketchpad, and graphing calculators. Graphing calculator required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: MATH 218 (C- or higher) or MATH 221 (C- or higher).

**MATH 328 - Curriculum & Technology in Secondary Mathematics II (3)**

Intended for students seeking certification to teach mathematics at the secondary level. Examination of the content of the mathematics curriculum in grades 7-12, with emphasis on the teaching of geometry, and discrete mathematics, including the use of geometric drawing programs, and the internet. Geometer's Sketchpad and graphing calculator required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: MATH 218 (C- or higher) or MATH 221 (C- or higher).

**MATH 344 - Mathematics and Diverse Cultures (3)**

Mathematical systems of different cultures around the world and their contributions to the development of mathematics. Recent trends in ethnomathematics research and ideas on multiculturalizing the mathematics classroom will also be discussed.

Prerequisite: MATH 152 or MATH 125 or MATH 305 all with grades of C- or higher.

**MATH 355 - Introduction to Differential Equations with Applications (4)**

Qualitative, analytical, and numerical methods for first and second order ordinary differential equations and first order linear systems. Laplace transforms and the application to differential equations. Introduction to software used to analyze and solve differential equations. Additional topics if time permits.

Prerequisite: MATH 221 and either MATH 226 or MATH 228 (C- or higher).

Corequisite: MATH 226 or MATH 228 can be taken concurrently.

**MATH 366 - Introduction to Abstract Algebra (4)**

Certain fundamental structures such as groups, rings, integral domains, and fields are considered.

Prerequisite: MATH 218 (C- or higher).

**MATH 377 - Introduction to Real Analysis (4)**

In-depth introduction to the theory of functions, including integration, differentiation, and series.

Prerequisite: MATH 218 (C- or higher) and MATH 221 (C- or higher)

**MATH 383 - College Geometry (3)**

Historical overview of the development of geometry since the time of Euclid. In-depth study of selected topics from Euclidean geometry and the role of axiomatics. Also covers material from at least one of the following non-Euclidean geometries; finite, projective, spherical, and hyperbolic.

Prerequisite: MATH 328 or MATH 366 or MATH 377 (all with C- or higher).

**MATH 398 - Independent Study in Mathematics (1-3)**

Special independent work to meet individual interest in areas not covered by the regular curriculum. Work will be under the supervision of a faculty member and in an area and for an amount of credit agreed upon prior to registration for the course.

Prerequisite: MATH 228 or MATH 366, and a 3.00 G.P.A. in mathematics and permission of instructor.

**MATH 400 - Introduction to Mathematica (4)**

Introduction to symbolic computation package Mathematica. Emphasis on applications and independent research.

Prerequisite: MATH 221 and either MATH 228 or MATH 226 (C- or higher), or admission to MA or MS program in math

Notes:

Course may be taken for Graduate credit

**MATH 409 - Mathematics through Computers (3)**

Exploration of computer software, such as Geometer's Sketchpad, Logo, and Excel, and the use of Internet sources to promote better understanding of mathematical concepts and algorithms. Restricted to students seeking certification.

Prerequisite: MATH 305 or MATH 306; MATH 116, or MATH 119 (all with C- or higher).

**MATH 411 - Clinical Experience in Mathematics Education III (1)**

Tutors are assigned to work in the Learning Center and may tutor students in courses up through MATH 152. Students who have not had Level 2 CLRA certification training receive the same training as students taking MATH 311.

Prerequisite: MATH 211 (B- or higher) and MATH 221 (C- or higher).

**MATH 412 - Elementary Mathematical Methods (3)**

Concepts underlying contemporary mathematics curriculum for elementary grades. Appropriate methods for developing concepts, through problem solving, including the meaning of operations and procedures in arithmetic. This course is for teacher certification only and graduate credit will not be granted. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: MATH 213 (C- or higher); open only for students seeking elementary certification.

**MATH 414 - Teaching Mathematics in the Middle School (3)**

This course will focus on pedagogical techniques specific to contemporary mathematics programs in the middle school with emphasis on the structure of the mathematics content and equitable teaching practices used for developing conceptual understanding. This course is for



teacher certification only and graduate credit will not be granted. Thirty hours of field experience at the Middle School level is required. Taken concurrently with EDTE 316. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: MATH 305 or MATH 327 (can also be taken concurrently) and admission to the Professional Program.

### **MATH 415 - Teaching Mathematics in the High School (3)**

This course will focus on pedagogical techniques specific to contemporary mathematics programs in the high school with emphasis on both the structure of the mathematics content and equitable teaching practices used for developing conceptual understanding. This course is for teacher certification only and graduate credit will not be granted. Thirty hours of field experience at the high school level is required. Taken concurrently with EDSC 425. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: MATH 328 and admission to the Professional Program.

### **MATH 421 - History of Mathematics (3)**

Development of mathematics is traced from arithmetic of commerce, astronomy, geometry, and trigonometry in Babylonia, Egypt, Greece, and Rome to the later accomplishments in algebra, geometry, and calculus.

Prerequisite: MATH 221 or for graduate students, admission to M.A., Mathematics or the M.S., Mathematics (for certified secondary teachers).

Notes:

Course may be taken for graduate credit.

### **MATH 422 - Introduction to Mathematical Software (1)**

This course introduces students to powerful mathematical software such as Mathematica and helps them to incorporate complex computational and graphical representations into projects in their own fields of interest.

Prerequisite: MATH 221 and either MATH 228 or MATH 226 with a grade of C- or higher or admission to a graduate program.

### **MATH 426 - Student Teaching Seminar (1)**

Examination of problems which arise in secondary mathematics instruction. Taken concurrently with EDSC 435.

Prerequisite: MATH 313 and MATH 414 and MATH 415 (all with a grade of C- or higher).

### **MATH 428 - Computational Linear Algebra (4)**

Driven by the needs of applications, this course studies reliable and computationally efficient techniques for practical linear algebra problems arising in sciences and engineering. Topics include vector spaces, orthogonal matrices, eigenvalues and eigenvectors, Q-R factorization, singular value decompositions, least-squares fits, generalized inverse, systems of linear differential equations, special matrices, precision and computational cost of algorithms. Students will learn how to approach a large variety of problems and implement an appropriate technique and software as needed.

Prerequisite: MATH 228 (C- or higher) or MATH 226 (C- or higher) or permission of the Department Chair

### **MATH 440 - Selected Topics in Mathematics (1-3)**

Selected topics in mathematics covering specialized areas not covered in regular offerings or that go beyond that provided for in the standard curriculum. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: Permission of instructor.

Notes:

Course may be taken for graduate credit.

### **MATH 449 - Mathematics Laboratory for Elementary School (3)**

Provides teachers in elementary school with the opportunity to make mathematical materials useful in teaching elementary mathematics. Each participant constructs mathematical models and manipulatives appropriate to his/her teaching level and interest. Mathematical projects and educational implications are discussed. Can be used to meet the requirements for a major or minor in mathematics only for students seeking elementary, early childhood or middle level certification. Not recommended for use in meeting requirements for secondary school mathematics.

Prerequisite: MATH 412, MATH 414 or MATH 327 or equivalent and student teaching.

Notes:

Course may be taken for graduate credit.

#### **MATH 450 - Research Seminar (4)**

An introduction to mathematical scholarship: reading research literature, engaging in analysis and discovery, making conjectures, scholarly writing with formal proofs, exploring and presenting topics outside the standard curriculum. Topics will vary based on student and instructor interest. This is a capstone course for the BA major. Class is limited to 15 students.

Prerequisite: MATH 366 and MATH 377 (both with grades of C- or higher), one of which may be taken concurrently.

#### **MATH 454 - Differential Equations and Dynamical Systems (4)**

Driven by the needs of applications, this course provides an introduction to dynamical systems. The emphasis is on nonlinear systems; topics include linearization near equilibria, stability properties, limit cycles and bifurcations, Lorentz equations, and chaos. Both analytical and numerical techniques will be used. Students will learn how to use a software to implement numerical methods and visualize solutions. Examples of applications in mathematics, physics, chemistry, biology, biomedical engineering, mechanical engineering, neuroscience, and economics are included.

Prerequisite: MATH 355 (C- or higher), and either MATH 228 (C- or higher) or MATH 226 (C- or higher); or, permission of the Department Chair

#### **MATH 455 - Introduction to Partial Differential Equations with Applications (4)**

Introduction to analytical, geometric, and numerical methods for solving partial differential equations. Basic models of physical systems using partial differential equations. Introduction to software used for solving partial differential equations.

Prerequisite: MATH 355 (C- or higher) or permission of department chair.

Notes:

Course may be taken for graduate credit.

#### **MATH 468 - Symbolic Logic (3)**

Introduction to truth, validity and argument. Methods of deduction, propositional functions and quantifiers, logic of relations, deductive systems, and propositional calculus.

Prerequisite: MATH 366 or equivalent.

Notes:

Course may be taken for graduate credit.

#### **MATH 469 - Number Theory (3)**

Elementary theory of numbers. Divisibility, prime numbers, Fundamental Theorem of Arithmetic, congruences, Diophantine equations, quadratic residues and continued fractions are among topics considered.

Prerequisite: MATH 366 or equivalent.

Notes:

Course may be taken for graduate credit.

#### **MATH 477 - Numerical Analysis (3)**

Selected topics including difference operators, iterative methods of finding zeros of functions, interpolation and polynomial approximation, numerical integration and differentiation, matrices, and systems of linear equations. No credit given to students with credit for CS 254.

Prerequisite: MATH 221 and CS 151 or permission of instructor.

Notes:

Course may be taken for graduate credit.

#### **MATH 478 - Fourier Analysis (4)**

A study of the Fourier transform, a tool which has numerous scientific applications. Emphasis is on knowing when, where, why and how to utilize the general principles and appropriate techniques to deal with various practical engineering and science problems. Students will gain familiarity with Matlab software which is used in engineering, science, and economics worldwide.

Prerequisite: MATH 221 (C- or higher), and either MATH 228 (C- or higher) or MATH 226 (C- or higher); or, permission of Department Chair.

#### **MATH 480 - Senior Project in Applied Mathematics (3)**

A study of how to formulate mathematical models of real-world problems, solve them using analytical and numerical techniques, and analyze and their results in a clear understandable way. Students will select a problem from a field such as physics, engineering, biology and

economics, choose a mathematical method for its solution, solve the problem analytically or numerically, and present their results to their peers. Enrollment limited to 15 students.

Prerequisite: MATH 455 (C- or higher), or permission of Department Chair.

#### **MATH 483 - Introduction to Topology (4)**

An introduction to topological spaces, continuous functions, connectedness, compactness, and quotient spaces. Other topics may include Euler characteristic and the topological classification of closed surfaces.

Prerequisite: MATH 377 with a C- or better, or permission of instructor.

#### **MATH 485 - Introduction to Differential Geometry (4)**

This course discusses the classical theory of curves and surfaces in space and introduces the students to the basic concepts of Riemannian geometry including differentiable manifolds, the metric tensor, the Levi-Civita connection, and the Riemann curvature tensor.

Prerequisite: MATH 222 Calculus III, and either MATH 226 Linear Algebra & Probability for Engineers or MATH 228 Introduction to Linear Algebra (all with a grade of C- or higher). Admission to a Master's program is also an acceptable prerequisite.

#### **MATH 491 - Advanced Vector Calculus (3)**

Topics from continuity and differentiability of functions of several variables, exterior differential forms, multiple and iterated integration, line integrals, Gauss', Green's, and Stokes' theorems.

Prerequisite: MATH 222 or permission of instructor.

Notes:

Course may be taken for graduate credit.

#### **MATH 500 - Mathematics Practicum (3)**

Supervised application of academic knowledge to an employment environment related to their field of study.

Prerequisite: Admission to the M.A. program in mathematics and permission of the department.

#### **MATH 502 - Modeling with Mathematics in STEM Education (3)**

Designed for K-12 in-service or pre-service teachers in a STEM field. Students will deepen their understanding of core mathematics concepts through mathematical modeling and build connections to other STEM fields.

Students will engage in the mathematical modeling cycle in a variety of STEM contexts and learn how to implement appropriate modeling tasks for their grade-level specializations. The course topics span the K-12 mathematics curriculum including geometry, patterning and functions, statistics and discrete mathematics. The relationship between the mathematical modeling cycle and Next Generation Science Standards will be explored.

Prerequisite: Enrollment in a graduate program at CCSU or permission of instructor.

Cross-Listed as: This course is cross-listed with STEM 502. No credit is given if this other course has been taken.

#### **MATH 504 - Topics in Mathematics (1-3)**

Topics in mathematics appropriate for in-service and pre-service graduate certification students who are not covered in regular course offerings. May be repeated under different topics for a maximum of 6 credits.

Prerequisite: Permission of instructor.

#### **MATH 506 - Teaching Number Concepts in the Elementary Grades (3)**

NCTM Standards-based instructional practices that promote the development of number sense; operations with whole numbers, decimal numbers and common fractions; problem solving; and graphical representations in the elementary grades.

Prerequisite: Admission to M.S. in mathematics for certified elementary teachers.

#### **MATH 507 - Teaching Geometry & Measurement in the Elementary Grades (3)**

NCTM Standards-based instructional practices that promote understanding of key concepts in geometry and measurement in the elementary grades.

Prerequisite: Admission to M.S. in Mathematics for certified elementary teachers.

#### **MATH 508 - Teaching Probability & Statistics in the Elementary Grades (3)**

NCTM Standards-based instructional practices that promote understanding of key concepts in probability and statistics in the elementary grades.

Prerequisite: Admission to M.S. in Mathematics for certified elementary teachers.

**MATH 509 - Teaching Algebraic Thinking in the Elementary Grades (3)**

NCTM Standards-based instructional practices that promote algebraic thinking in the elementary grades.

Prerequisite: Admission to M.S. in Mathematics for certified elementary teachers.

**MATH 510 - Mathematics through Technology (3)**

Designed for teachers certified to teach elementary and middle school grades. Mathematics content and pedagogy course with focus on technology in the teaching and learning of mathematics. Uses Common Core State Standards - Math and International Society of Technology and Education (ISTE) Standards.

Prerequisite: Admission to M.S. in Mathematics for certified elementary and middle school teachers.

**MATH 515 - Abstract Algebra I (4)**

Group Theory: normal subgroups, quotient groups, cyclic groups, permutation groups, classical isomorphism theorems, Sylow theorems, finitely generated abelian groups, groups of small order, group actions. Introduction to Ring Theory: integral domains, fields, ring homomorphisms, and ideals.

Prerequisite: MATH 366 or permission of instructor.

**MATH 516 - Abstract Algebra II (4)**

Ring Theory: unique factorization domains, principal ideal domains, Euclidean domains, polynomial rings. Modules and vector spaces. Field Theory: field extensions, Galois Theory. Additional topics if time permits.

Prerequisite: MATH 515

**MATH 519 - Principles of Real Analysis I (4)**

Rigorous study of the real number system, topological properties of the real line. Measure theory and the Lebesgue integral. Differentiation.

Prerequisite: MATH 377 or permission of instructor.

**MATH 520 - Principles of Real Analysis II (4)**

Topics include Banach spaces, topological spaces, general measure and integration theory.

Prerequisite: MATH 519

**MATH 523 - General Topology (4)**

Rigorous study of point-set topology. Topics include set theory, definitions and basic constructions of topological

spaces, separation axioms, continuity, metrizable, compactness, local compactness and connectedness.

Prerequisite: MATH 377 or permission of instructor.

**MATH 525 - Higher Geometry (3)**

Topics from higher-dimensional geometry. Foundations of several geometries and relationship of Euclidean geometry to other geometries. Projective properties in a Euclidean (metric) setting. Selected topics from synthetic and analytic projective geometry.

Prerequisite: MATH 221 or permission of instructor.

**MATH 526 - Complex Variables (4)**

An introduction to the theory of functions of a complex variable. Topics include the field of complex numbers, Cauchy-Riemann equations, complex analytic functions, elementary functions and their mapping properties, Cauchy integral formula, Taylor and Laurent series, residue theorem, and conformal mappings.

Prerequisite: MATH 222 or permission of instructor.

**MATH 534 - Techniques in Diagnosis and Remediation for the Teaching of Mathematics - K-12 (3)**

This course will train early childhood, elementary, middle and secondary teachers in diagnosis and remediation. The course will use a clinical case study approach so that each student will get practical, as well as theoretical experience. Topics include identifying the factors related to learning difficulties in mathematics in the cognitive and affective domains, diagnostic tests, identification of the underachiever, and case studies.

Prerequisite: Admission to M.S. in Mathematics for certified elementary or certified secondary teachers.

**MATH 536 - Teaching Number Concepts in the Middle Grades (3)**

NCTM Standards-based instructional practices that promote the development of number sense; operations with whole numbers, rational numbers, integers; problem solving; and graphical representations in the middle grades.

Prerequisite: Admission to M.S. in Mathematics for Certified Elementary School Teachers.

**MATH 537 - Teaching Geometry & Measurement in the Middle Grades (3)**

NCTM Standards-based instructional practices that promote understanding of key concepts in geometry and measurement in the middle grades.

Prerequisite: Admission to M.S. Mathematics for certified elementary teachers.

**MATH 538 - Teaching Probability & Statistics in the Middle Grades (3)**

NCTM Standards-based instructional practices that promote understanding of key concepts in probability and statistics in the middle grades.

Prerequisite: Admission to M.S. in mathematics for certified elementary teachers.

**MATH 539 - Teaching Algebraic Thinking in the Middle Grades (3)**

NCTM Standards-based instructional practices that promote algebraic thinking in the middle grades.

Prerequisite: Admission to M.S. in mathematics for elementary teachers.

**MATH 540 - Curriculum Problems in School Mathematics (3)**

Current issues in mathematics education. Study of some current major curriculum projects. Content basic to these programs is studied with emphasis on mathematical structure. Opportunity is provided for special investigation into topics of student's interest.

Prerequisite: Admission to M.S. in Mathematics for certified elementary or certified secondary teachers.

**MATH 543 - Secondary School Algebra with Technology from Advanced Viewpoint (3)**

Intended for in-service secondary school teachers and pre-service graduate certification students. Major objective is to broaden and deepen teacher's knowledge of the algebra topics encountered in secondary schools with particular emphasis on topics new to the curriculum and the uses of technology in teaching them.

Opportunities will be provided to discuss the NCTM standards and their implications for teachers.

Prerequisite: Admission to graduate certification program in mathematics or M.S. in Mathematics for certified secondary teachers.

**MATH 544 - Secondary School Geometry with Technology from an Advanced Viewpoint (3)**

For in-service mathematics teachers and graduate certification students in mathematics. Major objective is to expand teachers' knowledge of new topics and technology for teaching geometry. NCTM standards for geometry will be included.

Prerequisite: Admission to graduate certification program in mathematics or M.S. in Mathematics for certified secondary teachers.

**MATH 547 - Reflective Practice in Teaching Mathematics (3)**

Designed to help in-service teachers develop as reflective practitioners through the use of lesson logs/journals, narrative commentary, and examination of student work. Emphasis on relating instruction to major concepts of mathematics and their connections, selecting and implementing engaging tasks including culturally relevant tasks, designing appropriate assessments and determining meaningful feedback for students. This course is particularly helpful to teachers who are completing the requirements of the Teacher Education and Mentoring (TEAM) Program. Open to certified in-service teachers.

Prerequisite: None

**MATH 555 - Graduate Partial Differential Equations (4)**

Introduction to analytical, geometric, and numerical methods for solving partial differential equations. Basic models of physical systems using partial differential equations. Introduction to software used for solving partial differential equations. This is a link course with MATH 455, no credit given to students with credit for MATH 455.

Prerequisite: MATH 355 (C- or higher) or permission of department chair.

**MATH 569 - Graduate Number Theory (3)**

Elementary theory of numbers. Divisibility, prime numbers, Fundamental Theorem of Arithmetic, congruences, Diophantine equations, quadratic residues and continued fractions are among topics considered. This is a link course with MATH 469, no credit given to students with credit for MATH 469.

Prerequisite: MATH 366 or equivalent

**MATH 580 - Directed Study in Mathematics (1-3)**

A study of selected topics in mathematics. The area of study will depend on the instructor and the interests and needs of the student(s). May be repeated with different topics to a maximum of 6 credits.

Prerequisite: Permission of the instructor.

**MATH 585 - Graduate Differential Geometry (4)**

This course discusses the classical theory of curves and surfaces in space and introduces the students to the basic concepts of Riemannian geometry including differentiable

manifolds, the metric tensor, the Levi–Civita connection, and the Riemann curvature tensor. This is a linked course with MATH 485, no credit given to students with credit for MATH 485.

Prerequisite: MATH 222 and either MATH 226 or MATH 228 (all with a grade of C- or higher). Admission to a Master's program is also an acceptable prerequisite.

### **MATH 590 - Special Project in Mathematics (3)**

The study of an advanced topic in mathematics/mathematics education, approved by the student's graduate advisor and supervised by a faculty member. Requirements include preparation and oral presentation of a paper on the topic.

Prerequisite: Completion of at least 21 credits in the student's planned program of graduate study and a 3.00 overall GPA.

### **MATH 591 - Graduate Advanced Vector Calculus (3)**

Topics from continuity and differentiability of functions of several variables, exterior differential forms, multiple and iterated integration, line integrals, Gauss', Green's, and Stokes' theorems. This is a link course with MATH 491, no credit given to students with credit for MATH 491.

Prerequisite: MATH 222 or permission of instructor.

### **MATH 598 - Research in Mathematics Education (3)**

Course designed to familiarize graduate student with techniques and resources associated with research in mathematics and mathematics education. Opportunity for practical application will be provided.

Prerequisite: STAT 453 and permission of advisor.

### **MATH 599 - Thesis (Plan A) (3 OR 6)**

Preparation of thesis under guidance of thesis advisor for students completing master's requirements under M.S. and M.A. Plan A.

Prerequisite: Permission of the advisor, and a 3.00 overall GPA.

### **MATH 611 - Mathematics Curriculum K-8 Theory and Implementation (3)**

Examination of key questions of what mathematics should be taught in grades K-8. Mathematical foundations of exemplary elementary and middle schools curricula will be studied along with strategies to insure the development of students' deep and connected mathematical understanding.

Prerequisite: Admission to Sixth-Year Program in Mathematics Education Leadership.

### **MATH 613 - Research on the Learning of Mathematics (3)**

Exploration of theorists' perspectives on learning. Analysis of researchers' conceptual frameworks and methodology. Issues include learning of algorithms, building conceptual understanding, the use of concrete materials, and the role of group work, reflection, writing, discovery, dialogue, and listening.

Prerequisite: Admission to Sixth-Year Program in Mathematics Education Leadership and STAT 453 or permission of department chair.

### **MATH 614 - Research on the Teaching of Mathematics (3)**

Designed to acquaint educators with research on effective mathematics teaching practices. This course will focus on areas of research most useful in advancing classroom practices. All students will develop a research proposal.

Prerequisite: Admission to Sixth-Year Program in Mathematics Education Leadership and STAT 453 or permission of department chair.

### **MATH 615 - The Cultural Context of Mathematics Education (3)**

Explores the many aspects of cultural connections with mathematics. Topics may include the history of mathematics, comparative international studies and an introduction to ethnomathematics.

Prerequisite: Admission to Sixth-Year Program in Mathematics Education Leadership.

### **MATH 616 - Assessment in Mathematics Education (3)**

Use of varied assessments that probe students' mathematical understanding, provide effective feedback, improve questioning techniques, and use results to make instructional decisions will be explored. The entire range of assessments from those designed by the classroom teacher to state-mandated assessments will be considered.

Prerequisite: Admission to Sixth-Year Program in Mathematics Education Leadership.

### **MATH 622 - Internship in Mathematics Education Leadership (3)**

Supervised internship concerning leadership in promoting effective teaching and learning in mathematics. Students initiate and complete an action plan and professional portfolio. Mechanical Engineering

Prerequisite: Completion of 24 credits in Sixth-Year Program in Mathematics Education.

## **MAT - Master of Arts in Teaching**

### **MAT 510 - Research on Teaching Diverse Learners (5)**

Research-based introduction to teaching, learning theory, classroom implications of developmental and diversity issues, and personal stance. Focus on relating development and learning theory to classroom practice.

Prerequisite: Admission to the M.A.T program.

### **MAT 511 - Introduction to Special Education (1)**

Introduction to basic concepts, legal issues, and terminology related to teaching special learners in the regular classroom. Satisfactory completion of exit examination is required to pass the course.

Prerequisite: Admission to M.A.T. program.

### **MAT 515 - Advanced Assessment in Special Education (3)**

Review of the methods and materials used in assessing and evaluating the performance of students who may be eligible for special education. Topics include psychometric theory, selecting/administrating tests, scoring, interpreting and communicating test results/findings.

Prerequisite: Admission to MAT Program.

### **MAT 516 - Special Education Literacy Methods and Evidence-Based Practices (3)**

Methods in planning and implementing evidence-based reading and writing instruction in K-12 settings for students with special needs.

Prerequisite: Admission to MAT Program, RDG 508

### **MAT 517 - Special Education Content Methods and Evidence-Based Practices (3)**

Methods in planning and implementing evidence-based content area instruction in K-12 settings for students with special needs.

Prerequisite: Admission to MAT Program

### **MAT 520 - Design and Delivery of Instruction (4)**

Cross disciplinary study of design and delivery of instruction. Includes at least 45 hours of field experience in an assigned public school classroom, delivering lessons and observation by university instructor. Students must pass the field component to pass the course. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry

checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the M.A.T. program and MAT 510 (C or better).

Corequisite: MAT 530

### **MAT 522 - Field Experience in Schools (1-4)**

Fifteen hours of supervised field experience (per credit) in assigned educational setting on a schedule approved by the program coordinator. Focus on lesson planning, delivery, management, collaboration, and analysis of instruction within certification area. Includes an online planning component. May be repeated for up to 4 credits. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies. .

Prerequisite: Conditional admission to the M.A.T program and permission of program coordinator.

Corequisite: Any course in the M.A.T program

### **MAT 530 - Meeting the Needs of Special Learners in the Classroom (2)**

Study of strategies for meeting the needs of special learners in the regular classroom, emphasizing differentiation of instruction, assessment and management.

Prerequisite: Admission to the M.A.T. program and MAT 511 (C or better)

Corequisite: MAT 520

### **MAT 532 - Intervention Capstone I: Reading and Designing Educational Research (3)**

Develop ability to be discriminating consumers of educational research and teacher researchers. This is the first half of the program capstone requirement.

Prerequisite: Admission to the M.A.T program.

Corequisite: MAT 533

**MAT 533 - Field Experience in the Certification Area: English, History/Social Studies, Mathematics, Modern Language, Science, and Special Education (3)**

Two days (secondary education candidates) or four mornings (special education candidates) weekly supervised field experience in assigned public school certification area classroom. Focus on lesson planning, delivery, management, collaboration, and analysis of instruction. University supervisor observations and seminar. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the M.A.T program, MAT 520 and MAT 530 both with grades of C or higher.

Corequisite: MAT 531, MAT 532, MAT 534

**MAT 534 - Creating Productive Learning Environments (3)**

This course prepares aspiring teachers to create productive learning environments to fully engage learners in rigorous and relevant content learning. Teacher candidates will learn proactive and responsive classroom strategies using a tiered approach to promote active engagement and learning including a repertoire of approaches to: organize the learning environment (physical, interpersonal, and digital), build positive relationships with and among students, prevent classroom management and safety issues, manage daily routines and transitions, plan interventions for chronic disciplinary problems, and align classroom practices with school policies.

Prerequisite: Admission to the M.A.T. program, and MAT 520 with a grade of C or higher.

Corequisite: MAT 533

**MAT 540 - Internship in the Certification Area: English, History/Social Studies, Mathematics, Modern Language, Science, and Special Education. (6)**

Sixteen week, full-time internship in assigned public school classroom, supervised by certified teacher. Gradual assumption of full responsibility for classroom. Some certification areas must complete placements at two levels. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in

this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the M.A.T. program and MAT 530, MAT 531, MAT 532, MAT 533, MAT 534, and MAT 539 (all with grades of C or higher); a minimum GPA of 3.00; and permission of department chair.

Corequisite: MAT 541

**MAT 541 - Internship Seminar (3)**

Cross disciplinary seminar. Attention to progress in intervention study, teacher work sample, and education technology.

Prerequisite: Admission to the M.A.T. program.

Corequisite: MAT 540.

**MAT 550 - Intervention Capstone II: Conducting and Reporting Teacher Research (3)**

Complete the teacher research cycle by analyzing data and reporting research through paper and presentation. This is the second half of the program capstone.

Prerequisite: Admission to the M.A.T. program; MAT 532; and minimum GPA of 3.00 in MAT program.

Corequisite: MAT 540 and MAT 541

**MAT 551 - Perspectives on Educational Policy and Practice (3)**

Study of the contribution of philosophical, sociological and historical perspectives on American education today.

Prerequisite: Admission to the M.A.T. program.

**MAT 566 - Special Education Case Management (3)**

This course focuses on the role of the special education teacher as case manager including: managing student caseloads; consultation and teaching; Individualized Education Program (IEP) development, implementation, and maintenance; and professional learning.

Prerequisite: Admission to MAT Program.

**MC - Managerial Communication****MC 207 - Managerial Communication I (3)**

The study and development of effective business correspondence, reports, and communications systems. Selected assignments include written and oral reports used in business.



Prerequisite: WRT 110 or WRT 105 and WRT 105P.

### **MC 500 - Advanced Managerial Communication (3)**

Technical skills and necessary theoretical knowledge of managerial and leadership communication in specific business contexts. Topics include contemporary managerial writing, computer-mediated communications, interpersonal and group communication strategies as well as oral presentations involving the discussion of strategy and data.

Prerequisite: None

## **ME - Mechanical Engineering**

### **ME 216 - Manufacturing Engineering Processes (2)**

Engineering fundamentals of manufacturing processes for metals, ceramics and plastics, including forming, casting, sheet metal, additive, powder metallurgy, joining, and traditional and nontraditional machining operations are developed through analytical class work. Further efforts are focused on process selection and sequencing techniques. Two hours lecture per week.

Prerequisite: ENGR 150 (C- or higher); ME 217 to be taken concurrently or C- or higher.

### **ME 217 - Manufacturing Engineering Processes Lab (1)**

Engineering fundamentals of manufacturing processes for metals, ceramics and plastics, including forming, forging, rolling, drawing, EDM, laser cutting, welding, casting, molding and machining operations, are developed through manufacturing laboratory experiments. Three hour laboratory per week.

Prerequisite: ENGR 150 (C- or higher); ME 216 to be taken concurrently or C- or higher.

### **ME 258 - Engineering Thermodynamics (3)**

Engineering thermodynamics concepts involving storage, transformation, transfer of energy and properties of substances. First and second law analysis of thermodynamic systems and control volumes for engineering design.

Prerequisite: CHEM 161, CHEM 162; PHYS 125. (All prerequisites require a C- or higher).

### **ME 340 - Geometric Dimensioning & Tolerancing for Mechanical Design (3)**

Basics of interval arithmetic. Interpretation, application, and verification of GD & T aspects of engineering designs per the latest ANSI Y14.5 and ISO standards using customary and metric systems. Calculations with

toleranced dimensions, multidimensional tolerance stackups. Design of functional gauges. Statistical tolerancing.

Prerequisite: ETM 260 and ME 216 and MATH 226. (All prerequisites require a C- or higher.)

### **ME 345 - Engineering Statistical Analysis of Operations (3)**

Engineering probability and statistical techniques used to make inferences in experiments. Probability distributions. Tests of significance, hypothesis testing, simple linear regression, multiple regression models and ANOVA. Design of experiments, Taguchi quality techniques, Measurement System Analysis and SPC/SQC. Three hours of lecture and one hour of lab per week.

Prerequisite: MATH 226 (C- or higher)

### **ME 352 - Modeling and Control of Dynamic Systems (3)**

Mathematical modeling and simulation of dynamic systems with mechanical, electrical, hydraulic, and/or thermal elements. Response analysis, stability, and design of feedback control systems. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: ENGR 240 (C- or higher), ENGR 252 (C- or higher), MATH 355 (C- or higher).

### **ME 354 - Fluid Mechanics (3)**

Basic principles of fluid mechanics. Hydrostatic forces, kinematics of fluid motion, integral and differential representation of conservation of mass, momentum and energy, Bernoulli's equation, dimensional analysis, viscous flow, frictional losses, pipeline network analysis and design. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: ENGR 251 (C- or higher), ME 258 (C- or higher) or CE 376 (C- or higher), MATH 355 (C- or higher).

Cross-Listed as: CE 354

### **ME 358 - Engineering Thermodynamics II (3)**

Gas mixtures, their composition and thermodynamic properties. Chemical reactions, chemical and phase equilibrium. Fuels and combustion. Theoretical and actual combustion. Theoretical and actual combustion processes. Compressible flows in nozzles and ducts. Multistage power cycles. Refrigeration and air conditioning.

Prerequisite: ME 354.

**ME 360 - Manufacturing Operations Analysis and Simulation (3)**

Planning and optimization of resources utilization, forecasting, scheduling and sequencing of activities, inventory and maintenance planning for JIT environment, automated production. Lean Manufacturing environment and analysis and design. Analysis and simulation of production problems using computers.

Prerequisite: MATH 226 (C- or higher)

**ME 367 - Machine Design I (3)**

Analysis for the design of basic mechanical elements, and their role in the design of machines, theories of failure, fatigue design, design of rotating shafts, and analysis of variable loading.

Prerequisite: ENGR 357 (C- or higher).

**ME 368 - Machine Design II (3)**

Analysis for the design of basic mechanical elements, and their role in the design of machines, design of fasteners and joints, welds, springs, bearings, gear, clutches, brakes and power transmissions.

Prerequisite: ME 367 (C- or higher) and ENGR 252 (C- or higher).

**ME 370 - Instrumentation (3)**

Characteristics of measurement systems; signals. Fourier transform, general system model, analog and digital signal conditioning, sensors and actuators. Data acquisition, A/D and D/A conversion, data and error analysis. Strain, pressure, temperature, velocity, and flow measurements. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: ENGR 357 (C- or higher), ME 354 (C- or higher) and ENGR 290 (C- or higher).

**ME 400 - Special Topics in Mechanical Engineering (3)**

Special topics introduces knowledge of advanced mechanical engineering concepts, materials, and techniques. May be repeated under different topics for a total of 9 credits.

Prerequisite: None

**ME 403 - Aerospace Control Systems (3)**

Analysis of feedback control systems used in aerospace applications. Review of stability analysis, root locus design, Lead-lag, PID compensators. Frequency response, Bode plot, Nyquist stability criterion, Nyquist plot, autopilot stability and command augmentation systems,

introduction to modern control theory, linear state feedback, linear quadratic regulators, and other aerospace control system design considerations. Digital implementation, hardware considerations. Three hours of lecture per week.

Prerequisite: ME 352 (C- or higher).

**ME 452 - Mechanical Vibrations (3)**

Modeling and analysis of vibrating systems, characteristics of single degree and multiple degrees of freedom systems. Modal analysis and synthesis, vibration control by isolation, absorption, or balancing. Applications of computer simulation and analysis techniques in vibrations.

Prerequisite: ENGR 252 (C- or higher), MATH 355.

**ME 454 - Heat Transfer (3)**

Introduces the transport of heat by steady and transient heat conduction; forced and natural convection; radiation; introduction to phase change heat transfer and to heat exchangers. Two hours lecture and two hours laboratory per week.

Prerequisite: ME 354 (C- or higher).

**ME 458 - Heating, Ventilating and Air Conditioning Systems Design (3)**

Analysis and design of heating, ventilating, air conditioning and refrigerating systems (HVAC) for buildings and industrial applications, including equipment and component selection. Energy-efficient concepts and controls will be emphasized.

Prerequisite: ME 454 (may be taken concurrently or C- or higher); for graduate students, permission of instructor.

**ME 459 - Energy Conversion Systems (3)**

Design of energy producing systems utilizing combustible fuels and renewable sources; solar, wind, tidal, geothermal, fuel cells, nuclear. Study of energy demand and available resources and distribution in the world. Energy storage; distribution, conservation, and environmental impacts.

Prerequisite: ME 454 (may be taken concurrently or C- or higher)

**ME 460 - Manufacturing System Design (3)**

Analysis, synthesis, and control of manufacturing operations. Group Technology and flexible manufacturing. Process design and tolerance control in discrete parts

manufacturing. Analysis and design of Lean Manufacturing environment. Use of SPC/SQC and statistical methods.

Prerequisite: ME 345 (C- or higher)

### **ME 461 - Discrete Event Simulation for Manufacturing Systems (3)**

Principles of Discrete Event Simulation (DES) modeling and analysis, data collection and preparation, verification and validation of models, design of simulation experiments, output analysis, and using software to simulate manufacturing facilities, material handling systems, and transportation systems for a lean manufacturing environment.

Prerequisite: MATH 355 (C- or higher)

### **ME 463 - Engineering of Additive Manufacturing Processes ()**

Engineering fundamentals of additive manufacturing processes for metals, ceramics, and plastics, including powder bed fusion, extrusion, vat photopolymerization, material jetting, binder jetting, and sheet lamination. Selection of processes based on product requirements. Concepts are developed through analytical class work and manufacturing laboratory experience.

Prerequisite: ME 216 and ME 217 and ETM 356 and ENGR 357 (C- or higher required in all prerequisites)

### **ME 465 - Advanced Manufacturing Engineering (3)**

Advanced fabrication and assembly, lithography, self-assembly and other processes. Use of CAM software for advanced milling and turning operations. Concepts, toolpaths and toolpath control in advanced CNC programming with 5-axis machines. Modern cutting tool materials and geometry for aerospace alloys. Hard turning, milling, and high speed machining. Machining of composites, ceramics, and hybrid machining technologies.

Prerequisite: ETM 260 and ETM 356 and ME 216 and ME 217 (C- or higher required in all prerequisites)

### **ME 466 - Inventive Engineering Design (3)**

Design methodology and practice in problem solving using various techniques. Creative concept generation. Use of inventive principles and engineering contradictions in problem solving applied to product, process and system design. Patents and intellectual property protection.

Prerequisite: PHYS 126 (C- or higher)

### **ME 467 - Finite Element Analysis with Applications (3)**

A first course in the finite element method that includes the solution of spring, truss, and beam structures using the stiffness method and the principle of minimum potential energy applied to spring problems. Subsequent study of beam, plane stress, plane strain, axisymmetric, plate, and solid elements. Additional topics include mixed element models, mesh convergence, symmetry, stress singularities, and an introduction to element interpolation functions and element integration schemes. Additional structural applications include modal, buckling, dynamics, and thermal stress analyses in addition to conductive and convective heat transfer analyses. Analyses will include the use of commercially available finite element software. Two hours of lecture and two hours of laboratory per week.

Prerequisite: ENGR 357, MATH 222, MATH 226. All with C- or higher.

### **ME 470 - Engineering Biomechanics (3)**

Analysis of musculoskeletal joint loading during static and dynamic human activities, biomechanical force-motion analysis, energy and power transfer, theoretical models of viscoelasticity, structural/functional relationships, and stress/strain analysis of human tissues including bone, cartilage, and tendons.

Prerequisite: ENGR 252 (C- or higher) and ENGR 357 (C- or higher).

### **ME 480 - Propulsion Systems (3)**

Principles of propulsion devices. One-dimensional flows in propulsion systems, combustion and equilibrium. Examines inlets, nozzles, compressors and turbines. Basic theory and design of turbojets, ramjets, turboprop, turbofan and chemical rocket engines. Evaluates propellants and overall performance.

Prerequisite: ME 354 (C- or higher).

### **ME 483 - Aerodynamics (3)**

Basics of compressible flows. Reviews potential flow theory, viscous effects, and compressibility effects. Theory and design of aerodynamic bodies. Investigates subsonic, transonic, and supersonic airfoils. Computer simulation. Requires aerodynamic design project. Two hours lecture and two hours laboratory per week.

Prerequisite: MATH 222 (C- or higher) and ME 354 (C- or higher).

**ME 485 - Combustion (3)**

Thermodynamics of combustion, kinetic and transport phenomena, chemical equilibrium and reaction kinetics, chemical reactors. Structure, properties and gas dynamics of laminar and turbulent flames, diffusion flames. Ignition, quenching and flame stability. Combustion in propulsion and power generation systems.

Prerequisite: ME 354 (C- or higher), MATH 222 (C- or higher).

**ME 486 - Aerospace Structures and Materials (3)**

Topics will include bending, torsion and buckling of built up aerospace structures. Strain energy, fundamentals, and application of composite and alloys as applied to aerospace structures are covered along with computer modeling techniques.

Prerequisite: MATH 222 (C- or higher), MATH 226 (C- or higher), and ENGR 357 (C- or higher).

**ME 487 - Flight Dynamics (3)**

Study of motion of aircraft, equations of motion, aerodynamic force representation, longitudinal and lateral motions, stability, brief discussion of guidance, navigation, and control and response to atmospheric disturbance.

Prerequisite: ME 403 (C- or higher) and ME 483 (C- or higher).

**ME 488 - Aerospace Vehicle Design (3)**

Examination of fixed wing and rotary wing aircraft design. Evaluation of aerodynamic forces, aircraft systems, control surface design and power requirements, helicopter flight parameters, applied momentum equations used for helicopter performance predictions.

Prerequisite: ME 367 (C- or higher) and ME 354 (C- or higher).

**ME 497 - Senior Project I: Project Research (2)**

First of two-course capstone design sequence. Students work in an environment appropriate to an industrial setting. Teams propose and begin development of designs. Teamwork and oral and written communication skills emphasized. Mechanical Engineering majors only.

Prerequisite: ME 367, ME 216, and ME 217 (each C- or higher), ME 370 and ME 467 (both may be taken concurrently)

**ME 498 - Senior Project II: Design Project (3)**

Second course in capstone design sequence. Student design teams finalize capstone projects through oral and

written presentation. Final design analysis must satisfy requirements and show sound engineering judgment. Computer simulation and prototype development expected.

Prerequisite: ME 370 (C- or higher), ME 467 (C- or higher), ME 497 (C- or higher), ME 216 (C- or higher), and ME 217 (C- or higher).

**ME 501 - Digital Control ( )**

Introduction to the analysis and design of discrete-time feedback control systems. Topics include: mathematical representation of physical systems with linear difference equations, z-transforms, transfer functions, sampling, A/D and D/A converters, sampled-data systems, discrete equivalent systems, transient specifications, steady-state tracking errors, stability, controller design, and quantization effects.

Prerequisite: Admission to the MSME program, or permission of Engineering Department chair.

**ME 502 - Optimal Control ( )**

Introduction to the principles and methods of the optimal control approach. Topics include performance measures, dynamic programming, calculus of variations, Pontryagin's principle, optimal linear regulators, minimum-time and minimum-fuel problems, steepest descent, and quasi-linearization methods for determining optimal trajectories.

Prerequisite: Admission to the MSME program, or permission of Engineering Department chair.

**ME 503 - Dynamic System Parameter Identification ( )**

Introduction to system identification, including approaches to system modeling, identification procedure, and the properties of parameter estimates. Additional topics include regression and correlation analysis, the structures of linear dynamic models, deterministic methods of dynamic systems, system identification in the time and frequency domains, statistical methods of dynamic system identification, batch and recursive methods of identification, and practical aspects of identification, including experiment design, data preprocessing, model structure selection, and model validation.

Prerequisite: Admission to the MSME program, or permission of Engineering Department chair.

**ME 505 - Design of Control Systems with Uncertainties ( )**

Analysis of linear systems under uncertainty, including quantifying stability and performance, uncertainty and

robustness, parameterization of stabilizing controllers, algebraic Riccati equations, norms for signals and systems, and  $H_2$  control, and  $H_{\infty}$  control.

Prerequisite: Admission to the MSME program, or permission of Engineering Department chair.

### **ME 509 - Guidance, Navigation, and Control ( )**

Design of guidance and navigation systems for various aerospace vehicles. Analysis of the guidance and control systems used in missile systems and launch vehicles. Equilibrium glide trajectories for atmospheric flight and energy guidance methods. Selection and trade-off between various navigation components such as the IMU, GPS and other navigation components. Implementation of multi-sensor fusion techniques.

Prerequisite: Admission to the MSME program, or permission of Engineering Department chair.

### **ME 516 - Machines and Mechanisms ( )**

Advanced concepts of kinematic and dynamic modelling and analysis of mechanisms and machines, including linkage mechanisms, cam mechanisms, and reciprocating and rotating machinery. The course will emphasize computer-aided methods for analysis of contemporary problems such as balancing and engine dynamics.

Prerequisite: Admission to the MSME program, or permission of Engineering Department chair.

### **ME 518 - Fracture Mechanics ( )**

Study of the basic fracture problem and concepts together with analysis of linear elastic, elastic-plastic, dynamic and time-dependent fracture mechanisms. Material behavior considers fracture mechanics in metals and non-metals.

Prerequisite: Admission to the MSME program, or permission of Engineering Department chair.

### **ME 520 - Tribology ( )**

Study of the friction, wear and lubrication of materials. Review of surface interactions and the basic wear problem and concepts together with analysis of adhesive, abrasive, and other wear mechanisms. Examination of the impact of solid and liquid lubricants on the friction and wear of materials.

Prerequisite: Admission to the MSME program, or permission of Engineering Department chair.

### **ME 522 - Elasticity and Plasticity ( )**

The fundamentals of the theory of elasticity and plasticity are studied. Elasticity topics include analysis of stress, strain, and stress-strain relations. Two-dimensional problems in elasticity are solved using both Airy and Prandtl stress functions. Plasticity topics include generalized yield criterion, isotropic and kinematic hardening models, and  $J_2$  flow theory.

Prerequisite: Admission to the MSME program, or permission of Engineering Department chair.

### **ME 523 - Contemporary Engineering Materials (3)**

Analysis of contemporary materials for the applications, advantages or disadvantages, properties and specifications for product design and manufacturing techniques. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: Admission to the MSME program, or permission of Engineering Department chair.

### **ME 525 - Materials Engineering of Additive Manufacturing ( )**

Study of the resultant process – structure – property relationships achieved using various additive fabrication (AF) processes. Properties of plastics, metals, and ceramics are considered.

Prerequisite: ME 563 (C or better)

### **ME 540 - Advanced Geometric Dimensioning & Tolerancing and Metrology ( )**

Measurements and acceptance inspection of dimensional and GD&T requirements for parts and assemblies using typical measuring instruments, such as micrometers, calipers, indicators, gage blocks, Go-NoGo gages, functional gages, and coordinate measuring machines (CMM). Simulated datums and fitted datums. Measurement versus functional acceptance, procedures and equipment. Design of functional gages. Measurement system analysis and Gage R&R. Data graphing and analysis. Measurements of surface finish in 2D and 3D for various materials and applications.

Prerequisite: Admission to the MSME program, or permission of Engineering Department Chair

### **ME 545 - Design and Analysis of Additive Manufacturing ( )**

Engineering analysis of parts made via additive manufacturing. Includes finite element analysis of

orthotropic materials, topological optimization of structures, design for additive manufacturing principles, and a study of the relationships between design, materials and process, and the final part dimensions and mechanical and surface properties. Design validation through lab activities.

Prerequisite: ME 563 (C or better)

### **ME 551 - Advanced Fluid Mechanics ( )**

This course provides a continuation of the principal concepts and methods of fluid dynamics. Topics include mass conservation, momentum, and energy equations for continua, Navier-Stokes equations for viscous flows and its solution, similarity and dimensional analysis, boundary layers, potential and rotational flows, introduction to flow instability and transition to turbulence, and surface tension and surface tension driven flows.

Prerequisite: Admission to the MSME program, or permission of Engineering Department chair.

### **ME 552 - Mechanical Vibrations (3)**

Modeling and analysis of vibrating systems, characteristics of single degree and multiple degrees of freedom systems. Modal analysis and synthesis, vibration control by isolation, absorption, or balancing. Applications of computer simulation and analysis techniques in vibrations. Vibration system modeling and analysis project required. No credit given to students with credit for ME 452. Link course with ME 452.

Prerequisite: Permission of instructor.

### **ME 553 - Computational Fluid Dynamics ( )**

Computational Fluid Dynamics is a branch of continuum mechanics that deals with numerical simulation of fluid flow and heat transfer problems. This course provides an introduction to the scientific principles and practical engineering applications of CFD. The fundamental mathematical equations governing the fluid flow and heat transfer phenomena are introduced. Then this knowledge will be applied to practical use of commercial CFD codes.

Prerequisite: ENGR 501 and ME 551 (both C or better)

### **ME 554 - Advanced Heat Transfer ( )**

Introduces detailed analysis of conduction, convection, forced convection, and natural convection. The fundamentals of thermal radiation, diffusion, mass transfer, vaporization, condensation heat transfer are discussed. The theory and basics of the design and calculation of heat exchangers is covered. Two hours lecture and one-hour laboratory per week.

Prerequisite: Admission to the MSME program, or permission of Engineering Department chair.

### **ME 555 - Combustion ( )**

Physical and chemical aspects of basic combustion phenomena are covered. Flames, including premixed flames and diffusion flames, will be studied from the perspectives of chemical thermodynamics, temperatures, classification, laminar speed, and the theory of flame propagation. Chemical equilibrium, kinetics, and reaction mechanisms as applied to detonation and theories of ignition, stability, and combustion efficiency are considered. Finally, fuels are discussed, including the atomization and evaporation of liquid fuels.

Prerequisite: Admission to the MSME program, or permission of Engineering Department chair.

### **ME 557 - Turbomachinery ( )**

Dimensionless parameters such as similarity theory and Cordier diagrams. Impellers and specific speed. Performance maps. Basic principles such as Euler transport theorem. Conservation Laws in integral form. Entropy generation, work loss and efficiency. Basic energy transactions in turbomachines such as expansion, diffusion and energy extraction/addition. Torque and power. Pumps including incompressible flow and centrifugal pumps. Cavitation. Centrifugal compressors including components, operational principle, velocity triangles, design aspects. Stage design and losses of axial compressors, axial gas turbines, and axial steam turbines; steam turbines, impulse stage and reaction stages. Hydro turbines such as Pelton, Francis and Kaplan runners and their efficiency. Aerodynamics and power coefficient of wind turbines.

Prerequisite: Admission to the MSME program, or permission of Engineering Department chair.

### **ME 559 - Heating, Ventilation & Air Conditioning ( )**

Course topics include basic HVAC systems, as well as more advanced systems such as multizone, dual-duct, terminal reheat, variable air volume, induction, and induction reheat. Special applications, such as hydronic systems, unitary and heat pump systems, hydronic heat recovery systems are covered. Analysis of cooling and heating load calculation, duct and piping design, overall system design, and integration are discussed.

Prerequisite: Admission to the MSME program, or permission of Engineering Department chair.

**ME 563 - Engineering of Additive Manufacturing Processes ( )**

Engineering fundamentals of additive manufacturing processes for metals, ceramics, and plastics including powder bed fusion, extrusion, vat photopolymerization, material jetting, binder jetting, and sheet lamination. Selection of processes based on product requirements. Concepts are developed through analytical class work and manufacturing laboratory experience. Current state of the art is explored through review of current research publications.

Prerequisite: Acceptance in MS in Mechanical Engineering Program or in Graduate Certificate in Additive Manufacturing Engineering or Permission of the Department Chair.

**ME 565 - Advanced Manufacturing Engineering ( )**

Simulation and analysis of assembly mates and mechanisms incorporating theoretical discussions for kinematic and dynamic analysis; Advanced Optimization and Meta Heuristics using MATLAB; Advanced fabrication and assembly, lithography, self-assembly, and other processes; Use of CAM software for advanced milling and turning operations. Concepts, toolpaths and toolpath control in advanced CNC programming with 5-axis machines. Modern cutting tool materials and geometry for aerospace alloys. Hard turning, milling and high speed machining. Machining of composites, ceramics, and hybrid machining technologies.

Prerequisite: Acceptance in MS Mechanical Engineering Program or into Graduate Certificate in Advanced Manufacturing Engineering, or Permission of the Department Chair.

**ME 567 - Advanced Finite Element Analysis ( )**

This advanced course in the finite element method begins with an overview of linear finite element analyses including the direct stiffness method, the principle of minimum potential energy, and the method of weighted residuals. The sources of nonlinearity including geometric, material, and boundary condition nonlinearities are presented in detail. Nonlinear compatibility and constitutive relationships are introduced. Geometric nonlinearity topics include stress and strain measures for large deformation and total and updated Lagrangian descriptions. Material nonlinearity including yield criteria, work hardening, creep, and viscoelasticity and viscoplasticity are investigated. Contact and friction are included as boundary condition nonlinearity topics. Incremental and

iterative solution procedures for nonlinear problems including full and modified Newton-Raphson methods are also introduced. Implicit and explicit time integration procedures are presented for nonlinear dynamic analyses. Analyses will include the use of commercially available finite element software.

Prerequisite: Admission to the MSME program, permission of Engineering Department chair, or CE 574 (C or better).

**ME 569 - Composite Design and Analysis (3)**

Study of the design and analysis of composite structures using classical composite theory coupled with computational analysis software. New methods of structural redesign using composite materials.

Prerequisite: Admission to the MSME program, or permission of Engineering Department chair.

**ME 580 - Aerospace Propulsion Systems ( )**

This course provides an overview of gas turbine engines, ramjet and scramjet engines and rocket liquid-propellant propulsion systems and their analysis. The course contains a computer project.

Prerequisite: Admission to the MSME program, or permission of Engineering Department chair.

**ME 582 - Advanced Propulsion ( )**

The course reviews the types and performance attributes of rocket engines. Chemical rocket engines are studied in detail, including characteristics, propellants and combustion, expansion in nozzles, and thrust chambers. Liquid, solid, and hybrid propellant rocket engines are also covered, including their design, operational parameters, and specific features of combustion. Electrical rocket propulsion and advanced propulsion concepts are discussed. The course contains a design project.

Prerequisite: ME 580 (C or better)

**ME 583 - Advanced Aerodynamics ( )**

The course introduces concepts, derivations, and application of aerodynamic fundamentals. Emphasis is placed on advanced knowledge in the analysis of supersonic and hypersonic flows, compressible flows over airfoils, wing and wing-body combination in compressible flows, and multi-dimensional flows. Also covered are the basics aspects of the design of fixed-wing, launch/atmospheric return vehicles, and rotating systems. The course contains a computer project.

Prerequisite: Admission to the MSME program, or permission of Engineering Department chair.

### **ME 586 - Aerospace Structures ( )**

The course provides a review of plane states of stress and strain. These concepts are applied to the analysis of thin-walled beams with open and closed section, unsymmetrical bending of wing sections, torsion of skin-stringer and multi-cell sections, flexural shear in open and closed sections, and shear center and relevant failure criteria. This course also includes an introduction to composite materials and the demonstration of the behaviors of some simple structural elements.

Prerequisite: ENGR 557

### **ME 588 - Flight Dynamics ( )**

The course focuses on equations of motion for rigid aircraft; aircraft performance, weight and balance, static stability and control, and dynamic stability. The design implications of these concepts are also explored.

Prerequisite: ME 583 (C or better)

### **ME 597 - Thesis I ( )**

Initiation of the thesis creation process, under guidance of a thesis advisor, for students working towards fulfilling the requirements for the degree of Master's of Science in Mechanical Engineering.

Prerequisite: Thesis Advisor

### **ME 599 - Thesis II ( )**

Completion of the thesis process, under guidance of a thesis advisor, for students working towards fulfilling the requirements for the degree of Master's of Science in Mechanical Engineering.

Prerequisite: ME 597 (C or better)

## **MFG - Manufacturing Technology**

### **MFG 121 - Technical Drafting & CAD (3)**

Introduction to geometric construction, 3D modeling, orthographic projection, sectional and auxiliary views, dimensioning/tolerancing, and pictorials. Emphasis on the use of CAD. Technical drafting equipment and sketching are used to reinforce drawing techniques. Three hours lecture and two hours laboratory, course meets five hours per week.

Prerequisite: None

### **MFG 226 - Principles of Computer Numerical Control (3)**

Principles essential for computer numerical control part programming and machine tool operation. Laboratory experiences include word address programming, computer-aided programming, and CNC machine tool setup and operation. Three hours lecture and two hours laboratory, course meets five hours per week.

Prerequisite: MFG 121 or ETM 260 or permission of instructor.

### **MFG 236 - Tool Design (3)**

Introductory study of and experiences in the design and construction of custom tooling for manufacturing. Three hours lecture and two hours laboratory, course meets five hours per week.

Prerequisite: MFG 121 or permission of instructor.

### **MFG 321 - Computer-Aided Drafting (3)**

Laboratory-based instruction to the utilization of the computers in preparing architectural, civil, mechanical, electrical, piping, and pictorial drawings. Three hours lecture and two hours laboratory, course meets five hours per week.

Prerequisite: GRT 112 or MFG 121 or permission of instructor.

### **MFG 366 - Manufacturing Supply Chain Strategy (3)**

Overview of emerging trends in managing the manufacturing supply and value chains. Strategies, tools and techniques for production, purchasing, inventory control, customer service and distribution.

Prerequisite: MGT 295.

### **MFG 496 - Lean Manufacturing (3)**

Principles of lean manufacturing methodologies. Topics include production flow analysis, value stream mapping, pull systems, cellular manufacturing waste elimination, visual factory, error proofing, quick changeover, change management.

Prerequisite: None

## **MFT - Marriage and Family Therapy**

### **MFT 505 - Counseling and Human Development Across the Lifespan (3)**

The nature and needs of persons at all developmental levels with a focus on the physical, cognitive, emotional, and social aspects of growth. Psychosocial theories of



development and counseling models will be addressed as they apply to the stages of the lifespan.

Prerequisite: None

Cross-Listed as: Cross listed with CNSL 505. No credit given to students with credit for CNSL 505.

**MFT 510 - Intensive In-home Evidence-Based Models in Family Therapy (3)**

Introduction to definitions and competencies connected with Evidence-Based Practice (EBP); overview of the history, theoretical foundations, and implementation of several evidence-based in-home family treatment models. Training in the theory and practice of treatment models; and hands-on training exercises with specific treatment tools.

Prerequisite: MFT 541 or permission of instructor.

Cross-Listed as: Cross-listed with CNSL 510. No credit given to students with credit for CNSL 510.

**MFT 541 - Introduction to Theories of Family Systems (3)**

Historical and theoretical underpinnings of General Systems Theory as it applies to families and family therapy. Major models of family therapy will be presented to orient the student to an understanding of functional and dysfunctional processes in human interaction. This course lays the foundation for the subsequent assessment and treatment courses which focus specifically on the major schools of family therapy.

Prerequisite: Admission to department.

**MFT 542 - Professional, Ethical, and Legal Issues in Marriage and Family Therapy (3)**

Professional, ethical, and legal issues in marriage and family therapy.

Prerequisite: Admission to the MFT program.

**MFT 543 - The Family Life Cycle (3)**

Developmental aspects of the family system over time, delineating critical issues for individual and other subsystems at various stages and transition points of the family life cycle. This course covers divorce, remarriage, and blended families within the various stages a family may experience.

Prerequisite: MFT 541.

**MFT 544 - Families in Context: Gender and Cultural Dimensions (3)**

Integral principles of human organization that influence family growth and development. Students gain an understanding of ethnicity and gender from a systemic framework.

Prerequisite: MFT 541.

**MFT 551 - Structural/Strategic & Behavioral Family Therapies (3)**

Assessment and interventions from the structural, strategic, and Behavioral schools of family therapy are examined. Students learn about diagnosis and treatment of human dilemmas and symptomatology within a systemic context.

Prerequisite: MFT 541.

**MFT 552 - Experiential, Intergenerational and Psychodynamic Family Therapies (3)**

Assessment and interventions from Experiential, Intergenerational, and Psychodynamic schools of family therapy are explored. Students learn diagnostics and treatment of human dilemmas and symptomatology from these schools of therapy.

Prerequisite: MFT 551.

**MFT 554 - Couples Therapy (3)**

Assessment and treatment approaches to problematic dyadic relationships within a systemic framework are explored. Problems unique to couples are discussed, including sexual, communication, and role expectations. This course covers treatment of spousal violence, sexual dysfunctions, mate selection, types of marriages, communication problems, gender and power issues, and the developmental stages of marriage.

Prerequisite: MFT 541.

**MFT 555 - Dysfunctional Family Processes (3)**

Examination of structures and processes of family dysfunction, including substance abuse, family violence, and sexual abuse. Assessment and intervention strategies from a systemic framework.

Prerequisite: MFT 541.

**MFT 556 - Systemic Perspectives on Mental Disorders (3)**

Diagnostic classifications of mental, emotional, and behavioral disorders of individuals within a systemic framework. Students learn how to communicate within a

medical model framework using systemic conceptualizations.

Prerequisite: MFT 541.

### **MFT 557 - Action Methods in Marital and Family Therapy (3)**

Introduces students to action methods involving physical movement and dramatic role-play in MFT. Uses hands on experience and theory to compare action-oriented and exclusively verbal methods regarding therapeutic effectiveness and skill level.

Prerequisite: MFT 541 or permission of instructor.

### **MFT 558 - Internal Family Systems Therapy (3)**

Basic theory, techniques, and clinical applications of the Internal Family Systems model of psychotherapy. This experiential course will emphasize exploration of the student's own internal family system through in-class exercises and course assignments.

Prerequisite: MFT 541 or permission of instructor.

### **MFT 559 - Sex Therapy (3)**

This course will look at Human sexuality and sex therapy from a systemic (holistic) perspective. Foundational and current approaches to couple-focused sex therapy will be examined as well as several different aspects of sexuality including: biological, developmental, medical, cultural, historical and interpersonal. This course is especially designed to provide a foundation of sexual knowledge, experience talking about sexuality, and an introductory knowledge of traditional and contemporary relational sex therapy for Master's level students in the MFT and Counselor Education fields.

Prerequisite: MFT 541 or permission from instructor, and matriculation into a graduate program.

### **MFT 560 - Emotionally Focused Couple Therapy (3)**

Examine the principles of adult attachment theory, understand the dynamic and role of emotions and their relevance to the work with couples. Describe EFT stages, learn micro and macro-EFT skills and techniques, and the application of EFT in couple therapy. This course will be focused on the theory and practice of EFT.

Prerequisite: Admission to the MFT program

### **MFT 583 - Marriage and Family Therapy Practicum I (3)**

Students participate in direct client contact, staff meetings, and supervision in a clinical setting.

Prerequisite: MFT 551, MFT 542, and MFT 556.

### **MFT 584 - Marriage and Family Therapy Practicum II (3)**

Students participate in direct client contact, staff meetings, and supervision in a clinic setting.

Prerequisite: MFT 583.

### **MFT 585 - Marriage and Family Therapy Internship (Plan E) (3 (may be repeated))**

Placement in a community agency providing marital and family therapy under supervision. May be repeated as needed to complete minimum requirement of 12 consecutive months (and 400 clinical contact hours/100 supervision hours). Plans A, C, D, and E require completion of 18 credits for programs with 30-35 credits, or 24 credits for programs with greater than 35 credits, and a 3.00 overall GPA.

Prerequisite: MFT 584 or MFT 594.

### **MFT 592 - School-Based Family Counseling (3)**

MFT practice and intervention in public schools, school-based systems theory, learning theory, state and federal education laws pertaining to the health and education of children, and statutory requirements for mandated reporting, suspensions/expulsions, and school-based ethics, and policies and procedures governing special and general ed. services for collaboration, referral, and placement.

Prerequisite: CNSL 500, CNSL 501, PSY 512 and MFT 541 or permission of instructor.

### **MFT 593 - School-Based Marriage and Family Therapy Practicum and Seminar I (3)**

Supervision of Marriage and Family practice in public schools with direct client contact. Covers school-based learning and systems theories, Federal and state education laws (e.g. IDEA and ADA); professional ethics and codes of professional responsibility for educators; FERPA; statutory requirements for mandated reporting, suspensions and expulsions; and school and district accountability. Fulfills 1/2 of the required 300 hours of practicum for state certification. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: MFT 442, MFT 551, and MFT 556

**MFT 594 - School-Based Marriage and Family Therapy Practicum and Seminar II (3)**

Continuation of the two-semester School-Based Marriage and Family Therapy Practicum and Seminar. Further development of content areas covered in MFT 593. Fulfills the second 1/2 of the required 300 hours of practicum for state certification. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: None

**MFT 598 - Research Methods in Marriage and Family Therapy (3)**

Quantitative and qualitative research design, data analysis, interpretation, and program evaluation methods related to marriage and family therapy.

Prerequisite: Admission to M.S. in MFT graduate program or permission of department chair.

**MGT - Management****MGT 295 - Fundamentals of Management and Organizational Behavior (3)**

Introduction to the principles of management and their application to business. Emphasis on the development of a philosophy of management and interpersonal behavior within organizations.

Prerequisite: WRT 105 or WRT 110 or ENG 110 or ENG 202 or HON 140 with a grade of C- or higher and sophomore standing.

**MGT 305 - Human Resource Management (3)**

Study of the management of human resources. Topics include equal employment opportunity, job analysis, human resource planning, recruitment, selection, training, performance appraisal, compensation, labor/management relations, and related topics.

Prerequisite: MGT 295 (C- or higher) and admission to the upper division of the Business School

**MGT 321 - International Management (3)**

An introductory course in the field of international management that focuses on the diverse environmental forces and factors that affect the operations and performance of multinational corporations. A comparative

approach is used to develop some comprehension of the wide range of business conditions that exist in various regions of the world.

Prerequisite: MGT 295 (C- or higher) and admission to the upper division of the Business School

**MGT 326 - Business Organizational Behavior (3)**

A study of human behavior in organizations. Covers topics such as communication, decision making, team development, leadership, motivation, and productivity. Attention is given to behavioral science methods, research, and findings as applied to organizational management.

Prerequisite: MGT 295 (C- or higher) and admission to the upper division of the Business School

**MGT 329 - Leadership Skills (3)**

This course offers a foundational understanding of leadership theories, strategies, and applications in the context of modern organizations. Through a blend of lectures, real-world case studies, exercises, and team projects, students will acquire the knowledge, skills, and mindset necessary to thrive as leaders in the current competitive business environment.

Prerequisite: MGT 295 (C- or higher)

**MGT 330 - Entrepreneurship and New Venture Creation (3)**

Focuses on how businesses are started. Includes recognizing opportunities and risks, gathering resources to convert opportunities into businesses. Develops the skills to evaluate and formulate a business plan.

Prerequisite: MGT 295 (C- or higher) and admission to the upper division of the Business School, or by permission of the chair

Cross-Listed as: ENT 330

**MGT 333 - Operations Management (3)**

Examines ways of managing the interface between an organization's strategy and its operations. Operations are activities aimed at creating and delivering products and services of great value and high quality. Involves aligning operational capabilities with strategic direction and integrating resources to meet requirements using contemporary business tools, techniques, and methods. MGT 333 is the same course as MGT 448.

Prerequisite: MGT 295 and STAT 201 (both with C- or higher) and admission to the upper division of the Business School

**MGT 340 - Ethical and Social Issues for the Manager (3)**

Defines contemporary ethical issues of managerial and corporate social responsibility and explores the impact of these issues on managerial decision-making behaviors. Emphasizes issues that emerge in the internal as well as external environments of a business organization. Defines societal expectations of organizations regarding corporate social responsibility.

Prerequisite: MGT 295 (C- or higher) and admission to the upper division of the Business School, or by permission of the chair

**MGT 345 - Organizational Analysis & Change Management (3)**

Provides a systematic understanding of complex business organizations and how they shape and influence human behavior. Offers a number of conceptual tools and resources for analyzing the design and operation of organizations, diagnosing problems and opportunities, and recommending courses of action. The process of implementing and managing change is a central focus of this course.

Prerequisite: MGT 295 (C- or higher) and admission to the upper division of the Business School

**MGT 348 - Management Systems (3)**

Provides an understanding of the complex sociotechnical systems in organizations. Examines the relationship between technology and social systems by applying general systems theory. Emphasizes the relationship of machines, work processes, and methods to organization structure and human relationships. Alternative strategies for managing change and innovation will be explored.

Prerequisite: MGT 295 (C- or higher) and admission to the upper division of the Business School

**MGT 350 - Financing Entrepreneurial Ventures (3)**

Combines the analysis and evaluation of methods used to fund entrepreneurial ventures with the creation of a business plan for a new enterprise. Emphasis on creating pro-forma financial statement and managing cash flow.

Prerequisite: MGT 295 (C- or higher) and admission to the upper division of the Business School, or by permission of the chair

Cross-Listed as: ENT 350

**MGT 355 - Managing a Growing Business (3)**

Focuses on management decisions in resource allocation, human resource management, marketing policies and

control mechanisms that contribute to growth and value creation in business. Case studies and exercises concentrate on opportunities and problems unique to growing firms.

Prerequisite: MGT 295 (C- or higher) and admission to the upper division of the Business School, or by permission of the chair

Cross-Listed as: ENT 355

**MGT 390 - Management Topics (3)**

Selected topics in management, organization theory, and human resource management. Course content will vary from semester to semester. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: MGT 295 (C- or higher) and admission to the upper division of the Business School, or by permission of the chair

**MGT 395 - Field Studies in International Business (3)**

Designed to enrich the student's understanding of the world as a marketplace by visiting foreign countries. Students will be able to observe and discuss international business problems with leading business people. On-site seminars will be included.

Prerequisite: Pre-approved minor.

**MGT 425 - Labor/Management Relations (3)**

Study of issues related to labor-management relations. Topics include collective bargaining, labor-management contracts, contract negotiation and administration, grievance handling, employee discipline, and related topics. Methods for measuring staffing-related criteria are included.

Prerequisite: MGT 295 (C- or higher) and admission to the upper division of the Business School, or by permission of the chair

**MGT 431 - Compensation and Benefits (3)**

Study of compensation theory and practice. Topics include types of compensation and benefits, job analysis, job evaluation, pay structures, wage surveys, pay-for-performance, and methods for administering compensation and benefits.

Prerequisite: MGT 305 (with C- or higher)

**MGT 432 - Human Resource Development and Training (3)**

The focus of this course is to study the development and training of employees in the organizational setting. Topics

include adult learning theories, designing organizational training programs, employee and leadership development techniques, and the importance of knowledge management for innovative organizations.

Prerequisite: MGT 305 or MGT 326 (both with C- or higher)

### **MGT 455 - Global Supply Chain Strategy and Management (3)**

Advanced supply chain management. Topics include supply chain strategy, supply chain design, sourcing, logistics, demand forecasting, inventory management, continuous quality improvement, supply chain relationship management, global SCM, and sustainable SCM.

Prerequisite: MGT 295 and STAT 201 (both with C- or higher)

### **MGT 460 - Staffing (3)**

Study of issues related to the staffing of organizations. Topics include job analysis, human resource planning, recruitment, selection, equal employment opportunity, and related topics. Methods of measuring staffing-related criteria are included.

Prerequisite: MGT 305 and STAT 201 (both with C- or higher)

### **MGT 462 - International Human Resource Management (3)**

Study of human resource issues for multinational organizations. Topics include recruitment, selection, performance, training, career planning, compensation, labor relations, and related topics for expatriates and multicultural workforces.

Prerequisite: MGT 305 with a grade of C- or higher; junior standing; and (1) grades of at least C- in the eight pre-major courses and meeting upper-division Business School GPA requirements or (2) pre-approved minor.

### **MGT 473 - Organizing and Managing for Innovation (3)**

Explores contemporary approaches for releasing employee, supplier and customer creativity to constantly innovate what and how an organization produces its products and services.

Prerequisite: MGT 295 (C- or higher) and admission to the upper division of the Business School, or by permission of the chair

### **MGT 475 - New Venture Challenge: Lean Launch Methodology (3)**

The Lean Launch Methodology uses a scientific, hypothesis development and testing approach to discovering potentially successful business products and models. Students will learn to identify opportunities, test the scale and scope of opportunities, research competitive offerings, determine costs structure, find partners, and determine if a business is worth pursuing. The course utilizes an applied, project based pedagogy and may be delivered in a variety of formats. No credit given to students who have taken ENT 475.

Prerequisite: Admission to the upper division of the Business School, or by permission of the chair Graduate students: Admission to a School of Business graduate program and permission of the Associate Director of Graduate Programs

Cross-Listed as: Cross listed with ENT 475

### **MGT 480 - Strategic Management (3)**

Examines the role of a company's executive team in defining its long-term competitive direction. Focuses on the strategic management process of formulating and implementing the organization's mission, goals, strategies, and plans. Must be taken at CCSU for credit to be counted in any CCSU business program of study.

Prerequisite: Grades of at least C- in FIN 295, LAW 250, MIS 201, MGT 295, MKT 295, STAT 201 and the eight pre-major courses; acceptance into upper-division of School of Business; meeting upper-division Business School GPA requirements; and a minimum of 90 credits.

### **MGT 495 - Seminar in International Business (3)**

Advanced study of current trends in the global business environment. Emphasis will be on competitive advantage and a critical analysis of contemporary international business issues. May be taken under different topics for up to 6 credits.

Prerequisite: Senior standing or permission of instructor.

### **MGT 497 - Internship in Management and Organization (1-3)**

Internships are opportunities for students to gain practical work experience to enhance their academic studies. Students with approved proposals identify and investigate managerial problem areas as well as organizational growth and development phenomena. Progress and performance are monitored and evaluated by the faculty advisor who has approved the internship. A minimum of

150 hours of total time including work experience and school work is required.

Prerequisite: Grades of at least C- in MGT 295 and the eight pre-major courses, junior standing, meeting upper-division Business School GPA requirements; and approved Special Project Request Form.

### **MGT 499 - Independent Study in Management and Organization (1-3)**

Special study or research projects. Progress and performance are monitored and evaluated by a qualified MGT faculty advisor. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: MGT 295 (C- or higher); senior standing; permission of the supervising instructor, department chair, and dean.

### **MGT 500 - Management of Contemporary Organizations (3)**

Focuses on learning the structure and process of complex and dynamic contemporary organizations. Students will also develop skills and knowledge needed to successfully manage employees in such organizations.

Prerequisite: None

### **MGT 531 - Managing and Leading in the Contemporary Organization (3)**

Introduces and applies self-management, small group dynamics and leadership theories and techniques. Provides both a theoretical and practical basis on leadership. Students are expected to practice the course content through self-defined projects, typically in their workplace.

Prerequisite: Admission to a School of Business graduate program, permission of the Associate Director of Graduate Programs, or permission of the Department of Management & Organization Chairperson.

### **MGT 550 - Strategic Human Resources Management (3)**

This course will focus on practices and policies of managing human resources from the perspective of management. Topics include how management can build productive relationships with the human resource function and union leaders, performance management processes, hiring, retention and dismissal, development and human resource improvement, and other HR practices for which management is responsible.

Prerequisite: MGT 531, or admission to a School of Business graduate program, or permission of the

Associate Director of Graduate Programs, or permission of the Department of Management and Organization Chairperson

### **MGT 556 - Strategic Leadership (3)**

Explore a number of leadership theories and practices, analyze the key principles of effective leadership, understand the impact of leadership on business strategies. With the emphasis on practical applications of leadership, students will develop the skills necessary to be effective leaders in contemporary organizations.

Prerequisite: MGT 531, or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Management and Organization Chairperson

### **MGT 560 - Supply Chain Management (3)**

This course provides a high-level overview of the supply chain function and an enhanced understanding of key principles, concepts, methodologies, and analytical tools for effective SCM. The contents are applicable to service and manufacturing industries, nonprofit, and governmental institutions. Topics include supply chain analytics, supply chain design, sourcing, logistics, demand forecasting, inventory management, continuous quality improvement, supply chain relationship management, global SCM, and sustainable SCM.

Prerequisite: MGT 531, or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Management and Organization Chairperson.

### **MGT 563 - Sports Management (3)**

This course introduces students to the sports management profession and focuses on the sports industry, including professional sports entertainment, amateur sports entertainment, for-profit sports participation, nonprofit sports participation, sporting goods, sports tourism, and sports services. This course also examines the principles of leadership and management in the sport setting.

Prerequisite: MGT 531 (may be taken concurrently) or permission of the School of Business Assistant Dean of Graduate Programs, or permission of the Department of Management and Organization Chairperson

**MGT 570 - Business Policy and Strategy (3)**

The course examines the nature of organizations and their environments; the strategic management process; the concept of strategy, its function, and its characteristics; the different types of strategy; and the most salient strategy implementation and control factors. In doing so, the course allows students to learn how organizational strategies create competitive advantage through exploiting core competencies and adapting to complex and dynamic competitive environments. Emphasis is placed on the analysis, evaluation, and formulation of strategy.

Prerequisite: MGT 531, or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Management and Organization Chairperson

**MGT 573 - Advanced Organizing and Managing for Innovation (3)**

Explores contemporary understanding of how to stimulate and release creativity through personal practice and contextual design. Directs attention to innovation in products, processes, and services. No credit for MGT 573 if MGT 473 previously taken.

Prerequisite: MGT 531

Cross-Listed as: May run concurrently with MGT 473; additional requirements expected of graduate students.

**MGT 574 - New Venture Challenge: Lean Launch Methodology (3)**

The Lean Launch Methodology uses a scientific, hypothesis development and testing approach to discovering potentially successful business products and models. Students will learn to identify opportunities, test the scale and scope of opportunities, research competitive offerings, determine costs structure, find partners, and determine if a business is worth pursuing. The course utilizes an applied, project based pedagogy and may be delivered in a variety of formats.

Prerequisite: Admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Management and Organization Chairperson

**MGT 575 - Special Topics in Management (3)**

Selected content in management and related topics. Course content will vary from semester to semester. May

be repeated with different topics for a maximum of 6 credits.

Prerequisite: MGT 531, or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Management and Organization Chairperson

**MIS - Management Information Systems****MIS 201 - Introduction to Management Information Systems (3)**

The course provides the background necessary for understanding the role of information systems in organizations and for using computer tools and technology in solving business problems. Topics include organizational foundations of information systems, technical foundations of information systems, building information systems, and the management of information.

Prerequisite: None

**MIS 202 - Introduction to the Application of Artificial Intelligence (3)**

In this course, you will learn the application of artificial intelligence and its wide-ranging relevance across various industries. We will delve into the core principles of AI, including the application of machine learning, neural networks, and natural language processing. Through engaging lectures, hands-on projects, and real-world case studies, you will gain the knowledge and skills needed to harness the power of AI for problem-solving and innovation through AI applications.

Prerequisite: No Prerequisites

**MIS 210 - Application Program Development I (3)**

An introduction to computer programming in a business environment. Emphasis on the fundamentals of structured program design, development, testing, implementation, and documentation of common business-oriented applications using COBOL. Discussion and application of top-down design strategies and structured programming techniques for designing and developing problem solutions.

Prerequisite: MIS 201 (C- or higher).

**MIS 220 - Introductory Business Applications Development (3)**

Introduction to contemporary approaches to application development in a business environment. Emphasis on

program design, development, testing, implementation, and documentation of business applications.

Prerequisite: MIS 201 (C- or higher).

### **MIS 251 - International Studies in Information Systems (3)**

The goal of this course is to expose students to various information systems topics and to allow them to develop comparative understanding of information systems between different countries. This course does not count toward the MIS major.

Prerequisite: None

### **MIS 300 - IT Project Management I (3)**

Effective practices for management of business projects. Topics include definition and organization of projects; techniques for optimizing time, resources and cost; use of Information Technology tools for project management support.

Prerequisite: MIS 201 C- or higher or permission of department chair

### **MIS 310 - Contemporary Business Applications Development I (3)**

MIS 201 (C- or higher). An introduction to computer programming in a business environment. Emphasis on the fundamentals of structured program design, development, testing, implementation, and documentation. Discussion and application of top-down design strategies and structured programming techniques for designing and developing business problem solutions.

Prerequisite: MIS 201 C- or higher, or permission of the department chair

### **MIS 315 - Database Management Systems (3)**

Emphasizes the importance of data management in business. Design, develop and implement database systems for organizational needs. Sample topics include: relational databases, data modeling, SQL, and database administration. Design and implementation of a major database project.

Prerequisite: MIS 201 (C- or higher) or permission of department chair.

### **MIS 361 - Systems Analysis and Design for Business (3)**

Development of business application systems using structured and object-oriented analysis and design. Use of modeling techniques and CASE tools. Evaluation of system

choices via business analysis methods. Includes information systems architecture, enterprise modeling, and ethical issues.

Prerequisite: MIS 315 (can be taken concurrently; C- or higher) or permission of department chair.

### **MIS 395 - Business-Driven Infrastructure Design (3)**

Introduce networking concepts. Integrates LAN, WLAN, WAN and cloud technology concepts. Emphasis on network design and implementation. Uses lecture, hands-on projects and online labs to teach concepts. No credit given for students with credit for MIS 410

Prerequisite: MIS 361 (C- or higher) or permission of department chair.

### **MIS 399 - Business Analytics and Decision Support (3)**

The course covers methodologies, tools, and processes that support business decisions and performance management. Topics include decision-making processes, visualization, descriptive analytics, predictive analytics, etc.

Prerequisite: MIS 315 (C- or higher) or permission of the department chair

Cross-Listed as: This course is cross-listed with BUS 370. No credit given to students who have received credit for BUS 370

### **MIS 412 - Contemporary Business Applications Development II (3)**

Emphasizes program design, development, testing implementation, and documentation of business applications. Window and web applications, data access, security, and exchange will be covered. No credit given for students with credit for MIS 312.

Prerequisite: MIS 310 (C- or higher), or permission of the department chair.

### **MIS 416 - Advanced Database Management Systems (3)**

Advanced Database Management is a hands-on experience with the Amazon Relational Database Services (RDS) and an understanding of how to define, design, and implement databases. Students will learn about database programming and develop triggers, stored procedures, stored functions, and the Transact-SQL language of Microsoft SQL Server. The students will learn about database administration and perform common database administration functions, such as creating and modifying users, managing privileges, and managing backup and recovery. Additionally, they will learn how to prevent,



identify and correct database performance problems and learn the basics of modern database storage, including cloud databases.

Prerequisite: MIS 315 C- or higher, or permission of the department chair

### **MIS 450 - IT Governance and Strategy (3)**

Information Technology (IT) is an important business driver and source of competitive advantage. Almost all services offered by the organizations are IT-enabled. This positions IT as a key strategic capability. This course discusses the topics such as IT's value creation, governance of enterprise IT, alignment of IT strategy with business goals, data strategy, challenges of IT units in organizations, and building an IT leadership.

Prerequisite: Junior Standing or permission of department chair.

### **MIS 460 - Emerging Technologies for Business (3)**

Analysis of current topics and developments in emerging technologies. Application of these technologies to support decision-making in enterprises. Design of alternate information systems and strategies. May be repeated under a different topic to a maximum of 6 credits.

Prerequisite: MIS 201 C- or higher and Senior standing, or permission of the department chair

### **MIS 462 - IT Project Management II (3)**

IT project management best practices. Topics include managing IT projects by utilizing agile (adaptive) project management methods, adopting an agile mindset, creating an agile environment, agile team leadership and management, virtual team, agile project management frameworks and methods (e.g., Scrum, Kanban, Extreme Programming), scaling frameworks, and DevOps team project.

Prerequisite: MIS 300 with a grade of C- or higher, or permission of the department chair

### **MIS 463 - Analytics Applications (3)**

With access to vast amount of data, companies are now relying more on making decisions based on facts than on intuition. This course examines the tools and techniques used to make better decisions. Supervised and unsupervised business analytics techniques will be explored using software tools.

Prerequisite: MIS 399 C- or higher and Junior or Senior standing, or permission of department chair

### **MIS 466 - Enterprise Systems (3)**

This course provides a comprehensive understanding of enterprise systems (ES) and their role in organizations. Students learn how to configure an enterprise resource system to support a global organization with multiple companies. Concepts, issues, current trends, and decision making are addressed through a cross-functional view of the enterprise.

Prerequisite: MIS 201 C- or higher and Junior or Senior Standing, or permission of department chair

### **MIS 494 - Independent Study in Management Information Systems (3-6)**

Special study or research projects. Progress and performance are monitored and evaluated by a qualified MIS faculty advisor. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: MIS 315 B or higher and MIS 361 B and higher, senior standing and admission to the upper-division of the Business School. or permission of department chair

### **MIS 496 - Practicum in Management Information Systems (3)**

Students work on a real-world project under the direct supervision of a faculty advisor. Projects may be sponsored by a host organization. Student performance is monitored and evaluated in relation to conditions set forth in an approved Special Project Request Form. May be repeated for a maximum of 6 credits.

Prerequisite: MIS 315 and MIS 361 (both with grades of B or higher) and senior standing; or permission of department chair.

### **MIS 498 - Information and Decision Sciences Seminar (3)**

An examination of the current trends in the theory and business practices of information and decision sciences.

Prerequisite: MIS 315 C- or higher and MIS 361 C- or higher and senior standing, or permission of department chair

### **MIS 530 - Sports Analytics (3)**

This course will cover theories, knowledge, methodologies, tools, and processes to conduct sports analytics. The primary sports topics discussed include fitness for sports, basketball, etc. Python will be used to analyze the sports data

Prerequisite: Prerequisite

**MIS 531 - Strategic IT Alignment (3)**

Enterprise-wide perspective on IT leadership. Focuses on how IT professionals, non-technical managers, and external service providers work together to ensure that applications, data, and knowledge align with organizational strategy and business processes.

Prerequisite: Admission to a School of Business graduate program, permission of the Associate Director of Graduate Programs, or permission of the Department of Management Information Systems Chairperson.

**MKT - Marketing****MKT 295 - Fundamentals of Marketing (3)**

Overview of marketing emphasizing customer satisfaction and value. Product, price, promotion, place, people and physical evidence of quality; consumer behavior; marketing research; segmentation-targeting-positioning; ethical, global, and social issues are highlighted. CSUS Common Course.

Prerequisite: None

**MKT 301 - Creativity in Marketing (3)**

This course is designed to help students develop creative thinking skills, specifically as they apply to marketing challenges. The course will commence with a series of cognitive exercises before specifically addressing marketing issues. Students will work on a variety of projects including but not limited to: strategic planning, product development, marketing promotion, package and product design, communication logistics and media planning. Guest lectures will be used to connect student projects to relevant business issues.. This course is experiential in nature, students will work on projects inside and outside of class.

Prerequisite: MKT 295 or permission of the instructor

**MKT 305 - Consumer Behavior (3)**

Examines the influence of psychological, sociological and cultural factors on buying behavior of consumers and industrial buyers. Shows how this knowledge is indispensable to the marketing manager when he or she delineates target markets and makes decisions about product, price, promotion, and channels of distribution. Current theories and models are related to present practices and potential applications.

Prerequisite: MKT 295 (C- or higher) and admission to either the upper division of the Business School or the marketing minor.

**MKT 306 - Advertising and Promotion (3)**

Study of an organization's marketing communication with consumers and other stakeholders. Theory, characteristics and management of various promotion mix elements are surveyed with an emphasis on advertising and sales promotion.

Prerequisite: MKT 295 (C- or higher) and admission to either the upper division of the Business School or the marketing minor.

**MKT 311 - Retailing (3)**

Discussions of retail store problems, opportunities and trends in retailing, store organizations, merchandising, and store management.

Prerequisite: MKT 295 (C- or higher).

**MKT 321 - International Marketing (3)**

An analysis of the techniques, procedures, and strategies used by multinational firms. Potential problems are explored. Methods and sources of data for determining products to sell and countries in which to sell them are studied.

Prerequisite: MKT 295 (C- or higher).

**MKT 350 - Social Media Marketing (3)**

Discussion of social media landscape and its impact on marketing. A critical analysis of emerging paradigms, values, best practices and tools of social media. Discussion of the related topics including personal and professional branding, web integration, networking, and idea marketing.

Prerequisite: MKT 295 (C- or higher) and admission to either the upper division of the Business School or the marketing minor.

**MKT 359 - Special Events Marketing (3)**

Prepares current and future managers to deal with business special events and meetings. Provides students with basic concepts common to all special events, as well as, ideas and techniques concerning unique situations.

Prerequisite: MKT 295 (C- or higher).

**MKT 360 - Brand Marketing (3)**

Understanding of important issues in planning and evaluating brand strategies; appropriate concepts and techniques to improve the long-term profitability of brand strategies; establishing and measuring brand equity; understanding brand architecture and brand growth

strategies; establishing linkage between brand equity and profit growth for the company.

Prerequisite: MKT 305 (C- or higher) and admission to either the upper division of the Business School or the marketing minor.

### **MKT 373 - Marketing Research (3)**

Overview of research methods and procedures used in marketing to help solve marketing problems. Analysis of basic research designs and methods of collecting and interpreting data.

Prerequisite: MKT 295 with a grade of C- or higher and admission to the upper division of the Business School

Corequisite: none

### **MKT 375 - Services Marketing (3)**

Investigates unique problems associated with marketing of services. Focuses on managing customer perceptions of service quality by designing services to match customer driven quality standards, communication to set realistic customer expectations and delivering services to meet those expectations.

Prerequisite: MKT 305 (C- or higher).

### **MKT 380 - Market Data Analysis (3)**

Theoretical foundations in consumer need identification, prospecting, segmentation, positioning, pricing, advertising, consumer purchase decision process. Use of ANOVA, factor, cluster, discriminant, and conjoint analysis, perceptual maps and experimental designs.

Prerequisite: MKT 295 with a grade of C- or higher and admission to the upper division of the Business School

Cross-Listed as: none

### **MKT 444 - Direct Marketing Analytics (3)**

Students learn SAS programming, advanced statistical application, and marketing analytics as used in the direct marketing industry. Specific applications include: customer profiling, geographic segmentation and customer response modeling.

Prerequisite: MKT 373 C- or higher.

Cross-Listed as: Cross listed with STAT 456. No credit given to students with credit for STAT 456.

### **MKT 450 - Marketing Strategy and Plan (3)**

Synthesis of analytical frameworks: models for understanding customers, competitors, collaborators (e.g., suppliers and intermediaries), the organization itself,

and the design of its strategy, Students practice decision making with a marketing simulation and write a marketing plan.

Prerequisite: Marketing Majors or Minors, 2 MKT 300+ level courses and senior standing.

### **MKT 480 - Marketing for Non-Profit Organizations (3)**

A comprehensive study of the techniques used in marketing as they apply to non-profit organizations such as hospitals, governments, social action groups, educational institutions, religious institutions, etc. Topical areas to be covered will include market analysis, promotion decisions, market information systems, and decision making in non-profit structures.

Prerequisite: MKT 295 (C- or higher).

### **MKT 481 - Consultative Selling Techniques (3)**

Integrate theory and application of the consultative sales process with counselor style selling techniques emphasizing internalization of selling skills for business-to-business marketing employing lecturing, modeling, role playing, and coaching. Also studied are sales careers, CRM systems and applied psychology for selling.

Prerequisite: MKT 305 (C- or higher) or permission of instructor.

### **MKT 482 - Marketing Analytics (3)**

Equips students with analytical methods to improve decision-making in marketing. It emphasizes hands-on experience with analytical tools, enabling students to conduct in-depth analyses and derive actionable insights to support strategic managerial decisions.

Prerequisite: MKT 373

### **MKT 494 - Independent Study in Marketing (1-6)**

Special study or research projects, as assigned. Students with a deep interest in a specialized subject area explore their topic in detail.

Prerequisite: MKT 295 (C- or higher); and senior standing, permission of the supervising instructor, the department chair, and the Dean of the School of Business.

### **MKT 497 - Marketing Internship (3)**

Offers opportunity for students to use marketing knowledge and skills while gaining professional experience in a Connecticut business, government agency or non-profit organization. Majors with an overall GPA of 2.50 or better only.

Prerequisite: MKT 295 (C- or higher); and permission of the department chair and the Dean of the School of Business.

### **MKT 498 - Marketing Seminar (3)**

Exposes students to the latest developments in the field of marketing. Emphasis is placed on current advanced books and literature in relevant journals. Content will vary from semester to semester.

Prerequisite: MKT 295 (C- or higher) and senior standing.

### **MKT 500 - Marketing Management (3)**

Investigates activities planned by a firm to create and enhance customer value. Examines strategies that integrate the market place, competitive environment and core competencies of the firm to acquire and retain customers.

Prerequisite: None

### **MKT 531 - Strategic Marketing (3)**

Expands the application of marketing fundamentals concepts from tactical to strategic level decision making. Provides experiences in creating customer-driven and market-driven strategies for a firm's success, and in determining what each marketing mix element contributes to the goals of the business unit.

Prerequisite: Admission to a School of Business graduate program, permission of the Associate Director of Graduate Programs, or permission of the Department of Marketing Chairperson.

### **MKT 540 - Customer Experience Design (3)**

While marketers have traditionally focused on the four "P's" (price, product, promotion, placement), growing a loyal customer base in our digital society requires more than meeting customer expectations and good customer satisfaction scores. This course explores the theory, method, and application of a relatively new area of study: customer experience design. Customer experience—or CX—is the summary of all the interactions a company has with a customer over time. Rather than look at consumers as isolated individuals making rational decisions, customer experience design creates a holistic view of an organization's customer experience and identifies opportunities that can deepen relationships and drive loyalty.

Prerequisite: MKT 531 (may be taken concurrently), or admission to a School of Business graduate program, or permission of the Associate Director of Graduate

Programs, or permission of the Department of Marketing Chairperson.

### **MKT 545 - Sports Marketing (3)**

Sports Marketing is a specialized marketing course that is designed to prepare students to develop skills necessary to address marketing issues specific to the sports industry. This course analyzes the field of sports in terms of the practices, applications, and strategies of mainstream marketing. The subject includes Sponsorship, Endorsements, Licensing, Segmentation of the Sports Market, Promotional Strategy for the Marketing of Sports Products, and Emerging Issues in Sports Marketing. In addition, this class touches on the unique opportunities and challenges associated with marketing in the entertainment industry as an aggregate. To provide students with practical experience addressing sports and entertainment marketing issues, the class is organized around four projects.

This course will explore the strategies necessary for success in marketing sports events, products, and services. The course will build knowledge, skills, and a practical understanding of the nature, contexts, and dynamics of sports marketing and critically explore the product, price, promotion, and placement within the sports marketing context.

This course emphasizes the exploration of the essentials of effective sports marketing. Topics include the application of marketing principles in the sports arena, licensing issues, sponsorships and endorsements, stadium and arena marketing, broadcasting and media considerations, public policy and sports, and the unique marketing challenges for sport-specific products (football, basketball, baseball, motorsports, etc.)

Prerequisite: MKT 531 (may be taken concurrently), or admission to a School of Business graduate program, or permission of the Department of Marketing Chairperson.

### **MKT 550 - Graduate Seminar in Marketing (3)**

Selected content in marketing and related topics will be provided in the seminar course. Course content will vary from semester to semester.

Prerequisite: MKT 531 (may be taken concurrently), or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Marketing Chairperson.

**MKT 560 - Strategic Brand Marketing (3)**

A company's most valuable assets can be the brands that it has invested in and developed over time. In our global economy manufacturing processes can often be duplicated, but the knowledge, attitudes, and emotional connection established in consumers' minds cannot. This course intends to introduce MBA students to the key elements of brand development and management, and provide a sound framework for planning and evaluating brand strategies. It will provide the students with the opportunity to increase knowledge of crafting a brand, measuring the brand equity and managing the brand, and learn theories, models, and other analytic tools to make better branding decisions.

Prerequisite: MKT 531 (may be taken concurrently), or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Marketing Chairperson.

**MKT 570 - Marketing Analytics (3)**

This course is designed in response to industry's need for data analysis. The primary purpose of the course is to introduce students to a number of qualitative and quantitative analytical techniques that provide insight into the nature of market information and consumer demand to aid managerial decision-making. The use of these techniques can improve a manager's forecasting ability, provide a better understanding of market behavior, and ultimately form the basis for making more effective and efficient marketing decisions. This course is not a statistics course wherein students work on mathematical details of equations. The course is to equip prospective managers with the ability to understand various analytical tools so that they can apply them to derive and communicate data-based business decisions.

Prerequisite: MKT 531 and BUS 538 , (may be taken concurrently) or admission to a School of Business graduate program, or permission of the Associate Director of Graduate Programs, or permission of the Department of Marketing Chairperson.

**MM - Manufacturing Management****MM 121 - Mechanical CAD (3)**

Introduction to geometric construction, 3D modeling, orthographic projection, sectional and auxiliary views, dimensioning/tolerancing, and pictorials. Emphasis on the use of CAD for mechanical and manufacturing sectors. Two hours lecture and two hours laboratory per week.

Prerequisite: None

**MM 216 - Manufacturing Processes (3)**

Manufacturing principles for material removal, forming, joining, and casting. Applications of machine tool setup and operation, feeds and speeds, principles of cutting tools, welding, and foundry. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: [ROBO 110 or TM 120 or ENGR 150] AND [MATH 101 or MATH 102 (B- or better) or MATH 103 (C- or better) or MATH 115 or MATH 119 or MATH 123]

**MM 226 - Principles of Computer Numerical Control (CNC) (3)**

Principles essential for computer numerical control part programming and machine tool operation. Laboratory experiences include word address programming, computer-aided programming, and CNC machine tool setup and operation. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: [MM 121 or ETM 260 or ROBO 220] and [ME 216 or MM 216]

**MM 236 - Tool Design (3)**

Introductory study of and experiences in the design and construction of custom tooling for manufacturing. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: MM 121 or ETM 260 or ROBO 220 or permission of instructor.

**MM 324 - Fluid Power Systems (3)**

A study of the design and fabrication, diagnosis, and repair of fluid power systems, including hydraulics, pneumatics, and fluids. Two hours lecture and three hours laboratory, course meets five hours per week.

Prerequisite: None

**MUS - Music****MUS 090 - Concert/Forum Attendance (0)**

Attendance, totaling 9 per semester, at concerts/student forums sponsored by the Music Department. Music majors are required to enroll every semester except the semester they enrolled in either EDSC 420/421 or MUS 400.

Prerequisite: None

**MUS 100 - Search in Music (3)**

Introduction to and overview of various topics, techniques, and genres in music history and/or theory. Titles and themes may vary from section to section. Three hours of lecture per week. May be repeated with different content for up to 6 credits.

Prerequisite: None

**MUS 101 - Practicum in Music Education (1)**

Overview of topics related to a career in music education. Includes case study analysis, discussion of issues in music education, observations and reflections on classroom teaching and rehearsals, and laboratory in music education technology. Twelve hours of field experience required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Open only to pre-B.S. in Music Education majors or permission of instructor. MUS 114 (C- or higher)

**MUS 102 - Fundamentals of Musicianship (3)**

This course is designed to prepare all incoming Music majors for the sequence of courses dealing with Harmony and Aural Skills. Regardless of previous training or experience in the field, care is taken to establish strong basic skills in the rudiments of music, in the broadest sense of the concept.

Prerequisite: Open to Music majors; Music minors and others may take this course with permission of the Department Chair.

**MUS 109 - Fundamentals of Music (3)**

Music reading, ear-training, and elementary music theory. CSUS Common Course.

Prerequisite: None

**MUS 110 - Listening to Classical Music (3)**

Introduction to masterpieces of Western art music and to skills required for critical listening. CSUS Common Course.

Prerequisite: None

**MUS 111 - Music of the World's People (3)**

Introduction to music from a cross-cultural perspective, including African, Asian, Hispanic, and Native American musical traditions. CSUS Common Course.

Prerequisite: None

**MUS 112 - Computer Applications to Music (3)**

Includes music fundamentals, elementary principles of musical composition, and computer sound synthesis through the use of computers.

Prerequisite: None

**MUS 113 - History of Jazz (3)**

Survey of the evolution of jazz from its origins in African-American, European, and American ethnic styles through present models as illustrated through lectures, recordings, and related readings. CSUS Common Course.

Prerequisite: None

**MUS 114 - Introduction to Music Technology (1)**

Any may be taken concurrently. Introduction to fundamental technology skills relevant to music: computer-based notation, MIDI sequencing, and basic principles of digital-audio recording and editing. Open to music majors only. (1 credit; 2 contact hours)

Prerequisite: MUS 109 or MUS 102, and MUS 250 (or equivalent skills) (both with C- or higher or may be taken concurrently).

**MUS 115 - Aural Skills I (1)**

Development of sight-singing skills, diatonic major and minor materials. (1 credit; 2 contact hours.)

Prerequisite: MUS 102 (C- or higher); open only to Music majors.

**MUS 115-A - Elementary Aural Skills I (1)**

Music reading, elementary ear-training and development of sight-singing skills, diatonic major and minor materials. Admission will be determined by entrance examination. This course will meet 2 times a week for 1 hour each.

Prerequisite: Open only to Music majors.

Corequisite: MUS 115

**MUS 116 - Aural Skills II (1)**

Continued development of diatonic major and minor sight singing and ear training skills. Introduction to chromatic materials.

Prerequisite: MUS 115 (C- or higher); open only to Music majors.

**MUS 117 - Audio Production (3)**

Students will learn the techniques and technologies used in creative sound design for radio, television, film, and the Internet. Emphasis is on the technical skills used in recording, mixing, and editing. Students will create projects focusing on the fundamentals of sound design for various applications.

**MUS 118 - Electronic Music (3)**

Designed for the non-musician, this course focuses on the composition, creation, performing, and recording of music using modern production techniques. Students will learn the compositional elements of music including rhythm, music and chord theory, and song structure and then perform and record their compositions using MIDI keyboards and digital audio workstations.

**MUS 121-A - Elementary Music Theory I (1)**

Elementary music theory, basic properties of music with emphasis on melodic materials; study includes stylistic analysis, composition, two and three-part counterpoint. This course will meet 2 times a week for 1 hour each.

Prerequisite: Open only to Music majors or minors; or permission of instructor.

Corequisite: MUS 121

**MUS 140 - Ensemble (1)**

Study and performance for ensembles for various combinations. May be repeated for credit with different content. This course does not satisfy ensemble degree requirements for Music majors (except B.A. in Jazz Studies).

Prerequisite: Permission of instructor through audition.

**MUS 141 - Chorus (1)**

A variety of choral literature will be performed each semester. May be repeated for credit with different course content. No more than 3 credits drawn from MUSIC 140 through MUSIC 149 may be counted toward general education in Study Area 1.

Prerequisite: Basic proficiency in singing; or permission of instructor.

**MUS 142 - Wind Band (1)**

Open to all students who play woodwind, brass, or percussion instruments. Performance-based course that focuses on the development of both individual and ensemble musicianship through the rehearsal and

performance of high quality established and emerging wind band literature. May be repeated for credit with different content. No more than 3 credits drawn from MUSIC 140 through MUSIC 149 may be counted toward general education in Study Area 1.

Prerequisite: None

**MUS 142A - Wind Symphony (1)**

Open to all students who play woodwind, brass, or percussion instruments. Performance-based course that focuses on the development of both individual and ensemble musicianship through the rehearsal and performance of high quality established and emerging wind band literature. May be repeated for credit with different content. No more than 3 credits drawn from MUS 141 through MUS 149 may be counted toward general education in Study Area 1.

Prerequisite: None

**MUS 142B - Wind Symphony & Marching Band (1)**

Open to all students who play woodwind, brass, or percussion instruments. Participation in both Wind Symphony (students develop individual and ensemble musicianship through the rehearsal and performance of high quality established and emerging wind band literature) and Marching Band (performance of marching band music and opportunities to perform at football games and other special events) during the Fall. May be repeated for credit with different content. No more than 3 credits drawn from MUS 141 through MUS 149 may be counted toward general education in Study Area 1.

Prerequisite: None

**MUS 142C - Marching Band (1)**

Performance of marching band music and opportunities to perform at football games and other special events. May be repeated for credit with different content. No more than 3 credits drawn from MUS 141 through MUS 149 may be counted toward general education in Study Area 1.

Prerequisite: Basic proficiency in playing a wind or percussion instrument; experience doing color guard; or permission of instructor.

**MUS 143 - Sinfonietta (1)**

Standard orchestral literature will be played each semester. Course may be repeated for credit with different content.

Prerequisite: Basic proficiency in playing a string, wind, brass, or percussion instrument; or permission of instructor.

### **MUS 146 - Vocal Jazz Ensemble (1)**

This course consists of the study, rehearsal, and public performance of literature appropriate for a collegiate vocal jazz ensemble. This group will perform a diverse spectrum of vocal jazz charts accompanied by a rhythm section, as well as a cappella pieces each semester. Topics of study will include basics of singing jazz, vocal improvisation, and microphone techniques. Performances may include appearances with larger ensembles, and off-campus concerts. Attendance at performances is required. This course may be repeated for credit.

Prerequisite: Permission of instructor through audition.

### **MUS 147A - Traditional Jazz Ensemble (1)**

Standard big-band instrumentation repertoire that concentrates on ensemble playing while giving the more accomplished musicians improvisatory opportunities. No more than 3 credits drawn from MUSIC 140 through MUSIC 149 may be counted toward general education in Study Area 1.

Prerequisite: Permission of instructor through audition.

### **MUS 147B - Improvisatory Jazz Ensemble (1)**

Varied instrumentation. May be divided into several groups concentrating on individual development of jazz improvisatory skills. May be repeated for credit with different content.

Prerequisite: Permission of instructor through audition.

### **MUS 148 - Ensemble: University Singers (1)**

A select small vocal ensemble which studies and performs primarily a capella repertoire including madrigals, motet, chamber music, vocal jazz, and world music. Performs several times both on and off campus with occasional concert tours. May be repeated for credit with different content.

Prerequisite: Permission of instructor through audition.

### **MUS 149 - University Chamber Players (1)**

A select ensemble of musicians exploring their passion for chamber music in all its settings. May be repeated for credit with different content.

Prerequisite: Permission of instructor through audition.

### **MUS 177 - Applied Music (.5)**

Individual instrumental or vocal instruction in performance. May be repeated with different content for a total of 6 credits. Fee: \$200 per semester. (Fee subject to change.)

Prerequisite: Open to non-majors by permission of instructor.

### **MUS 178 - Applied Music for Majors (1)**

Individual instrumental or vocal instruction in performance. May be repeated with different content for a total of 6 credits. Fee: \$400 per semester. (Fee subject to change.)

Prerequisite: Open only to Music majors.

### **MUS 201 - Listening to Western Art Music of the 20th and 21st Centuries (2)**

Exposure to repertoire of our time. Class sessions focused on listening with and without scores, with discussion of the experience. Assigned listening outside of class as well. Some discussion of techniques and analysis, but the class is not an analysis class, rather dedicated to a broad exposure of the music of the last 118 years, and an awareness of the work that precedes our own.

### **MUS 211 - Ethnomusicology (3)**

Introduction to the discipline of ethnomusicology. Case studies explore different musical systems and their relationship to their cultural settings.

Prerequisite: MUS 121 or MUS 109 for music majors (C- or higher); or permission of Chair of the Department.

### **MUS 213 - Jazz Styles and Chronology (3)**

Critical study of major jazz artists and the influence of their lives, culture, and music on the development of jazz.

Prerequisite: MUS 113 (C- or higher) or permission of instructor.

### **MUS 214 - Electro-Acoustic Music and Sonic Art (3)**

Historical survey of electro-acoustic music composition and sonic art. Introduction to computer-based digital audio recording and editing, sound synthesis, and effects. Simple electro-acoustic and sonic art composition projects.

Prerequisite: None



**MUS 215 - Aural Skills III (1)**

Continued development of diatonic major and minor sight singing and eartraining skills. Introduction to modulatory materials.

Prerequisite: MUS 116 (C- or higher); open only to Music majors.

**MUS 216 - Aural Skills IV (1)**

Continued development of diatonic major and minor sight singing and eartraining skills. Expanded tonal and atonal materials. (2 contact hours)

Prerequisite: MUS 215 (C- or higher); open only to Music majors.

**MUS 223 - Search in Music Technology and Music Business (3)**

Introduction to and overview of various topics, techniques, and genres in music technology history and techniques and/or music business. Titles and themes may vary. May be repeated with different content for up to 18 credits.

**MUS 224 - Electronic Music Composition/Audio Technology I (3)**

This course is an introduction to the art and techniques of electronic music and audio production/creation. Students will learn the history, elements, and tools of electronic music. Students will also learn about relevant acoustics theory, analog and digital audio principles, sound sampling, electronic synthesis of sound, MIDI, and audio for electro-acoustic music, multimedia, and the World Wide Web/Social Media. Finally, students will become familiar with a variety of the latest sound-generating music software.

**MUS 225 - Electronic Music Composition and Audio Technology II (3)**

Continuation of the study of the principles of electronic music composition and audio production/creation. This course emphasizes the professional techniques and methodologies used in studio and live recording, mixing, and processing of music. Students will be expected to complete projects both individually and collaboratively resulting in the recording, editing, and mastering of music compositions. Topics will include multi-track recording, studio acoustics, microphone placement techniques, sound design, digital mixing consoles, signal processors, and studio session procedures.

**MUS 226 - Music for Film, TV, Video Gaming and Other Media (3)**

Demonstrated knowledge and success in music theory, rudimentary acoustic composition, as well as digital music software programs are highly recommended.

A practical course that focuses on music composition as it relates to digital studio creation for the express purpose of composing for sundry media genres to include, but not limited to film, television, commercials, documentaries, and video games music scores.

Prerequisite: MUS 112, MUS 118, or MUS 214,

**MUS 227 - Principles of Sound Recording (3)**

This course is an advanced study of the techniques and methodologies used in studio and live recording of sound and music. Students will be expected to work both individually and collaboratively in the recording and mastering of live or studio music recording projects. Topics will be drawn from advanced knowledge of multi-track recording, studio acoustics, sound design, digital mixing consoles, microphone placement techniques, signal processors, monitoring, talkback systems, studio session procedures, and familiarization of the latest sound-generating music software for sound recording.

**MUS 228 - Audio Mixing and Processing (3)**

This is advanced-level course in audio and music mixing and signal processing. Students will be expected to take pre-recorded multi-track audio and music production files and edit, mix, process, and master them at a professional level. Topics will include advanced-level sound design, multi-track digital mixing and signal processing, including audio compression, equalization, filtering, reverb, echo, delay, flanging, modulation, pitch shifting, chorus, and other digital effects.

**MUS 235 - Music History I (3)**

Survey of the development of music in its historical contexts from Antiquity to the 17th century, treating both the traditional western curriculum and multiple parallel developments (e.g., sacred music; court music) in non-western cultures.

Prerequisite: MUS 102 (C- or higher).

**MUS 237 - Diatonic Harmony (2)**

Foundational properties of music with emphasis on melodic materials; study includes stylistic analysis, composition, two and three-part counterpoint, and part-writing. (2 credits; 3 contact hours)

Prerequisite: MUS 102 (minimum grade of C-); open only to Music majors or minors, or with permission of instructor.

**MUS 250 - Piano Class I (1)**

Introduction to piano through the study of harmonic, melodic, and rhythmic patterns. Elementary keyboard skills in sight-reading, transposition and melody harmonization. For students with no previous piano training. (1 credit; 2 contact hours)

Prerequisite: None

**MUS 251 - Piano Class II (1)**

Continuation of keyboard skills introduced in MUS 250. (1 credit; 2 contact hours)

Prerequisite: MUS 250 (C- or higher) or equivalent skill and permission of instructor.

**MUS 259 - Vocal Methods (1)**

Methods and materials of class instruction in voice.

Prerequisite: Open only to Music majors.

**MUS 261 - Woodwind Methods (1)**

Beginning class instruction in woodwind instruments.

Prerequisite: Open only to Music majors.

**MUS 262 - Brass Methods (1)**

Beginning class instruction in brass instruments.

Prerequisite: Open only to Music majors.

**MUS 263 - Percussion Methods (1)**

Class instruction in snare drum, tympani, and related orchestral and band percussion instruments.

Prerequisite: Open only to music majors.

**MUS 264 - Voice Class (2)**

Instruction in voice production and vocal techniques. Vocalizations for vowels, range, flexibility. Song repertoire for individual members.

Prerequisite: None

**MUS 266 - String Methods (1)**

Methods and materials for class instruction in violin and viola as well as cello and double bass

Prerequisite: Open to Music Majors only.

**MUS 267 - String Methods: Violin and Viola (1)**

Methods and materials of class instruction in violin and viola.

Prerequisite: Open only to Music majors.

**MUS 268 - String Methods: Cello and Double Bass (1)**

Methods and materials class instruction in cello and double bass. Open only to Music majors.

Prerequisite: None

**MUS 269 - Technology in Music Education (1)**

Introduction to the practical application of general productivity, multimedia, and music-specific technologies to teaching music in elementary, middle, or high schools. Restricted to Music Education majors.

Prerequisite: MUS 101 and MUS 114 (both with C- or higher).

**MUS 273 - Jazz Improvisation I (2)**

Study of jazz theory and performance to develop the basic skills required for improvising. Students will transcribe, perform and analyze solos in various styles while becoming proficient in jazz theory and terminology.

Prerequisite: MUS 237 (C- or higher) or permission of instructor.

**MUS 274 - Jazz Improvisation II (2)**

Study of jazz theory and performance leading to an advanced level of improvising and proficiency in theory and terminology. Students will transcribe, perform and analyze solos containing complex harmony and advanced vocabulary.

Prerequisite: MUS 273 (C- or higher) or permission of instructor.

**MUS 278 - Applied Music for Majors II (1)**

Individual instrumental or vocal instruction in performance. May be repeated for up to 6 credits in any one performing area. Fee: \$400 per semester. (Fee subject to change.)

Prerequisite: MUS 178 (C or higher); open only to Music majors.

**MUS 295 - Beginning Composition (2)**

Fundamental principles, techniques, and skills of music composition. Introduction to contemporary innovations in musical styles and language. Composition of simple, short musical compositions.

Prerequisite: MUS 114 and MUS 237 (both with C- or higher); or permission of instructor.

### **MUS 301 - Coding for Music (3)**

This course will introduce students to the Max/MSP music programming environment. This graphic programming environment, Max/MSP is an application for musicians to write one's own application and/or for designing interactive music programs. It is a suitable programming environment that is useful for a wide variety of areas: music performances, sound and art installations, animations, video, as well as particularly useful for situations involving human-computer interaction. Each student in the class will be required to become fluent in this programming environment, learning to design and realize artistic projects within it.

### **MUS 310 - General Music Education (3)**

Organization, aims, and supervision of elementary and middle school programs. Materials for teaching general music in the elementary, middle school, and high school. Open only to Music Education majors. Due to field experience in this class, proof of fingerprinting is required prior to the beginning of class. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: MUS 101 (C- or higher), MUS 215, MUS 319

Corequisite: To be taken concurrently with EDTE 314.

### **MUS 311 - General Music Education, Part II (Grades 5-12) (3)**

Organization, aims, and supervision of general music programs, and resources and techniques for teaching general music. Aims, materials, procedures, and techniques for teaching general music and non-performance classes in middle and high schools grades (7-12). Field experience requirement: teacher candidates will have a minimum of 15 hours of field experience. To be taken concurrently with EDSC 425, SPED 315, MUS 315, and MUS 316. Due to field experience in this class, proof of fingerprinting is required prior to the beginning of class. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and

are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: MUS 101 (with a grade of C- or higher), MUS 310 (with a grade of C or higher), and admission to the Professional Program in Music Education.

### **MUS 315 - Choral Music Methods (4)**

Organization, aims, methods and supervision of school vocal programs and choral organizations in elementary, middle and high schools. Discussion of special problems of choral conducting and the selecting of choral materials and repertoire for students in grades 4-12. Field experience required (20 hours). In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: MUS 101 (C- or higher) and 310 (C or higher), and admission to the professional program in Music Education.

Corequisite: MUS 311, SPED 315, and EDSC 425.

### **MUS 316 - Instrumental Music Methods (4)**

Organization, aims, methods, and supervision of school instrumental programs and instrumental organizations. Discussion of special problems of instrumental conducting and the selecting of instrumental materials and repertoire appropriate for students in grades 4-12. Field experience required (20 hours). In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: MUS 101 (C- or higher) and MUS 310 (C or higher), and admission to the professional program in Music Education.

Corequisite: MUS 311, SPED 315 and EDSC 425.

### **MUS 317 - Secondary Music Methods (4)**

Catalog Description: Organization, aims, methods, and supervision of secondary school instrumental and vocal programs and instrumental and choral organizations in middle and high schools. Discussion of special problems of instrumental and choral conducting, and the selecting

of instrumental and choral materials for middle and high school choirs and instrumental ensembles. *Open only to students who have competed MUS 310.*

Prerequisite: MUS 101, MUS 310 (C- or higher).

Corequisite: EDSC 425

### **MUS 318 - Chromatic Harmony I (2)**

Homophonic texture and diatonic and basic chromatic harmonic relations, form, analysis, and part writing. (2 credits; 3 contact hours)

Prerequisite: MUS 237 (C- or higher); open only to Music majors or minors; or permission of instructor.

### **MUS 319 - Chromatic Harmony II (2)**

Advanced Chromatic Harmonic relations, higher tertian harmony, and beyond. Study to common piece forms as well as continued analysis and part writing within advance chromatic harmony. (2 credits; 3 contact hours)

Prerequisite: MUS 318 (C- or higher); open only to Music majors.

### **MUS 334 - Music History II (3)**

Survey of the development of music in its historical contexts from the late Baroque to the Romantic era (c. 1700-1850), treating both the traditional western curriculum and multiple parallel developments (e.g., music for the theatre, story-telling, and ceremonies) in non-western cultures.

Prerequisite: MUS 235 (C- or higher).

### **MUS 335 - Music History III (3)**

Survey of the development of music in its historical contexts from the late Romantic Era to the present, treating both the traditional western curriculum and multiple parallel developments (e.g., folk music and native styles) in non-western cultures.

Prerequisite: MUS 334 (C- or higher); open only to Music majors.

### **MUS 350 - Piano Class III (1)**

Continuation of MUS 251 with emphasis on keyboard skill. Harmonization of folk melodies, improvising to given chord pattern, sight-reading of community songs. (1 credit; 2 contact hours)

Prerequisite: MUS 251 (C- or higher) or equivalent skill and permission of instructor.

### **MUS 351 - Piano Class IV (1)**

Continuation of MUS 350. Improvisation on more advanced level. Repertoire from various styles of piano literature. (1 credit; 2 contact hours)

Prerequisite: MUS 350 (C- or higher) or equivalent skill and permission of instructor.

### **MUS 367 - Choral Conducting (2)**

Development of skills in choral conducting and score reading. Open only to Music majors.

Prerequisite: MUS 319 and MUS 215 (both C- or higher) or equivalent.

### **MUS 368 - Instrumental Conducting (2)**

Development of skills in instrumental conducting, baton technique, and score reading. Open only to Music majors.

Prerequisite: MUS 367 (with C- or higher); or permission of instructor.

### **MUS 378 - Applied Music for Majors III (1)**

Individual instrumental or vocal instruction in performance. May be repeated for up to 6 credits. Fee: \$400 per semester. (Fee subject to change).

Prerequisite: MUS 278 (C or higher); open only to Music majors.

### **MUS 380 - Advanced Notation, Sequencing, and Sound Synthesis (2)**

Advanced development of music technology skills focusing on computer-based notation, sound synthesis, MIDI sequencing, and digital audio recording and editing.

Prerequisite: MUS 114 (C- or higher); open only to Music majors; or permission of instructor.

### **MUS 390 - Orchestration (3)**

Techniques and principles of orchestration; both instrumental and vocal arranging. Open only to Music majors.

Prerequisite: MUS 114 and MUS 319 (both with C- or higher); or permission of instructor.

### **MUS 395 - Composition (2)**

Principles and techniques of music composition, geared to the mature musician; much independent work. Open only to music majors.

Prerequisite: MUS 295 (with C- or higher); open only to Music majors; or permission of instructor.

**MUS 400 - Project in Music (1-4)**

Individual study in an area of student's choice. May take the form of performance, composition, paper, or other area to be determined in consultation with a music department advisor.

Prerequisite: Permission of instructor.

**MUS 401 - Topics In Music (1 - 3)**

Selected topics in music to include specialized area not covered in regular course offerings. May be repeated with different topics for up to 6 credits.

**MUS 402 - Student Teaching Seminar (1)**

Seminar in which students discuss experiences in their learning communities, share resources, problem-solve, and develop and refine teaching techniques.

Prerequisite: Acceptance into the Professional Program.

Corequisite: EDSC 420 or EDSC 421.

**MUS 404 - Topics in Performance (1-3)**

Topics relevant to the performing musician including accompaniment, diction for singers, and performance practice.

Prerequisite: Permission of instructor.

**MUS 405 - Topics in Composers (3)**

Historical and analytical study of selected composers and their works.

Prerequisite: Permission of instructor.

**MUS 408 - Form and Analysis (2)**

Study of historical forms and contrapuntal techniques through analysis, composition, and performance, and orchestration study. (2 credits; 3 contact hours)

Prerequisite: MUS 319 (C- or higher); open only to Music majors.

**MUS 469 - Music Theory Review (2)**

Survey of the principles of diatonic and chromatic elements of theory. This course is a prerequisite to MUS 470 if graduate theory placement exam is not passed. Credits from this course may not be applied toward the M.S. degree in Music Education.

Prerequisite: Four semesters of undergraduate music theory.

**MUS 470 - Musical Structure and Style (3)**

Survey of the principles of music theory through analysis of representative forms from various style periods.

Prerequisite: Admission to the M.S. in Music Education program, or four semesters of undergraduate music theory or demonstrated proficiency on the music theory entrance examination.

**MUS 478 - Applied Music for Majors IV (1)**

Individual instrumental or vocal instruction in performance. May be repeated for up to 4 credits. Fee: \$400 per semester. (Fee subject to change).

Prerequisite: MUS 378 (C or higher); open only to Music majors.

**MUS 501 - Topics in Music (1-3)**

Selected topics in music covering specialized areas not covered in regular course offerings. Open only to students with an undergraduate degree in music or with special permission of the department chair. May be repeated with different topics up to 6 credits.

Prerequisite: None

**MUS 502 - Topics in Music Education (1-3)**

In-service experience designed to meet specific needs of public school music teachers. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

**MUS 503 - Topics in Instrumental Music Education (1-3)**

Study of specialized areas of instrumental music for the experienced music educator. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

**MUS 504 - Principles and Foundations of Music Education (3)**

The study of the school music program from a historical, philosophical, and psychological basis. Special emphasis on current research in pedagogy and trends in aesthetic education.

Prerequisite: Admission to the Master of Science (MS) in Music Education degree program.

**MUS 505 - Topics in Pedagogy and Curriculum (1-3)**

Exploration of specialized topics in music pedagogy and curriculum for the experienced music educator. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

**MUS 506 - Topics in Choral Music Education (2)**

Specialized areas of choral music and the school choral music program for the experienced music educator. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

**MUS 507 - Topics in Conducting (1-3)**

Selected topics in band, choral, or orchestral conducting covering specialized areas for the experienced conductor. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

**MUS 508 - Topics in Choral Literature (2)**

Selected choral literature and rehearsal techniques for specific choral ensembles, including elementary, middle, high school, and community choirs. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

**MUS 509 - Comparative Music Studies (3)**

Study of the world of music from many perspectives including universal themes, organology, acoustics, iconography, notation, uses and function of music, and social identity.

Prerequisite: Admission to the graduate program in Music Education (M.S.) degree program.

**MUS 510 - Current Issues in Music Education (3)**

Contemporary issues in music education and how these interface with educational reform. Topics and projects include curriculum (music and interdisciplinary), research, assessment, equity, and access.

Prerequisite: Admission to Master of Science (MS) in Music Education and MUS 504 or permission of graduate coordinator.

**MUS 512 - Topics in String Pedagogy (2)**

Intensive study of the elements of pedagogy, with emphasis on program development. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

**MUS 515 - Topics in Technology Applications and Techniques in the Music Classroom (2)**

A study of selected software and techniques, and multi-media and devices, and their applications in the music classroom. May be repeated for a maximum of 6 credits with different content.

Prerequisite: None

**MUS 525 - Topics in Pedagogy and Curriculum in Music Technology (2)**

Exploration of music technology in pedagogy and curriculum in the music classroom. Designed for the experienced music educator. May be repeated for a maximum of 6 credits with different content.

**MUS 526 - Developing Children's Choirs (2)**

Study of organizational techniques, resource materials, and rehearsal techniques for developing children's choirs.

Prerequisite: None

**MUS 528 - Topics in Computer Music Notation (2)**

Specialized topics in computer music notation software and its application to the music classroom. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

**MUS 529 - Topics in Sequencing and Synthesis (2)**

Specialized topics in MIDI sequencing and synthesis software tools and their application to the music classroom. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

**MUS 536 - Topics in Music Technology (1-3)**

Specialized topics in music technology including computer-assisted instruction, Internet and multi-media authoring, and music computerlabs. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

**MUS 540 - Chamber Ensemble (1)**

Study and performance of music for various chamber ensembles. Will be offered based on availability of faculty and student interest. May be repeated for a total of 3 credits toward the M.S. in Music Education degree.

Prerequisite: Permission of instructor by audition.

**MUS 540E - Ensemble: Clarinet (1)**

Prerequisite: Permission of instructor by audition.

**MUS 540F - Ensemble: Percussion (1)**

Prerequisite: Permission of instructor by audition.

**MUS 547A - Ensemble - Traditional Jazz (1)**

Standard big band instrumentation repertoire that concentrates on ensemble playing while giving the more accomplished musicians improvisatory opportunities. May be repeated for up to 4 credits with different content.

Prerequisite: Permission of instructor through audition.

**MUS 547B - Ensemble - Improvisatory Jazz (1)**

Varied instrumentation. May be divided into several groups. Concentration on individual development of jazz improvisatory skills. May be repeated for up to 4 credits with different content.

Prerequisite: Permission of instructor through audition.

**MUS 548 - Ensemble-University Singers (1)**

Select small vocal ensemble studies and performs primarily a capella repertoire including madrigals, motet, chamber music, vocal jazz and world music. The ensemble performs several times both on and off campus with occasional concert tours. May be repeated for up to 4 credits with different content.

Prerequisite: Permission of instructor through audition.

**MUS 549 - University Chamber Players (1)**

Select ensemble of musicians exploring their passion for chamber music in all its settings. May be repeated up to 4 credits with different content.

Prerequisite: Permission of instructor through audition.

**MUS 551 - Orff-Schulwerk Teacher Training Course Level I (3)**

Foundations and principles of the Orff-Schulwerk process for teaching music to children; includes training in recorder pedagogy, ostination, bordun and canon.

Prerequisite: None

**MUS 552 - Folk Dance and Movement Across the Curriculum (2)**

Multicultural and interdisciplinary course based on traditional folk music and dances. Movement education will be explored. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

**MUS 556 - Orff-Schulwerk Teacher Training Course Level II (3)**

A continuation of MUS 551; various accompaniment patterns, orchestrations, and modulation. Rhythmic training including irregular rhythms and meters; continuation of soprano recorder and introduction of alto recorder.

Prerequisite: MUS 551.

**MUS 557 - Topics in General Music Education (2)**

Study of specialized areas of classroom music throughout the K-12 music program. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

**MUS 559 - Topics in High School Music Curriculum (2)**

Study of selected non-performance curricula for the secondary music teacher. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

**MUS 562 - Topics in Instrument Repair (2)**

Repair and preventative maintenance of brass, woodwinds, and string instruments. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

**MUS 567 - String Repair (2)**

Fundamentals of violin family repair through lecture, demonstration, and lab experience. Areas of emphasis include bridge and peg repair, seam and crack gluing, making and setting of sound posts, instrument cleaning, and bow rehairing.

Prerequisite: None

**MUS 569 - Aural Skills Development for Teachers (3)**

Aural skills development and proficiency in areas of musicianship including sight-singing, dictation (melodic and harmonic), error detection; and their application to the music classroom. Open to any music educator with a Bachelors degree in music.

Prerequisite: Bachelors degree in music.

**MUS 570 - Topics in Vocal Techniques (2)**

Study of vocal techniques for selected age groups and/or levels of musical development. May be repeated for maximum of six credits with different content.

Prerequisite: None

### **MUS 572 - Topics in Literature for Bands (2)**

Study of selected instrumental literature for specific instrumental ensembles, including elementary, middle, and high school bands, and wind and jazz ensembles. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

### **MUS 574 - Topics in Assessment and Evaluation (2)**

Study of various methods and evaluation as related to student, teacher, and program assessment. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

### **MUS 575 - Topics in Band (2)**

Study of selected aspects of the public school band program. May be repeated for a maximum of 6 credits with different content.

Prerequisite: None

### **MUS 578 - Advanced Applied Music or Conducting (2)**

Individual instrumental or vocal instruction in performance or conducting. May be taken more than once for credit. Fee: \$400 (subject to change).

Prerequisite: Admission to the Master of Science (MS) in Music Education degree program and approval for the Capstone Recital or Conducting Special Project.

### **MUS 579 - Topics in Improvisation (2)**

Study of function and usage in specialized areas of improvisation. Development of basic skills in such realms as jazz, classical, and world music. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

### **MUS 590 - Sinfonietta (1)**

Standard symphonic literature will be rehearsed for concert performance. No more than a total of 4 credits from MUS 590, MUS 591, and MUS 592 may be taken for credit towards the M.S. in Music Education degree.

Prerequisite: Permission of instructor.

### **MUS 591 - Chorus (1)**

Representative chorus works from the great composers will be rehearsed and performed. No more than a total of 4 credits from MUS 590, 591, and 592 may be taken for credit towards the M.S. in Music Education degree.

Prerequisite: Permission of instructor.

### **MUS 592A - Wind Symphony (1)**

Various styles of band music and different compositions studied for performance each semester. No more than a total of 3 credits from MUS 590, 591, and 592A may be taken for credit towards the degree.

Prerequisite: None

### **MUS 597A - Capstone Project in Music (3)**

Individual study or research in an area of the student's choice with the consultation of the Capstone Project advisor; may include action research or composition.

Prerequisite: Admission to the Master of Science (MS) in Music Education degree program at least 18 credits toward the planned program of study, a 3.00 cumulative grade point average and permission of the department's graduate committee.

### **MUS 597B - Performance or Conducting Recital (3)**

The preparation and presentation of a performance or conducting recital under the guidance of the appropriate applied music instructor.

Prerequisite: Admission to the Master of Science (MS) in Music Education degree program, approval of the audition committee, at least 18 credits toward the planned program of study and a 3.00 cumulative grade point average.

### **MUS 598 - Research in Music Education (3)**

Study of research methods used in music education and the primary sources needed to conduct these types of research.

Prerequisite: Admission to MS in Music Education degree program and MUS 504 or permission of Graduate Music Coordinator.

### **MUS 599 - Thesis (3)**

Preparation of the thesis under the supervision of the thesis advisor.

Prerequisite: Admission to the Master of Science (MS) in Music Education degree program; permission of the department's graduate committee; at least 18 credits toward the planned program of study; and a 3.00 cumulative grade point average.



## NAR-Nurse Anesthesia Residency

### NAR 730 - Nurse Anesthesia Residency I (1)

Structured, supervised clinical training and experience to learn to organize, administer, and manage anesthesia in a wide range of ages of patients. Conducted at affiliated hospital school of nurse anesthesia or their affiliated sites.

Prerequisite: Admission to the DNAP Entry-level Specialization program and cumulative GPA of 3.00

### NAR 731 - Nurse Anesthesia Residency II (1)

Continuation of NAR 730: Conducted at affiliated hospital school of nurse anesthesia or their affiliated sites.

Prerequisite: NAR 730 and cumulative GPA of 3.00

### NAR 732 - Nurse Anesthesia Residency III (1)

Continuation of NAR 731; Conducted at affiliated hospital school of nurse anesthesia or their affiliated sites.

Prerequisite: NAR 731 and cumulative GPA of 3.00

### NAR 733 - Nurse Anesthesia Residency IV (3)

Structured, supervised clinical training and advanced experience to organize, administer, and manage anesthesia in a general or specialty setting. Creation of a professional portfolio with written case studies of clinical experiences; with focus on methods for determining best clinical practices through identification of problems, review and systematic evaluation of current research, interdisciplinary collaboration, and consideration of economic and other factors that impact patient outcomes. Conducted at an affiliated hospital school of nurse anesthesia or other approved clinical sites.

Prerequisite: NAR 732 and cumulative GPA 3.00

### NAR 734 - Nurse Anesthesia Residency V (3)

Continuation of NAR 733. Continuation of professional portfolio at more advanced level. Conducted at affiliated hospital school of nurse anesthesia or other approved clinical sites.

Prerequisite: NAR 733 and 3.00 cumulative GPA

### NAR 735 - Nurse Anesthesia Residency VI (3)

Continuation of NAR 734. Continuation of professional portfolio at more advanced level. Conducted at affiliated hospital school of nurse anesthesia or other approved clinical sites.

Prerequisite: NAR 734 and 3.00 Cumulative GPA

## NRSE - Nursing

### NRSE 110 - Introduction to Nursing Theories (2)

This course is designed to introduce the beginning nursing student to the current and historic nursing theory as it relates to the nursing profession. Topics will include nursing theories that influenced the development of the nursing process, patient care and research in the profession.

Prerequisite: Nursing majors only, PSY 136 (Required C or better, as per program requirements), BMS 102 and BMS 103 (Required C+ or better, as per program requirements), CHEM 210 (Required C+ or better, as per program requirements).

Corequisite: NRSE 150, NRSE 210, BMS 318

Cross-Listed as: BIO 318

### NRSE 150 - Nutrition (3)

This course emphasizes basic, normal nutrition across the lifespan and the current guidelines for maintaining wellness through healthy eating. The interconnectedness of nutrition and health or disease is stressed and an introduction to nutritional therapy is included. Nursing application of nutritional knowledge is the primary focus of this course.

Prerequisite: Nursing majors only; BMS 102 (Required C+ or better, as per program requirements), BMS 103 (Required C+ or better, as per program requirements), CHEM 210 (Required C+ or better, as per program requirements), PSY 136 (Required C or better, as per program requirements)

Corequisite: NRSE 110, NRSE 210, and either BMS 318 or BIO 318

### NRSE 210 - Health Assessment (4)

This nursing health assessment course presents the theoretical knowledge and skills necessary to perform a comprehensive health assessment. Emphasis is on comprehensive history taking, interviewing, and physical assessment techniques for both wellness and illness needs. There is a 3 hour class and 3 hour lab on campus weekly.

Prerequisite: Nursing majors only; PSY 136 (Required C or better, as per program requirements), CHEM 210 (Required C+ or better, as per program requirements), BMS 102 and BMS 103 (Required C+ or better, as per program requirements)

Corequisite: NRSE 110, NRSE 150, BMS 318

Cross-Listed as: BIO 318

**NRSE 246 - Ethical Issues in Professional Nursing Practice (3)**

Application of ethical theories and principles to contemporary healthcare issues

Prerequisite: Matriculation in RN/BSN program.

**NRSE 250 - Nursing Care of Well Populations (2)**

Focus on well populations. The nursing role in promotion of health, prevention of disease and encouragement of healthy behaviors in populations across the lifespan is emphasized. Required clinical experience in community/community-based settings. There is a 2 hour class weekly. There are 56 hours of clinical laboratory per semester.

Prerequisite: Nursing Majors Only, NRSE 110 (Required C+ or better, as per program requirements), NRSE 150 (Required C+ or better, as per program requirements), NRSE 210 (Required C+ or better, as per program requirements), and either BIO 318 or BMS 318 (Required C+ or better, as per program requirements)

Corequisite: NRSE 260, NRSE 270, and either BMS 319 or BIO 319

**NRSE 260 - Evidence-Based Nursing Interventions (4)**

Practice-focused interventions, patient outcomes, and clinical reasoning within the context of patient-centered care. There is a 2 hour class and 3 hour lab on campus weekly.

Prerequisite: Nursing Majors Only. NRSE 110 (Required C+ or better, as per program requirements), NRSE 150 (Required C+ or better, as per program requirements), NRSE 210 (Required C+ or better, as per program requirements), BIO 318 or BMS 318 (Required C+ or better, as per program requirements)

Corequisite: NRSE 250, NRSE 270 and either BMS 319 or BIO 319

**NRSE 270 - Gerontological Nursing (3)**

The process of aging is examined in terms of values and attitudes toward older citizens. All levels of health will be examined including successful aging, health promotion, disease prevention, acute/chronic illness, limitation of disability and end of life care. Required off campus clinical hours. There is a 2 hour class weekly. There are 56 hours of clinical laboratory per semester.

Prerequisite: Nursing majors only; NRSE 110 (required C+ or better, as per program requirements), NRSE 150 (required C+ or better, as per program requirements),

NRSE 210 (required C+ or better, as per program requirements), BMS 318 or BIO 318 (required C+ or better, as per program requirements).

Corequisite: NRSE 250, NRSE 260, and either BMS 319 or BIO 319

**NRSE 300 - Health Assessment and Promotion (3)**

Application of the knowledge and skills necessary to conduct a comprehensive health assessment with an emphasis on health promotion interventions and aspects of care

Prerequisite: Current Connecticut Registered Nurse License, or permission of the department chair.

**NRSE 301 - The Art and Science of Nursing (3)**

This course applies nursing theory to the art and science of nursing with a focus on caring for the self, individuals, families, and communities we serve.

Prerequisite: CT RN license or permission of department chair.

**NRSE 303 - Nursing Research for Evidence-Based Practice (2)**

Preparation of the professional nurse to be a critical consumer of nursing research and to begin to apply basic nursing research findings to nursing practice.

Prerequisite: Admission to the professional program in Nursing and a statistics course.

**NRSE 305 - Scholarship for the Nursing Discipline (3)**

Preparation of the professional nurse to utilize basic principles of the research process to critique research and determine its applicability enhancement of nursing's body of knowledge. The role of the professional nurse in the improvement of health and health care, while promoting the ethical conduct of scholarly activity, is highlighted

Prerequisite: Statistics course and matriculation in RN/BSN program.

**NRSE 310 - Altered Health Concepts and Therapeutic Interventions (4)**

Selected health problems and associated pharmacological/ holistic interventions are addressed from a lifespan perspective. Medication administration, therapy and safety are considered along with non-pharmacological interventions. In addition, this course is based on the principles of nursing management of drug therapy, the basics of core drug knowledge and patient-related variables. Emphasis is on assessing and evaluating

patient responses that change with health status, age, lifestyle, gender and other factors.

Prerequisite: NRSE 250, NRSE 260, NRSE 270, BIO 318 or BMS 318, BIO 319 or BMS 319

Corequisite: NRSE 345 and NRSE 360

### **NRSE 320 - Holistic Care of Adults with Health Alterations (5)**

Nursing care of adults across altered health states. These health alterations will be explored with a focus on their impact on mental and spiritual wellness. Evidence based nursing interventions appropriate to this population will also be covered. Required clinical hours off campus. There is a 3 hour class weekly. There are 112 hours of clinical laboratory per semester.

Prerequisite: Nursing Majors Only, NRSE 310, NRSE 345, NRSE 360

Corequisite: NRSE 303

### **NRSE 342 - Ethical Issues Confronting the Geriatric Patient (3)**

Introduction to the major ethical/social/political issues arising in the care and treatment of the elderly individual.

Prerequisite: Permission of instructor.

### **NRSE 345 - Psychiatric/Mental Health Nursing (4)**

Integrates behavioral, biological, genetic, psychosocial, cultural, environmental, and religious influences on mental health across the life span. Promotion of health, disease prevention, and adaptation to health deviations will be emphasized. Required clinical hours on and off campus. There is a 3 hour class weekly. There are 56 hours of clinical laboratory per semester.

Prerequisite: Nursing Majors only, NRSE 250, NRSE 260, NRSE 270.

Corequisite: NRSE 310 and NRSE 360.

### **NRSE 360 - Maternity Nursing: The Expanding Family (4)**

Women and their families from conception through the childbearing period, are considered from a holistic approach to nursing prevention and intervention. Clinical experiences off campus are required. There is a 2 hour class weekly. There are 56 hours of clinical laboratory per semester.

Prerequisite: Nursing Majors Only, NRSE 250, NRSE 260, and NRSE 270.

Corequisite: NRSE 345.

### **NRSE 400 - Nursing Externship (3)**

Integrates practice and education through health-care based service model and collaborative partnerships to enhance clinical nursing competence, confidence and skills. Total of ninety-nine clinical hours off campus.

Prerequisite: Admission to the professional program in nursing; NRSE 246 and NRSE 350.

### **NRSE 413 - Population Health (3)**

Interventions to optimize and promote health of populations will be examined within the public health framework. Ethical theories and principles will be discussed incorporating the essentials of baccalaureate nurse practice. Current topics in public health such as epidemiology, disaster preparedness, environmental health, and violence will be explored.

Prerequisite: Matriculation in the RN/BSN program.

### **NRSE 414 - Policy and Advocacy in Professional Nursing (3)**

Examination of the fundamental issues of healthcare policy and practice for professionalism in nursing. Emphasis on the nurse's ethical responsibility to be an active participant in the political process and an advocate for equitable dimensions of care

Prerequisite: Matriculation in the RN/BSN program.

### **NRSE 445 - Social Justice and Health Promotion of Communities (4)**

Concepts of Community and Public Health will be explored from a social justice framework in the classroom and community clinical setting. Common health care problems and health care challenges faced by vulnerable populations will be identified and incorporated into population based health interventions. Required off campus clinical hours. There is a 3 hour class weekly. There are 56 hours of clinical laboratory per semester.

Prerequisite: Nursing Majors Only; NRSE 465, NRSE 470, NRSE 490.

Corequisite: NRSE 495.

### **NRSE 465 - Nursing Care of Families with Children (4)**

Health care issues of children from birth through adolescence. Emphasis on application of the nursing process and interventions specific to child health. Required clinical hours off campus. There is a 2 hour class weekly. There are 56 hours of clinical laboratory per semester.

Prerequisite: Nursing Majors Only, NRSE 303, NRSE 320.

**NRSE 470 - Holistic Nursing Care of the Critically Ill (5)**

Nursing care for critically ill populations across the life span with a focus on altered body systems and the impact on mental and spiritual wellness. Emphasis is on integration of professional role in a changing practice environment. Required clinical hours off campus. There is a 3 hour class weekly. There are 112 hours of clinical laboratory per semester.

Prerequisite: Nursing Majors Only. NRSE 303, NRSE 320.

Corequisite: NRSE 465.

Cross-Listed as: Knowledge and clinical practice from prerequisite courses is needed to prepare students academically for this course.

**NRSE 485 - Professional Values and Role Development (2)**

Analysis of current social, political and ethical healthcare issues. Concepts relevant to ethical and professional behaviors will be incorporated.

Prerequisite: Nursing Majors Only. NRSE 465, NRSE 470, NRSE 490

Corequisite: NRSE 495.

**NRSE 490 - Leadership and Management in Nursing (2)**

Concepts and practices of leadership needed by healthcare clinicians to fulfill professional responsibilities for the quality of care for patients, for caregivers, and organizations. Emphasis on leadership, quality and safety, group dynamics, staff motivation and conflict resolution.

Prerequisite: Nursing or RN to BSN majors only. NRSE 303, NRSE 320

**NRSE 492 - Leadership Development for Quality Care (4)**

Development of nursing leadership skills to enhance healthcare delivery with a special emphasis on quality improvement as a means of improving patient outcomes

Prerequisite: Matriculation in RN/BSN program.

**NRSE 495 - Synthesis of Professional Nursing Practice (6)**

Capstone course to support role mastery in a clinical practice area. Students work with preceptors to achieve maximum preparation for their transition from student to RN. Weekly seminars use case studies to facilitate synthesis and application of nursing knowledge. There is a 3 hour class weekly. There are 112 hours of clinical laboratory per semester.

Prerequisite: Nursing Majors Only, NRSE 465, NRSE 470, NRSE 490.

Corequisite: NRSE 445.

**NRSE 496 - Professional Values in Practice (3)**

The cultivation of a sustainable professional nursing identity and evolving ways of knowing through self-reflection, self-care, and application of the QI process in practice.

Prerequisite: Matriculation in the RN/BSN program. Prior or concurrent completion of all other RN/BSN courses.

**NRSE 498 - Special Studies in Nursing (1-3)**

Individualized plan to aid the learner in attainment of professional goals. Plan may consist of directed study of reading, clinical experience, individual instruction, research, or other appropriate activities.

Prerequisite: Permission of instructor.

**NRSE 500 - Pathophysiology and Health Assessment Across the Lifespan (4)**

This course includes advanced health assessment knowledge and advanced physical assessment techniques. Pathophysiology of selected chronic disease processes are studied including, but not limited to: cancer, organ/multi-organ failure (ex. heart, respiratory, liver, renal), chronic neurological diseases and severe cognitive deficit. Pediatric, Adult, and Elderly considerations will be reviewed.

Prerequisite: Student must be matriculated into the MSN Program.

Corequisite: This course will be taken concurrent with NRSE 501.

**NRSE 501 - Theory of Hospice & Palliative Care (3)**

This course presents the theory of hospice care and palliative care. The contrasts with curative care are discussed. The comparisons and distinctions between hospice care and palliative care examined. Scope and Standards of Nursing Practice are studied. The context and environments for hospice and palliative care are explored.

Prerequisite: Students must be matriculated into the MSN Program.

Corequisite: This course will be taken concurrent with NRSE 500.

**NRSE 502 - Global Policy and Ethical Issues in Hospice & Palliative Care (3)**

This course will examine the major ethical/social/political issues arising domestically and globally regarding the care and treatment of the hospice and/or palliative care patient. Issues surrounding autonomy and competence, surrogate decision-making, spiritual and legal concerns, end-of-life considerations, as well as the evolution of financial, social and governmental support systems will be the focus of the course. Existing domestic and international health care policies will be analyzed in light of these issues.

Prerequisite: Student must be matriculated into the MSN Program

Corequisite: The course will be taken concurrent with NRSE 503.

**NRSE 503 - Nursing Leadership, Management, and Inter-Professional Collaboration (3)**

The concepts of leadership and management in the care of persons needing end-of-life care and chronic care are analyzed. The benefits of the multidisciplinary team for both areas are studied. The client and support person (s) are included in the team.

Prerequisite: Students must be matriculated into the MSN Program

Corequisite: This course will be taken concurrent with NRSE 502.

**NRSE 504 - Emerging Best Practices and Research in Hospice & Palliative Care (3)**

This course will review the ethical translation and articulation of current evidence into practice through the integration of theory, evidence, clinical judgment, research and inter-professional perspectives to improve practice and health outcomes. Examine ways to work collaboratively with teams to improve care outcomes and support policy changes.

Prerequisite: Student must be matriculated into the MSN Program

Corequisite: This course will be taken concurrent with NRSE 505.

**NRSE 505 - Comparative Domestic Delivery Systems and Informatics (3)**

This course will examine the role of the nurse in using technology to deliver care, coordinate care across multiple settings, analyze outcome data to reduce risks,

and enhance care outcomes. Explore ways of communicating findings through other healthcare professionals, policy makers, the media and the public. Educate others using technology and about the principles related to the safe and effective use of care and information technologies.

Prerequisite: Student needs to be matriculated into the MSN Program

Corequisite: This course will be taken concurrent with NRSE 504.

**NRSE 506 - Current Pharmacology and Complementary Therapies in Hospice & Palliative Care (4)**

This course examines pharmacology to provide symptom management and pain control. Complimentary therapies such as acupuncture, acupressure, Reiki, cranio-sacral therapy, music and art therapy, massage, and biofeedback.

Prerequisite: Student will be matriculated into the MSN Program

**NRSE 507 - Nursing Practicum (6)**

This course is demonstration of nursing praxis. Students will select a specialized 6 credit nursing clinical experience in the following areas: Hospice Care, Palliative Care, Pediatric Hospice and Palliative Care, or Psychiatric Palliative Care. Nursing Practicum can occur in acute care, long term care, residential care, and in various community settings.

Prerequisite: Student must be matriculated into MSN Program and have successfully completed all other graduate nursing courses before enrolling in this course.

**NRSE 508 - Nursing Capstone (6)**

This course involves the synthesis of knowledge and practice from prior course work in this program of nursing study. Students will select a specialized 6 credit capstone project in one of the following areas: Hospice or Palliative Care Research, Hospice or Palliative Care Improvement Project, Evidenced based graduate nursing practice study in Hospice or Palliative Care, and Policy project in Hospice or Palliative Care. Capstone areas included are: Hospice Care, Palliative Care, Pediatric Hospice and Palliative Care, or Psychiatric Palliative Care.

Prerequisite: Students must be matriculated into the MSN Program. Students must have successfully completed all graduate nursing courses, as well as successfully completed NRSE 507.

## PE - Physical Education

### PE 111 - Introduction to Physical Education (2)

Examines the history, philosophy, and foundation aspects of physical education with allied fields. 3 hours of field experience in a physical education setting required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Open to Physical Education majors

### PE 144 - College Wellness (2)

Emphasis of this course is to promote all aspects of wellness as a vital sign of health while integrating students into the life and culture of Central Connecticut State University. This course accentuates a university commitment to wellness. Students will understand the benefits of leading a healthy lifestyle, as well as realizing the direct correlation between positive lifestyle habits and overall well-being.

\*Required of all students entering with fewer than 15 credits and required to be taken in a students' first year.

Prerequisite: None

### PE 273 - Educational Games, Gymnastics & Dance (2)

Purpose is to prepare teacher candidates in the knowledge and teaching methodologies to effectively organize and implement a variety of games and experiences for PK-8th grade. Emphasis is on selection of age appropriate games and demonstration to involve children in the analysis and modification of educational games, gymnastics, and dance.

Prerequisite: Open to Physical Education majors only

### PE 274 - Lifetime Activities 1 (2)

Focus on participation and learning a variety of lifetime activities with intent to teach to students in PK-12. Focus on the classroom management, safety, and importance of participation in lifetime activities for overall health and well-being. Activities may include but are not limited to: Pilates, spinning, archery, outdoor education, etc.

Prerequisite: Open to Physical Education majors only

### PE 276 - Lifetime Activities 2 (2)

Focus on participation and learning a variety of lifetime activities with intent to teach to students in PK-12. Focus on the classroom management, safety, and importance of participation in lifetime activities for overall health and well-being. Activities may include but are not limited to: hiking, geocaching, bowling, golfing, etc.

Prerequisite: Open to Physical Education majors only

### PE 279 - Skills & Strategies for Invasion Games (2)

Methods course in the fundamental skills and techniques of team sports. Focus on preparing students to implement teaching strategies for skill development and proper progressions.

Prerequisite: Open to Physical Education majors only

### PE 280 - Skills & Strategies for Net and Wall Games (2)

Methods course in the fundamental skills and techniques in a variety of net and wall games. Focus on application of teaching net and wall games to students PK-12 including principles for personal skill development.

Prerequisite: Open to Physical Education majors only

### PE 281 - Skills & Strategies for Individual Sports/Activities (2)

Methods course in the fundamental skills and techniques of individual sports and activities. Focus on preparing students to plan and implement teaching strategies for skill development and proper progressions.

Prerequisite: Open to Physical Education majors only

### PE 299 - Psycho-Social Aspects of Physical Education (3)

Examination of the foundation and practical psychological and sociological principles to facilitate classroom management, teaching effectiveness, and student learning in physical education. 10 hours of field experience in a physical education setting required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: PE 111, DAN 272 or PE 273

Corequisite: EDTE 314

**PE 305 - Assessments in Physical Education, Dance Education and Health Education (3)**

Assessments in health and physical education. Emphasis on the development and implementation of various forms of traditional, alternative, and authentic forms of assessment. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: STAT 104, STAT 200 or STAT 215. Open to Physical Education or Dance Education majors only.

**PE 320 - Motor Development (3)**

Study of changes in motor behavior PK-12; processes that underlie these changes, and social and environmental factors that affect them. Emphasis upon task analysis and developmentally appropriate instruction. 15-hour practicum is embedded within this course allowing students to be involved in application of theories and motor skill analysis with students in PK-12 grade. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: PE 273 or DAN 272, PE 299 or DAN 298, EXS 207, PSY 136. Open to Dance and PE Majors only.

**PE 337 - Group Process in Health Education (3)**

A survey of individual and group processes that relate to school health instruction. Students will learn how to facilitate groups for effective interaction. Group approaches will be applied to a variety of health education populations. Concentrates on the role of the group leader and the group leader and the interpersonal relationships of groups.

Prerequisite: None

**PE 374 - Methods of Teaching Health-Related Fitness (3)**

Introduces the physical education teacher candidate to the philosophy, concepts and practice of teaching developmentally appropriate health-related fitness for PK-12 public school children. The emphasis is on how to develop the attitude, knowledge and skills that will result in a lifetime of healthy physical activity choices. The focus

is on cardiorespiratory endurance, muscular strength and endurance, flexibility, nutrition and body composition. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: EXS 207 (C- or higher) Open to Physical Education or Dance Education majors only

**PE 404 - Methods of Teaching School Health Education (3)**

A pedagogical approach to examining the concepts and skills to promote positive health behaviors and background information and skills teachers need to implement comprehensive school health education in the public school setting. 15 hours of field experience in a health education setting is required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: PE 405 and admission to the Professional Program in Physical Education

Cross-Listed as: PE 514

**PE 405 - Elementary Methods in Physical Education (3)**

Application of the child-centered, problem-solving approach as a method to learning fundamental concepts of movement. Discussion, observation, and laboratory experience will provide theoretical background. 15 hours of field experience in an elementary physical education setting required.

Prerequisite: PE 320 and admission to the Professional Program in Physical Education or Dance Education majors only.

**PE 406 - Adapted Physical Education (3)**

Pedagogical skills and knowledge pertaining to physical education for individuals with disabilities and gifted and talented individuals. Emphasis on program planning and teaching effectiveness in the psychomotor, cognitive, and affective domains. 20 hours of field experience in a school and/or community-based facility. In accordance with CT law, districts may require criminal background and/or DCF

child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: PE 320 and admission to the Professional Program in Physical Education or Dance Education.

Cross-Listed as: PE 516

**PE 416 - Program Development in Physical Education, Dance Education and Health Education (3)**

Emphasis is on K-12 physical/health education program/curriculum development and design, program implementation, and evaluation.

Prerequisite: PE 405 or DAN 300 and admission to the Professional Program in Physical Education or Dance Education.

**PE 417 - Secondary Methods in Physical and Health Education (3)**

Emphasis is on physical education unit planning and pedagogical methods of teaching at the secondary school level with exposure to health content and classroom pedagogy. 15 hours of field experience in a secondary physical education setting required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: PE 405 and admission into the Professional Program in Physical Education.

**PE 422 - Motor Learning and Skill Acquisitions (3)**

This course investigates principles underlying the acquisition and control of motor skills. Emphasis is given to a sound theoretical base from which to design and implement optimal learning and performance conditions. Motor control is studied through an information processing and dynamic systems lens. Motor learning/performance variables such as transfer, modeling, feedback, practice schedule, mental practice, memory and attention will be discussed and applied to PK-12 motor skill teaching.

Prerequisite: PE 320 and admission to the Professional Program in Physical Education

**PE 490 - Independent Study in Physical Education (1-3)**

Reading and research in approved topics under the guidance of a member of the department. May be repeated for a total of 3 credits.

Prerequisite: Senior standing and permission of department chair.

**PE 500 - Improving Student Learning in Physical Education (3)**

Components of the effective teaching of physical education are explored. Topics include teacher standards, student performance standards, instructional planning, assessment strategies, and reflective practice.

Prerequisite: Permission of instructor.

**PE 505 - Instructional Tools for Physical Education (3)**

The student will use pedometers and heart rate monitors as instructional tools. The internet will be used for the planning and implementation of programs of instruction in physical education.

Prerequisite: Admission to M.S. in Physical Education or permission of instructor.

**PE 506 - Adapted Physical Education (3)**

The purpose of this course is to provide students with content knowledge foundational to adapted physical education, activity, and sport programs in self-contained and/or inclusive settings for children with moderate to severe disabilities.

Prerequisite: Admission to M.S. in Physical Education or permission of instructor.

**PE 509 - Teaching Health-Related Fitness (3)**

This course is designed to educate prospective physical educators in the philosophy and methodology of teaching health-related fitness for PK-12th grade. Content knowledge, movement technique, and standards-based lesson construction will be taught with an emphasis on how to build positive attitudes toward lifelong physical activity using developmentally appropriate programming. Students in the course will concurrently examine the knowledge and skills required to organize and teach a progressive, safe & effective physical fitness program. Students will have the option of becoming a certified Physical Best Health-Fitness Specialists.

Prerequisite: Admission to M.S. in Physical Education or permission of instructor.



**PE 510 - Instructional Models for Physical Education (3)**

Contemporary instructional models for physical education. Includes theory, planning, and implementation for cooperative learning, personalized systems of instruction, inquiry, and other effective models used in physical education.

Prerequisite: Admission to M.S. in Physical Education or permission of instructor.

**PE 514 - Methods of Teaching School Health Education (3)**

A pedagogical approach to examining the concepts and skills to promote positive health behaviors and background information and skills teachers need to implement comprehensive school health education in the public school setting. 15 hours of field experience in a health education setting is required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: PE 405 and admission to the Professional Program in Physical Education

Cross-Listed as: PE 404 Methods of Teaching School Health Education

**PE 516 - Adapted Physical Education (3)**

Pedagogical skills and knowledge pertaining to physical education for individuals with disabilities and gifted and talented individuals. Emphasis on program planning and teaching effectiveness in the psychomotor, cognitive, and affective domains. 20 hours of field experience in a school and/or community-based facility. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: PE 320 and admission to the Professional Program in Physical Education or Dance Education.

Cross-Listed as: PE 406

**PE 520 - Current Issues in Physical Education (3)**

Reviews current trends and issues involved in the teaching of Physical Education in American schools. Emphasis is upon a discussion of new and innovative administrative procedures, programs, trends, and problems.

Prerequisite: None

**PE 522 - Physical Activity and Health Concepts for Physical Educators (3)**

Study of the hypokinetic diseases of the human organism. Particular emphasis will be given to the beneficial effects of physical activity on the cardiovascular system, weight control, low back pain, longevity, and participation of women in sports.

Prerequisite: Admission to M.S. in Physical Education.

**PE 560 - Mindfulness in Education & Healthcare (3)**

An examination of the history, practice and benefits of mindfulness in education and healthcare. Students will participate in as well as lead class meditations and other contemplative practices.

Prerequisite: Admission to MS in Physical Education with approved planned program or permission of instructor.

**PE 590 - Independent Study/Topics in Physical Education (1-3)**

Work in theory or research to meet individual requirements in areas not covered by the regular curriculum. Either PE 590 and/or EXS 590 may be taken for a maximum of 6 credits.

Prerequisite: Admission to the M.S. in Physical Education with approved planned program, or permission of instructor.

**PE 595 - Applied Research in Physical Education and Exercise Science (3)**

The applied research experience will involve the student completing a special project (Plan C) under the direction of a special project advisor. The applied research experience will culminate in a presentation to the Physical Education Human Performance Program faculty and students and submission of an original copy of the special project manuscript.

Prerequisite: PE 597; Admission to M.S. in Physical Ed or MSAT program

**PE 597 - Research in Physical Education and Exercise Science I (3)**

Introduction to scientific process, focused on understanding research designs, interpreting research through writing and reviewing research. Overview of statistics presented. Students must take this course before successful completion of 12 credit hours of graduate coursework.

Prerequisite: Admission to M.S. in Physical Education or MSAT program

**PE 598 - Research in Physical Education and Exercise Science II (3)**

Scientific process of performing research, focused on concepts and procedures for designing, conducting, and analyzing research. Students must take this course before successful completion of 24 credit hours of graduate coursework.

Prerequisite: PE 597; admission to M.S. in Physical Education or MSAT program.

**PE 599 - Thesis (3)**

Preparation of the thesis under the supervision of the thesis advisor.

Prerequisite: 18 credits of approved graduate study including PE 597 and PE 598; minimum 3.00 overall GPA.

**PES - Peace Studies****PES 110 - Introduction to the Study of Peace & War (3)**

Introduction to the study of peace and war from an interdisciplinary perspective, focusing on problems of just war theory, pacifism, types of wars, and the nature of peace movements, with reference to conflicts today and in the past.

**PES 111 - War & Peace through Films (3)**

Films illustrative of issues and dilemmas of war and peace; followed by in-class discussion.

Prerequisite: None

**PES 202 - Peace Psychology (3)**

Prerequisite: None

Cross-Listed as: Cross listed with PSY 202. See PSY 202 for a detailed description. No credit given to students with credit for PSY 202.

**PES 210 - Topics in International Peace Studies (3)**

Topics vary. May be repeated with different topics for credit up to a maximum of 9 credits.

Prerequisite: None

**PES 310 - Internship in Peace Studies (1-6)**

Placement of student with an organization that addresses issues of war and peace or related topics of social justice. May be repeated for a maximum of 6 credits.

Prerequisite: Minor in Peace Studies or permission of instructor.

**PES 345 - Philosophy of War and Peace (3)**

Prerequisite: None

Cross-Listed as: Cross listed with PHIL 345. No credit given to students with credit for PHIL 345. See PHIL 345 for detailed description.

**PES 410 - Research in Peace Studies (3)**

Directed research project in Peace Studies.

Prerequisite: Open to Peace Studies minors only.

**PHIL - Philosophy****PHIL 100 - Search in Philosophy (3)**

Introduction to the techniques and perspectives of philosophical inquiry. Title and content may vary from section to section.

Prerequisite: None

**PHIL 112 - Introduction to Philosophy (3)**

Introduction to the study of philosophy, to some significant philosophies, and to philosophical problems in metaphysics, theories of knowledge, ethics, and/or aesthetics. CSUS Common Course.

Prerequisite: None

**PHIL 125 - Introduction to Philosophy through Popular Culture (3)**

Study of philosophical issues as they arise in films, television, music etc. Recent topics include ethics, feminism, nihilism, the meaning of life.

Prerequisite: None

**PHIL 135 - Nature, Mind, and Science (3)**

Introduction to philosophical problems concerning matter, life, mind, cosmology, and evolution from ancient times to the present.

Prerequisite: None

**PHIL 144 - Moral Issues (3)**

Critical examination (both practical and theoretical) of issues arising in the private and public conduct of one's life. Typical issues for examination are abortion, violence, capital punishment, and conflicts between personal values and professional duties. CSUS Common Course.

Prerequisite: None

**PHIL 200 - Topics in Philosophy (3)**

Examination of philosophical topics and questions. Title and content may vary from section to section.

**PHIL 211 - Philosophy & Global Justice (3)**

Critical examination of theoretical and practical issues within the field of global justice. Theoretical concerns include the nature and scope of justice, the moral significance of national boundaries, and the possibility of cross-cultural reasoning at the global level. Practical concerns include global poverty, women's human rights, terrorism, and environmental degradation.

Prerequisite: None

Cross-Listed as: PES 210

**PHIL 221 - Introduction to Modern Logic (3)**

Introduction to formal systems of deductive reasoning (Aristotelian syllogism, Venn diagrams, sentential, and predicate logic), as well as non-deductive reasoning and the relations between logic and philosophy. Skills learned in this course are relevant to legal reasoning and other professional contexts.

Prerequisite: None

**PHIL 222 - Philosophy of Gender (3)**

Study of attitudes to gender in the history of philosophy, discussion of recent and contemporary issues and texts, and an introduction to feminist thought.

Prerequisite: None

Cross-Listed as: Cross listed with WGSS 222. No credit given to students with credit for WGSS 222.

**PHIL 230 - Ancient Greek Philosophy (3)**

Development of Greek philosophy from the pre-Socratics to Plato and Aristotle.

Prerequisite: None

**PHIL 232 - Medieval and Renaissance Philosophy (3)**

Development of European philosophy from the Middle Ages through the Renaissance (3rd to the 16th century). Topics may include pagan philosophy (Neoplatonism), arguments for the existence of God, and free will and divine foreknowledge. Authors may include Plotinus, Augustine and Aquinas.

Prerequisite: None

**PHIL 240 - Ethical Problems in Business (3)**

Critical examination (both practical and theoretical) of contemporary moral problems in business such as ethical investment, questionable foreign payments, disclosure, dumping, mergers, job discrimination, whistle-blowing, and big and small business responsibilities and regulations.

Prerequisite: None

**PHIL 241 - Environmental Ethics (3)**

Critical examination of ethical problems concerning how people treat the land, air, plants, and animals.

Prerequisite: None

**PHIL 242 - Ethical Problems in Technology (3)**

Critical examination (both practical and theoretical) of contemporary moral problems in technology, ranging from modern farming and manufacturing technologies to recombinant DNA, nuclear, modern surgical and computer technologies.

Prerequisite: None

**PHIL 243 - Philosophy of Bioethics (3)**

Overview of prominent ethical theories utilized in bioethics. Research articles and case studies will be used to examine various bioethical topics, including (but not limited to): nanoethics, neuroethics, environmental ethics, medical ethics, and research ethics.

Prerequisite: None

**PHIL 244 - Introduction to the Philosophy of Social Justice (3)**

Introduces students to philosophical theories and issues of social justice within the United States. Critically explores the philosophical aspects of systemic oppression and the role of various social institutions and structures in producing inequality and injustice. Possible topics include structural inequality and poverty, racism in the criminal justice system, gender-based violence, and affirmative action.

Prerequisite: None

**PHIL 245 - Computer Ethics (3)**

Examination of ethical theories and principles relevant to issues regularly confronted by computer professionals and users, including privacy, intellectual property, expression, and codes of conduct.

Prerequisite: None

**PHIL 248 - Philosophy of the Arts (3)**

Philosophical analysis of some of the concepts used in identifying, describing, and evaluating both works of art and aesthetic experience: expression, representation, form, content, interpretation.

Prerequisite: None

**PHIL 250 - Introduction to Asian Philosophy (3)**

Broad survey of Indian, Chinese, and Japanese philosophical traditions.

Prerequisite: None

**PHIL 255 - Philosophy of Religion (3)**

Critical examination of important concepts, beliefs and arguments presented in world religions.

Prerequisite: None

**PHIL 260 - African Philosophy (3)**

Examination of some or all of the five leading trends in African philosophy; ethnophilosophy, sagacity philosophy, metaphilosophy, modern/critical philosophy, and liberation philosophy.

Prerequisite: None

Cross-Listed as: AFAM 260

**PHIL 275 - Chinese Philosophy (3)**

Close examination of the foundational texts of the Confucian, Mohist, and Daoist traditions.

Prerequisite: None

**PHIL 301 - Special Topics in Philosophy (3)**

Examination of special topics in Philosophy, which are not covered by existing Philosophy courses.

Prerequisite: Sophomore standing or permission of chair.

**PHIL 310 - Philosophy Research and Writing (3)**

Introduction to philosophical methods, including research of material, argumentation and writing, and oral presentation of topics within different philosophical

traditions. Open only to philosophy majors or minors and social justice minors.

Prerequisite: A minimum of 6 credits in Philosophy. Sophomore standing.

**PHIL 320 - Modern Logic (3)**

Further study of sentential and predicate logic. The formal foundations of epistemology and metaphysics as applied to various philosophical problems such as logical paradoxes, and minds and machines.

Prerequisite: Sophomore standing or permission of Chair.

**PHIL 330 - Early Modern Philosophy (3)**

European philosophy from the Renaissance to the Enlightenment (17th and 18th centuries). Authors may include Descartes, Spinoza, Leibniz (rationalists), Locke, Berkeley, and Hume (empiricists). The course concludes by studying Kant. Topics may include: epistemology, metaphysics, ethics, philosophy of science, political theory and philosophical psychology.

Prerequisite: Sophomore standing or permission of chair.

**PHIL 332 - 19th Century Philosophy (3)**

Major issues of the nineteenth century: the era of Darwin, Hegel, Schopenhauer, Nietzsche, Marx, and others, focusing on metaphysics, epistemology, political philosophy, and philosophy of history. Topics include philosophical background to continental philosophy, liberal, conservative and socialist ideologies, and the scientific doctrines of evolutionism and mechanism.

Prerequisite: Sophomore standing or permission of chair.

**PHIL 335 - Philosophy of Science (3)**

Study of some contemporary philosophies of science, including theories of scientific revolutions, confirmation and refutation of scientific theories, hypothesis formation and theory testing, and scientific progress.

Prerequisite: Sophomore status or permission of chair.

**PHIL 344 - Topics in Philosophical & Social Justice (3)**

Examines topics in the philosophical literature on social justice. Possible topics include democracy, social activism, welfare, structural inequality and oppression, racism, and poverty.

Prerequisite: Sophomore standing or permission of chair.

**PHIL 345 - Philosophy of War & Peace (3)**

Philosophical concepts related to war and peace from the ancient world to modern times. Including just war,

perpetual peace, moral equivalent of war, non-violence, absolute and non-absolute pacifism, war crimes, cease fires and peace-keeping.

Prerequisite: Sophomore standing or permission of chair.

Cross-Listed as: Cross listed with PES 345. No credit given to students with credit for PES 345.

### **PHIL 346 - Ethical Theory (3)**

Critical examination of practical and theoretical problems about right and wrong conduct, good and bad character, and justified and unjustified practices, policies and institutions, as well as of ethical theories for addressing the problems.

Prerequisite: Sophomore standing or permission of chair.

### **PHIL 349 - Philosophy of Law (3)**

The nature of law and of such correlative concepts as legal rights, obligations, responsibility and punishment. The logic of judicial reasoning. The relationship between law and morality.

Prerequisite: Sophomore standing or permission of chair.

### **PHIL 350 - Philosophy East & West (3)**

Engagement with a philosophical concept, question, or theme through the lenses of Eastern and Western philosophical traditions. Equal attention to Eastern and Western perspectives demonstrates areas of convergence and divergence in methods of philosophical inquiry, argument, and theory.

Prerequisite: Sophomore standing or permission of chair.

### **PHIL 355 - American Philosophy (3)**

Critical survey of classical American philosophy. Authors may include Emerson, Thoreau, Fuller (Transcendentalists), Peirce, James, Royce, Dewey, Addams (Pragmatists), and others. Topics may include metaphysics, epistemology, ethics, aesthetics, philosophy of religion, and social-political philosophy.

Prerequisite: Sophomore standing or permission of chair.

### **PHIL 360 - African-American Philosophy (3)**

Critical examination of the writings of African- American philosophers from 1619 to the present. Addresses issues in moral, social, and political philosophy.

Prerequisite: None

Cross-Listed as: Will be cross-listed with AFAM 360

### **PHIL 366 - Existentialism (3)**

Some of the important existentialists in the 19th and 20th centuries, focusing on questions concerning human existence, such as freedom, responsibility, anguish, interpersonal relationships, and the meaning (or lack of meaning) of human existence itself.

Prerequisite: Sophomore standing or permission of chair.

### **PHIL 368 - Contemporary Epistemology and Metaphysics (3)**

Study of relations between language, thought, and reality by reference to the works of leading 20th century thinkers, both analytic and others.

Prerequisite: Sophomore standing or permission of chair.

### **PHIL 375 - Japanese Philosophy (3)**

This course traces the development of lines of philosophical thought in Japan from the Heian Period (794-1185) to the 21st century. Primary focus is given to metaphysical, epistemological, and ethical philosophies found in Japanese forms of Buddhism (e.g., Shingon, Pure Land, Zen), Japanese developments of Confucianism, and Japan's native tradition of Shinto. Students will also gain familiarity with the confluence of these traditions in the samurai (Bushido), and later incorporations of Western philosophy by the Kyoto School. Other philosophical topics may also be explored, such as Japanese aesthetics, phenomenology, and feminist thought.

Prerequisite: Sophomore standing or instructor approval

### **PHIL 376 - Buddhist Philosophy (3)**

Critical survey of Buddhist philosophy from its Indian beginnings to its development in China and Japan, including contemporary aspects. Primary source material is used to illustrate key doctrinal developments.

Prerequisite: Sophomore standing or permission of chair.

### **PHIL 400 - Seminar in Philosophy (3)**

Intensive study and research in philosophy, with close focus on one philosopher or philosophical text. Topics vary. May be repeated with a different topic for up to 6 credits.

Prerequisite: PHIL 310 or permission of instructor.

### **PHIL 492 - Independent Study (1-3)**

Individual research in selected topics. Open to any student who wishes to pursue a topic of special interest for which the student is qualified.

Prerequisite: Permission of instructor.

### **PHIL 497 - Philosophy Thesis Preparation (1)**

The purpose of this course is to prepare students to write their thesis for the Philosophy Department. Students choose any topic related to Philosophy, subject to approval by the course instructor and a primary advisor.

Prerequisite: PHIL 310 or permission of instructor.

### **PHIL 498 - Philosophy Thesis (2)**

Undergraduate thesis on a topic in philosophy, working in consultation with a primary advisor.

Prerequisite: PHIL 497 Philosophy Thesis Preparation

Corequisite: This course is to be taken concurrently with PHIL 499 Philosophy Thesis Completion.

### **PHIL 499 - Philosophy Thesis Completion (1)**

The purpose of this course to to ensure that students complete and present their thesis on time. It requires meetings every other week, and the presentation of the thesis at the end of the semester.

Prerequisite: PHIL 497 Philosophy Thesis Preparation

Corequisite: PHIL 498 Philosophy Thesis

## **PHYS - Physics**

### **PHYS 111 - Introductory Physics I (3)**

For students who do not plan to major or minor in science. Includes study of selected topics from mechanics, heat, electricity and light, and modern physics. Not open to students who have received credit for SCI 117. Two lectures and one two-hour laboratory per week. CSUS Common Course.

Prerequisite: None

### **PHYS 121 - General Physics I (4)**

Fundamental principles of mechanics and properties of matter; heat and sound. Three lectures and one three-hour lab per week. No credit given to students who have taken PHYS 125. CSUS Common Course.

Prerequisite: MATH 119, or MATH 124, or MATH 115 and MATH 116, or MATH 115 and MATH 125 (MATH 116 and MATH 125 may be taken concurrently with PHYS 121)

### **PHYS 122 - General Physics II (4)**

Continuation of PHYS 121. Electricity (DC and AC), magnetism, optics, and atomic phenomena. Three

lectures and one three-hour laboratory per week. No credit given to students who have taken PHYS 126. CSUS Common Course.

Prerequisite: PHYS 121 or PHYS 125

### **PHYS 125 - University Physics I (4)**

Introductory course for science/engineering students which uses calculus. Fundamental principles of mechanics, heat, and sound. Three lectures, one recitation, and one three-hour laboratory per week. Credit not given to students who have had PHYS 121. CSUS Common Course.

Prerequisite: MATH 221 with a grade of C- or higher (or may be taken concurrently) and MATH 152 with a grade of C- or higher.

### **PHYS 126 - University Physics II (4)**

Continuation of PHYS 125. Study of electricity, magnetism, and optics. Three lectures, one recitation and one three-hour laboratory per week. CSUS Common Course.

Prerequisite: PHYS 125 with a grade of C- or higher; Math 221 with a grade of C- or higher.

### **PHYS 220 - Mechanics I (3)**

Vector formulation of kinematics and dynamics of particles and rigid bodies. Topics include Newton's laws, momentum, energy, moving coordinate systems, central force motion, and the harmonic oscillator.

Prerequisite: PHYS 122 or PHYS 126, MATH 222 (may be taken concurrently).

### **PHYS 250 - Intermediate Lab I (1)**

Laboratory course with experiments performed in mechanics, heat, and thermodynamics. One three-hour laboratory per week.

Prerequisite: PHYS 125, PHYS 126 and PHYS 220 or PHYS 320 (may be taken concurrently).

### **PHYS 305 - Foundations of Electricity and Magnetism (3)**

Electrostatics, circuit theory, electromagnetic fields of steady and alternating currents, solutions of Laplace's equation, Maxwell's equations, and propagation of electromagnetic waves.

Prerequisite: PHYS 220 and MATH 222.

### **PHYS 320 - Heat and Thermodynamics (3)**

Nature and measurement of heat, thermoproperties of matter, thermodynamic processes, and introductory statistical mechanics.

Prerequisite: PHYS 122 or PHYS 126, MATH 222.

### **PHYS 325 - Optics (4)**

Study of geometrical and physical optics. Topics include lens and mirror theories and applications, interference, and diffraction phenomena including holography and polarization. Matrix methods are employed where applicable. Three lectures and one three-hour laboratory per week.

Prerequisite: PHYS 122 or PHYS 126, MATH 221 (may be taken concurrently).

### **PHYS 331 - Electronics I (3)**

Unified treatment of solid state devices and their applications in filters, regulators, power supplies, oscillators, amplifiers, and control devices. Introduction to digital circuits such as logic gates. Two lectures and one three-hour laboratory period per week.

Prerequisite: PHYS 122 or PHYS 126, MATH 221 (may be taken concurrently).

### **PHYS 341 - Fiber Optic Communication Theory (3)**

Scientific principles of fiber optics and optical communication systems. Examines fundamental behavior of optical components, device integrations in optical fiber links, and performance characteristics of complex optical links and networks.

Prerequisite: PHYS 325.

### **PHYS 350 - Intermediate Lab II (1)**

Laboratory course with experiments in electrical measurements and modern physics (Planck's constant, charge to mass ratio of the electron, Milikan's oil drop experiment, etc.). One three-hour laboratory per week.

Prerequisite: PHYS 305 or PHYS 425 (may be taken concurrently).

### **PHYS 360 - Introduction to Nanotechnology (3)**

Fundamental concepts of nanotechnology, nanoscale characterization techniques, zero, one and two-dimensional nanomaterials, applications of nanotechnology in electronics, optics, engineering, biotechnology and medicine.

Prerequisite: None

### **PHYS 425 - Modern Physics (3)**

Special theory of relativity; quantum aspects of matter and of electromagnetic radiation, Bohr model, nuclear structure, radioactivity.

Prerequisite: PHYS 305.

### **PHYS 450 - Advanced Laboratory Techniques (1)**

Study of laboratory techniques and experimentation in areas of current research interest in Physics. Areas may include a) the 400 kV Van de Graaf accelerator, particle detection electronics, and a study of induced nuclear reactions, b) Laser radar instrumentation, optical atmospheric sensing, and a study of laser light scattering in the atmosphere, c) Materials properties instrumentation, data acquisition programming, and a study of properties of materials, or d) other areas as appropriate. One three-hour laboratory per week.

Prerequisite: Permission of Instructor.

### **PHYS 452 - Independent Study in Physics (1-3)**

Special work in laboratory or theory to meet individual requirements in areas not covered by regular curriculum. May be taken more than one semester up to a limit of 6 credits.

Prerequisite: Approved plan of study by arrangement with supervising instructor and approval of department chair.

### **PHYS 460 - Seminar in Physics (1)**

Through individual readings, discussions, and presentations, students will study contemporary topics in various fields of physics. Capstone requirement for all physics majors in the B.A. and B.S. non-teaching programs. Hours by arrangement.

Prerequisite: Senior standing.

### **PHYS 470 - Quantum Mechanics I (3)**

Special theory of relativity; quantum aspects of matter and of electromagnetic radiation, Bohr model, nuclear structure, radioactivity.

Prerequisite: Modern Physics (PHYS 425) introduces students to core ideas of Physics that evolved at the turn of the last century. It forms the bedrock for understanding Quantum Mechanics (PHYS 470)

### **PHYS 471 - Quantum Mechanics II (3)**

Three-dimensional Schrodinger equation, angular momentum, radial equation, hydrogen atom, operator matrices and spin, addition of angular momentum, plus additional topics to be chosen by instructor.

Prerequisite: PHYS 470.

**PHYS 480 - Student Internship in Physics (3)**

Students participating in the program will serve as interns, obtaining outside industrial and/or research experiences in an environment directly related to their program. Before commencing work, a plan of the Committee of Physics faculty members. Restricted to physics majors pursuing the B.A. degree.

Prerequisite: Senior standing and permission of the student's advisor.

**PHYS 490 - Topics in Physics (3)**

Selected studies in physics which are not offered presently in the curriculum of the department. Course may be repeated for different topics. No topic may be taken for credit more than once.

Prerequisite: None

**PHYS 542 - Advanced Electricity & Magnetism (3)**

Field theory of electromagnetism. Magnetic fields of currents, magnetic materials, electromagnetic induction of Maxwell's equations.

Prerequisite: PHYS 425 or permission of chair.

**PHYS 599 - Thesis (3)**

Preparation of the thesis under the supervision of the thesis advisor. Plans A, C, D, and E require completion of 18 credits for programs with 30-35 credits, or 24 credits for programs with greater than 35 credits, and a 3.00 overall GPA.

Prerequisite: PHYS 598, permission of the advisor, and a 3.00 overall GPA.

**POL - Polish****POL 111 - Elementary Polish I (3)**

Open only to students with one year or less of high school study. Functional approach to grammar. Development of facility in speaking, understanding, reading Polish.

Prerequisite: None

**POL 112 - Elementary Polish II (3)**

Continuation of POL 111. Functional approach to grammar. Development of facility in speaking, understanding, reading Polish.

Prerequisite: POL 111 or equivalent (normally, two years high school study). No credit given to students with previous credit for more advanced course work in Polish except by permission of the department chair.

**POL 125 - Intermediate Polish I (3)**

Principles of Polish structure are reviewed. Short stories and poems are read and discussed. Conversation and composition topics given to improve oral and written expression.

Prerequisite: One year of college Polish or equivalent.

**POL 126 - Intermediate Polish II (3)**

Continuation of POL 125. Further work in written and oral expression.

Prerequisite: POL 125 or equivalent.

**PS - Political Science****PS 104 - The World's Political Systems (3)**

Comparative survey of the structures and functions of the national governments of selected industrialized and Third World nations, such as the U.S., Russia, Britain, France, India, Nigeria, and Brazil. Scope and methods of political science and key policy issues will be treated in a comparative context. PS 104 or PS 110 is required for all political science majors. CSUS Common Course.

Prerequisite: None

**PS 110 - American Government & Politics (3)**

Structure, functions, services, and problems of government and politics at the national level. PS 110 or PS 104 is required of all political science majors. CSUS Common Course.

Prerequisite: None

**PS 111 - Race and Ethnicity in US and Global Politics (3)**

Examines the impact of race in ethnicity within the context of the American political system from the foundation of the country to the present and the relevance of the unique experiences of African Americans, Latinos, Asian Americans and others. The course also examines the comparative political role of race and ethnicity in the global context. Several country cases will be examined.

Cross-Listed as: Cross-listed with AFAM 111

**PS 131 - Introduction to Political Theory (3)**

This is an introductory course in the subfield of political theory. Students are exposed to influential thinkers and concepts from Ancient, Medieval, Modern, and Contemporary periods. The class deals with topics such as freedom, citizenship, economics, and democracy that are fundamental to political thought and expression.



**PS 210 - The International and Domestic Legal Environment of Cybersecurity (3)**

One of the challenges of working in the cybersecurity field is the complex and at times ambiguous legal and regulatory environment in which one must operate. There are domestic laws, regulations, and policies, and also, since physical borders play a reduced role, international and regional laws and policies. Complicating the legal analysis is that the law is often uncertain, such as when a cyber-attack justifies a response under the principles of self-help or self-defense. This course introduces the major legal regimes and policies, domestic and international, how they are developed, interpreted and applied.

Prerequisite: Political Science Majors, Cybercrime Minors, and Cybersecurity Majors only.

**PS 230 - American State and Local Government (3)**

Organization and major problems of state and local government in the United States, with attention to intergovernmental relations, federalism, and contemporary issues.

Prerequisite: None

**PS 231 - U.S. Foreign Policy (3)**

Theories, processes, and problems of U.S. foreign policy and the craft of diplomacy, with special attention to contemporary issues.

Prerequisite: None

**PS 232 - Ancient and Medieval Political Thought (3)**

Political thought from Plato to Machiavelli.

Prerequisite: None

**PS 235 - International Relations (3)**

Introduction to study of international relations, including international politics, international law and morality, international organization, international conflict and cooperation and the foreign policies of the major powers.

Prerequisite: None

Cross-Listed as: Cross listed with LAS 235. No credit given to students with credit for LAS 235. CSUS Common Course.

**PS 250 - Approaches to Political Science (3)**

Introduction to social research methods covering the foundations of social science, research design, data collection, and data analysis. Students will learn by doing

in all aspects of the course - in class meetings, the computer lab, and out-of-class assignments. Emphasis on effective collection, analysis, and critical evaluation of quantitative and qualitative data.

Prerequisite: PS 104 or PS 110, and open to majors only.

**PS 260 - Public Administration (3)**

Study of the organization and management of public agencies, with a focus on how public management differs from private (or business) management. Topics surveyed include: organizational management, intergovernmental relations, administrative communication and decision making, public budgeting, and public sector ethics.

Prerequisite: PS 104, or PS 110, or PS 230, or permission of instructor.

**PS 270 - Law and Politics (3)**

Study of the structure of the U.S. court system, the judicial process and legal reasoning. Other topics include the role of the Supreme Court in U.S. politics and comparative judicial systems.

Prerequisite: None

**PS 280 - Religion & Politics (3)**

A cross-national and international survey of the role and impact of religion in domestic, regional, and international politics and conflicts. Select cases and topics, including the role of religion in the politics of the U.S. will be considered.

Prerequisite: None

**PS 291 - Topics in Political Science (3)**

Examination of selected topics in political science. Topics may vary from semester to semester. May be repeated with a different topic for up to 6 credits.

Prerequisite: None

**PS 300 - Corruption and Scandal in Politics (3)**

Considers the relationship between corruption and political and economic development and the question of how to successfully contain corruption.

The course examines past and current corruption and sex scandals from the real world as well as scholarly perspectives. Using comparative cases, lectures, and items from the news to examine how corruption and scandal impact governance across the globe as well as causes; consequences; economic, social, and political costs; and possible political and preventative policy measures.

Prerequisite: NA

Corequisite: NA

Cross-Listed as: NA

**PS 315 - Internet & Media Politics (3)**

Technologies of the information superhighway, their political implications, and decentralizing effects; economic concentration in the media industries; politics and public policy toward the telecommunications industries; the 1996 Telecommunications Act; rate deregulation; and potential threats to privacy and freedom of speech and of the press.

Prerequisite: None

**PS 325 - Public Opinion in American Politics (3)**

Content and context of public opinion in American politics, and its relationship to political analysis in the mass media. Emphasis on the formation and political impact of public opinion, and on opinion measurement techniques; critical analysis of the reliability and credibility of political arguments expressed in the public sphere.

Prerequisite: None

**PS 330 - American Parties and Interest Groups (3)**

Historical development and current operation of party organizations in the United States, with attention to voting behavior, interest groups, the influence of news media, etc. Field research projects.

Prerequisite: PS 104, PS 110 or permission of instructor.

**PS 331 - American Constitutional Law (3)**

Great constitutional issues through the study of Supreme Court decisions. Origins of judicial review in *Marbury v. Madison* to current issues, exclusive of civil liberties. In addition to the traditional case approach, attention is given to a behavioral understanding of judicial decision making.

Prerequisite: PS 110.

**PS 332 - Civil Liberties (3)**

U.S. Supreme Court decisions addressing civil liberties and civil rights, including equality, freedom of speech, religion, and due process.

Prerequisite: PS 110 and junior or senior standing.

Cross-Listed as: Cross listed with AMS 332. No credit given to students with credit for AMS 332.

**PS 334 - Modern Political Thought (3)**

Critical consideration is given to modern political thinkers, origins, developments, and present significance.

Prerequisite: None

**PS 335 - American Political Thought (3)**

American political thought, with special attention to early and contemporary discussion of liberalism, conservatism, pluralism, and radicalism.

Prerequisite: None

**PS 336 - West European Governments (3)**

Comparison of selected West European political systems, mainly in Britain, France and West Germany. Other countries may be included.

Prerequisite: None

**PS 338 - International Organization (3)**

Basic assumptions, objectives, growth, problems, and prospects of international organizations, such as the League of Nations, the U.N. and its specialized agencies, the O.A.S.

Prerequisite: None

**PS 339 - International Law (3)**

Nature and functions of international law in the international community, in theory as well as in practice.

Prerequisite: None

**PS 343 - Political Leadership (3)**

Analysis of political leadership and its role in the political process.

Prerequisite: PS 104, PS 110 or instructor's permission.

**PS 345 - Terrorism (3)**

Examination of definitions, history, philosophy, and theories of terrorism, as well as tactics and strategies of terrorist groups and responses of governments, with emphasis on policy alternatives and civil liberties dilemmas for democratic countries combatting terrorism.

Prerequisite: None

**PS 370 - Arab Uprisings (3)**

This course analyses the seminal events that unfolded in the MENA (Middle East and North Africa) countries since December 2010, which transformed the political and social dynamics in many parts of the Arab world. Through lectures, readings, class discussions and documentaries,

we will shed some light on the underlying causes of these events. Furthermore, we will ascertain the significance of the Arab uprisings and examine their impact on the regional and global power configuration. No credit given to students with credit for PS 491: Advanced Studies in Political Science - The Arab Spring.

### **PS 380 - International Conflict and Security (3)**

Theory and case studies of international and domestic conflict and conflict resolution during the Cold War and post-Cold War eras. Emphasis on forms of conflict (international war, civil wars, revolutions, domestic insurgencies) and forms of conflict resolution (intervention, bargaining, negotiation, diplomacy and strategies of international security, peace-building and peacekeeping).

Prerequisite: None

### **PS 385 - Pursuits, Possibilities, and Professions in Political Science (2)**

This course is designed to create a bridge for seniors from college to career by providing students with the necessary information and skills to be successful in their job searches, graduate school applications, or law school pursuits. Students will complete an intellectual biography that connects prior coursework with future goals.

Prerequisite: Political Science Majors with senior class standing only.

### **PS 401 - The Politics of Sport (3)**

This course examines the fascinating and complicated intersection of politics and sport. Covered topics include the politics of sport technology, stadium financing, the enforcement of NCAA regulations, political symbolism in sport, and other contemporary issues. The course is broken down into three sections: sport and socialization, problems in sport, and the politics of sport inequality.

Prerequisite: PS 110 or permission of instructor.

### **PS 410 - Advanced Research Methods ( )**

This class explores quantitative and qualitative approaches to public policy analysis. The course begins with understanding how to identify and articulate research questions. Framing a research project, including the processes of conceptualization, measurement, and sampling, will be discussed. The course will then investigate a variety of methodological approaches to public policy research. Emphasis will be placed on the interpretation of quantitative data. As a key feature of the

class, students will be expected to undertake their own independent research project.

Prerequisite: Successful completion of PS 250 with a grade of "B" or higher OR permission of the instructor

### **PS 420 - Government and Politics of Latin America (3)**

Historical, social, economic, and ideological factors impacting contemporary government and politics in Latin America.

Prerequisite: None

Cross-Listed as: Cross-listed with LAS 420, no credit given to student with credit for LAS 420.

### **PS 421 - Government and Politics of Africa (3)**

Historical, social, economic, and ideological factors impacting contemporary government and politics in Africa.

Prerequisite: None

### **PS 425 - Asian Politics (3)**

Examination of the government and politics of East and South Asia with major focus on Japan, China, and India. Emphasis on historical and cultural forces shaping politics, Western impact on Asia, and cross-national comparisons.

### **PS 430 - The American Presidency (3)**

Office of President and place in the political system, colonial antecedents and modern counterparts. Emphasis on the presidency's functional and institutional development, contemporary role in politics and public policy, and interplay between man and office.

Prerequisite: PS 104 or PS 110 or permission of instructor.

Cross-Listed as: Cross listed with AMS 430. No credit given to students with credit for AMS 430.

### **PS 431 - The Legislative Process (3)**

Structure, behavior, and operation of U.S. Congress. Comparison with state legislatures. Interrelationships with executive and judicial branches. Problems of popular representation. Attention to the budgetary process, lobbying, and campaign financing.

Prerequisite: PS 104 or PS 110 or permission of instructor.

### **PS 432 - Urban Politics and Government (3)**

Examines the relationships between cities, other governmental units, and municipal corporations as well as the forms of government found in urban areas. The course also includes an examination of contemporary urban

policy processes and regionalism Selected topics may include education, housing, economic development, public health, transportation, technology, and the environment. Field research projects may be required.

Prerequisite: PS 104 or PS 110 or permission of instructor.

**PS 433 - Contemporary Political Thought (3)**

Examines central themes and thinkers in political theory since World War II. Includes traditional topics of power, governance, and democracy, as well as more recent studies on race, gender, multiculturalism, and postcolonialism.

Prerequisite: None

**PS 434 - Government and Politics of the Middle East and North Africa (3)**

Historical background, contemporary setting, political processes, and major problems of some of the countries of Middle East and North Africa.

Prerequisite: None

**PS 435 - Central and Eastern European Politics (3)**

Course on politics and government of Central and Eastern Europe, including regional political history, life under communism, post-communist transitions, and contemporary political events. Focus both at the regional level and through individual case studies. Students will also learn how important theories from political science apply to the politics of Central and Eastern Europe.

Prerequisite: None

**PS 439 - U.S. Middle East Policy (3)**

Examination of the evolution of United States foreign policy towards the Middle East since WW II. Emphasis placed on the sources, determinants, and goals of United States policy and the challenges facing the United States in the region.

Prerequisite: None

**PS 445 - Public Policy Analysis and Evaluation (3)**

An examination of public policymaking in the United States with a focus on how institutional design and development, as well as political, social, and economic change, impact public policymaking processes and outcomes in Connecticut. The roles played by legislators, elected executives, political appointees, career public administrators, lobbyists, journalists, and political activists

in American public policy formulation, enactment, and implementation are explored.

Prerequisite: PS 110 or PS 230 and juniors or seniors only; or graduate status

**PS 446 - Power, Money, and Politics: The Public Budgeting Process (3)**

An examination of how U.S. and state governments make decision concerning the generation of revenue and the allocation of scarce government resources to competing public interests. Course considers the budget decision process in the Executive and Legislative branches of government, as well as the roles played by public administrators. Reviews the history of budget reforms of public budgeting at the national and state levels, including constitutional reforms affecting public budgeting, and explains why public budgeting evolved from simple accounting of government revenues and expenditures into a central tool of administrative management. Current topics may include controlling government debt, collective bargaining with public employee unions, stimulating economic development, and the budgetary impact of judicial mandates.

Prerequisite: PS 260, permission of instructor, or admission to graduate program.

**PS 448 - Current U.S. Public Policy Issues (4)**

Study of the politics and administration of government programs in such fields as education, healthcare, housing, and social welfare policy. Significant independent student research or community engagement project in U.S. politics required.

Prerequisite: PS 110 and PS 230; or permission of instructor.

**PS 450 - Public Sector Ethics (3)**

In this **capstone seminar**, students will be introduced to the theory and practice of public sector ethics within the context of U.S. national government. The history and current state of U.S. government ethics will be analyzed with a focus on legislators, public administrators, and judges. A primary objective of the seminar is to encourage future public officials to begin developing an historically and theoretically well-grounded ethical perspective before embarking on a public service career.

Prerequisite: PS 110, PS 260 or PS 270 and junior, senior; or graduate status; or permission of instructor.

**PS 455 - Environmental Politics and Policy ( )**

An examination of the evolution and range of environmental policy issues facing the US government. Topics covered may include air and water quality, pollution, land use, energy production and use, natural resource preservation and usage, and climate change. International and comparative policy evolution may also be covered to provide context for US policy evolution.

Prerequisite: PS 110 or permission of instructor.

**PS 465 - Public and Non-Profit Organization and Management Theory ( )**

This course will survey the major theoretical approaches to the management of public and non-profit organizations in the United States. Topics include Weberian bureaucracy, scientific management, human relations theory, Organizational humanism, systems theory, and organizational change/development theory with an emphasis on the implications of technological, social, and political change for effective public and non-profit organizational design and management.

Prerequisite: PS 110 and PS 260 or permission of instructor.

**PS 470 - National Intern Experience (12)**

Government or political intern experience in Washington D.C., or other national settings, outside of Connecticut. Cannot be used to satisfy the requirements for a political science major if the student has completed PS 482. No more than 8 credits of PS 470 may be applied toward an undergraduate political science major. No more than 9 credits of PS 470 may be applied toward a graduate degree.

By application.

Prerequisite: Junior, senior, or graduate status; a minimum of 12 credits in political science; and a minimum of a 3.20 GPA unless special exception is granted by the internship advisor in consultation with the department chair.

**PS 480 - State Internship Experience (4)**

Students admitted to this program work in state and local governments, state departments, or agencies for a minimum of two days a week for the duration of the semester. Not open to students who have completed PS 482. No more than 3 credits of PS 480 may be applied toward a graduate degree. By application.

Prerequisite: Must be taken concurrently with PS 485. Junior, senior status, or grad status; a minimum of 12

credits in political science; and a minimum 2.70 grade point average unless special exception is granted by the internship coordinator in consultation with the department chair. Also open to graduate students with a minimum 3.00 grade point average.

**PS 482 - Intensive State Internship Experience (9)**

Students admitted to this program work in state and local governments, state departments, or agencies on a full-time basis, five days per week for the duration of the semester. Not open to students who have completed PS 480. Cannot be used to satisfy the requirements for a political science major if the student has completed PS 470. No more than 5 credits of PS 482 may be applied toward an undergraduate Political Science major. No more than 6 credits of PS 482 may be applied toward a graduate degree. By application.

Prerequisite: Must be taken concurrently with PS 485. Junior, senior, or graduate status; a minimum of 12 credits in political science; and minimum 3.20 grade point average unless special exception is granted by the internship coordinator in consultation with the department chair.

**PS 485 - State Internship Seminar (3)**

Concurrent enrollment in either PS 480 or PS 482 is required. Structure, behavior, and operation of government institutions, agencies, and external organizations with an emphasis on applying theoretical knowledge to practical political experiences.

Prerequisite: Students must be enrolled in a department approved internship.

**PS 490 - Directed Readings in Political Science (1 to 6)**

Individual programs of study for students with specialized interests in political science. May be repeated with different topics to a maximum of 6 credits.

Prerequisite: Permission of instructor.

**PS 491 - Special Topics in International Relations (3)**

Intensive study of selected problems or areas in International Relations. May be repeated for up to 6 credits.

Prerequisite: 3 Credits of Political Science.

**PS 493 - Special Topics in Comparative Politics (3)**

Intensive study of selected problems or areas in comparative politics. May be repeated for up to 6 credits.

Prerequisite: 3 Credits of Political Science.

**PS 494 - Special Topics in U.S. Government and Politics (3)**

Intensive study of selected problems or areas in U.S. government and politics. May be repeated with different topics for up to 6 credits .

Prerequisite: 3 credits of Political Science.

**PS 495 - Special Topics in Public Policy (3)**

Intensive study of selected problems or areas in Public Policy. May be repeated with different topics for up to 6 credits.

**PS 499 - Advanced Topics in Political Science (3)**

Must be cross-listed with a 400-level Political Science course. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: Admission to the Graduate School.

Cross-Listed as: Must be cross-listed with a 400-level Political Science course. Credit will not be granted to a student who has previously taken the cross-listed equivalent course.

**PS 500 - Advanced Research Methods ()**

This class explores quantitative and qualitative approaches to public policy analysis. The course begins with understanding how to identify and articulate research questions. Framing a research project, including the processes of conceptualization, measurement, and sampling, will be discussed. The course will then investigate a variety of methodological approaches to public policy research. Emphasis will be placed on the interpretation of quantitative data. As a key feature of the class, students will be expected to undertake their own independent research project.

Prerequisite: Admission to the Masters in Public Policy or permission of instructor.

**PS 501 - Advanced Studies in International Law (3)**

Origins, scope and limitations of public international law. Fundamental principles affecting laws among nations, and variables influencing state compliance. Discussion of contemporary issues, the role of international organizations, and the impact of the changing global power configuration on the international legal, political and economic environment.

Prerequisite: Graduate status.

**PS 532 - Urban Politics and Government ()**

Examines the relationships between cities, other governmental units, and municipal corporations as well as the forms of government found in urban areas. The course also includes an examination of contemporary urban policy processes and regionalism Selected topics may include education, housing, economic development, public health, transportation, technology, and the environment.

Prerequisite: Admission to the Masters in Public Policy program or permission of the instructor.

**PS 545 - Public Policy Analysis and Evaluation ()**

An examination of the public policy process from the formulation through evaluation and audit stages. Decision making theories and practices relevant to various types of public actors and institutions will be explained and evaluated in the context of an increasingly complex public policy environment.

Prerequisite: Admission to the Masters in Public Policy program or permission of the instructor.

**PS 546 - Power, Money and Politics: The Public Budgeting Process ()**

An examination of how U.S. and state governments make decision concerning the generation of revenue and the allocation of scarce government resources to competing public interests. Course considers the budget decision process in the Executive and Legislative branches of government, as well as the roles played by public administrators. Reviews the history of budget reforms of public budgeting at the national and state levels, including constitutional reforms affecting public budgeting, and explains why public budgeting evolved from simple accounting of government revenues and expenditures into a central tool of administrative management. Current topics may include controlling government debt, collective bargaining with public employee unions, stimulating economic development, and the budgetary impact of judicial mandates.

Prerequisite: Admission to the Masters in Public Policy program or permission of the instructor.

**PS 548 - Current US Public Policy Issues ()**

Study of the politics and administration of government programs in such fields as education, healthcare, housing, and social welfare policy.

Prerequisite: Admission to Masters in Public Policy program or permission of instructor.

**PS 550 - Public Sector Ethics ( )**

An examination of the ethical dimensions of public service with an emphasis of the relationships between and among the different types of public officials (merit appointees, political appointees, and elected officials), as well as the relationship between public officials and the public.

Prerequisite: Admission to the Masters in Public Policy or permission of the instructor.

**PS 555 - Environmental Politics and Policy ( )**

An examination of the evolution and range of environmental policy issues facing the US government. Topics covered may include air and water quality, pollution, land use, energy production and use, natural resource preservation and usage, and climate change. International and comparative policy evolution may also be covered to provide context for US policy evolution.

Prerequisite: Admission to a graduate program or permission of instructor.

**PS 565 - Public and Non-Profit Organization and Management Theory ( )**

This course will survey the major theoretical approaches to the management of public and non-profit organizations in the United States. Topics include Weberian bureaucracy, scientific management, human relations theory, Organizational humanism, systems theory, and organizational change/development theory with an emphasis on the implications of technological, social, and political change for effective public and non-profit organizational design and management.

Prerequisite: Admission to the Masters in Public Policy program or permission of instructor.

**PS 580 - Graduate Internship in Public Policy ( )**

Advanced internship in an government institution, agency, or non-profit organization directly related to public policy advocacy, formation, analysis, evaluation or implementation.

Prerequisite: Completion of 18 credits of approved graduate study in the Masters in Public Policy and permission of advisor.

**PS 592 - Advanced Directed Readings in Public Policy ( )**

Individual program of study for students with specialized interests in Public Policy. May be repeated with different topics for up to 6 credits.

Prerequisite: Admission to the Masters in Public Policy.

**PS 595 - Special Topics in Public Policy ( )**

Selected topics in the field of public policy. May be repeated for up to 6 credits.

Prerequisite: Admission to the graduate program or permission of instructor.

**PS 597 - Advanced Projects in Public Policy ( )**

Completion of an advanced project in public policy under the supervision of a special projects faculty advisor. Major research paper and presentation required upon completion of the project. (Plan C)

Prerequisite: Completion of 21 credits of approved graduate study in public policy and a 3.0 overall G.P.A. or permission of special projects advisor.

**PS 599 - Thesis ( )**

Preparation of the thesis under the supervision of a thesis advisor.

Prerequisite: Completion of 21 credits of approved graduate study in public policy and a 3.0 overall G.P.A. or permission of thesis advisor.

**PSY - Psychological Science****PSY 112 - Introduction to Psychology (3)**

Survey of the scientific study of mental processes and behavior. Required of all psychology majors and minors. CSUS Common Course.

Prerequisite: None

**PSY 113 - Exploring Psychology (1)**

Introduction to the academic, professional, and ethical aspects of the field of psychology. Develops critical thinking, research, library, and information acquisition for psychology. Also explores career options. Open only to Psychology majors or with permission of instructor.

Prerequisite: PSY 112 (may be taken concurrently).

**PSY 125 - Environment & Behavior (3)**

Effects of built and natural environment on human behavior, cognition, and emotion.

Prerequisite: PSY 112.

**PSY 136 - Life-Span Development (3)**

Human development from conception through old age, considering physical, emotional, social, and intellectual factors. Required of all psychology majors.

Prerequisite: None

**PSY 200 - Learning & Memory (3)**

Introduction to theories, methods, and research in the study of learning and memory. Underlying mechanisms of behavior and models of memory derived from animal and human research will be emphasized.

Prerequisite: PSY 112.

**PSY 202 - Peace Psychology (3)**

Overview of psychological process involved in peace and war and how humans manage conflict in a way that generates justice and equity rather than destruction. Examines international, societal, and personal levels of conflict. Promotes critical thinking skills, tolerance for rival viewpoints, nonviolent resolutions of conflict and social responsibility.

Prerequisite: None

Cross-Listed as: Cross listed with PES 202. No credit given to students with credit for PES 202.

**PSY 224 - Psychology of Giving: Introduction to Philanthropy (3)**

Course examines a) historical /modern approaches to philanthropy (e.g., altruism, entrepreneurship, social justice, strategic philanthropy), b) underlying psychological processes of giving and c) how foundations establish goals, develop strategies, evaluate grant applications, and grant awards.

**PSY 225 - Peer Tutoring in Research Methods (1)**

Peer tutor training. Students attend class 1 hour per week and tutor 3 hours per week, assisting students enrolled in PSY 301 and PSY 302. Completion of Level 1 CRLA Certification required. May be repeated for up to 3 credits. (Re-enrollees mentor less experienced tutors, develop a learning portfolio, and complete Level 2 CRLA certification).

Prerequisite: PSY 301 (B or higher) and permission of instructor.

**PSY 234 - Industrial and Organizational Psychology (3)**

Application of psychological theory, knowledge, and methods to individual and group behavior in organizations and industry. Topics covered include: job attitudes, job performance, occupational health and safety, leadership, organizational theory and change, counterproductive work behavior, training, selection, and employment legal issues.

Prerequisite: PSY 112 or permission of instructor.

**PSY 241 - Introduction to Health Psychology (3)**

Examination of how psychological processes impact health, both positively and negatively. Topics include health-related behaviors, stress, coping, and management of chronic illness such as cancer, diabetes, heart disease, and HIV/AIDS.

Prerequisite: PSY 112.

**PSY 244 - Psychology of Stress Management and Wellness ( )**

Examines the nature of stress and its effects upon health and wellness. Students will identify sources and consequences of stress, develop a stress profile, learn coping methods, and apply this information to create and develop individualized Stress Management strategies. Students will be introduced to helpful methods such as progressive relaxation, biofeedback, mindfulness, exercise, diet and other skills to enhance overall wellness and health.

Prerequisite: PSY 112

**PSY 250 - The Psychology of Community Service (3)**

Integration of psychology concepts and principles with community experience to understand service to our communities. Significant community service experience in a new setting required during the course.

Prerequisite: PSY 112.

**PSY 270 - Psychology and the Law (3)**

Interaction between psychology and the U.S. legal system. Application of basic psychological science findings to the investigation and adjudication of criminal and civil matters including forensic psychology. Applied psychology research and practice that has focused explicitly on legal issues.

Prerequisite: PSY 112.

**PSY 281 - Cognitive Psychology (3)**

Overview of current theory concerning the processing of information by the human mind. Emphasis placed on relevant contributions from the areas of perception, memory, language, and thinking.

Prerequisite: PSY 112.

**PSY 301 - Research Methods in Psychological Science I (4)**

Introduction to research in psychology, with emphasis on quantitative methods and statistics in the behavioral sciences. Students will plan an independent research project which will be done outside of the class setting.



Lecture, discussion, and instructor-supervised research activities will take place during class time. Class will meet 4 hours per week. Students who have taken PSY 221 cannot take this course for credit.

Prerequisite: PSY 112 (C- or higher) and STAT 215 (C- or higher).

**PSY 302 - Research Methods in Psychological Science II (4)**

Introduction to research in psychology, with emphasis on advanced quantitative methods and statistics in the behavioral sciences. Students will complete the independent project proposed in PSY 301. This work will be done outside of the class setting. Lecture, discussion, and instructor-supervised research activities will take place during class time. Class will meet 4 hours per week. Students who have taken PSY 222 cannot take this course for credit.

Prerequisite: PSY 301 (C- or higher).

**PSY 330 - Abnormal Psychology (3)**

Examines the definition of a psychological disorder and focuses on understanding the classification, etiology, and treatment of mental health problems.

Prerequisite: PSY 112 and one other psychology course.

**PSY 361 - Psychology of Early Childhood (3)**

Advanced study of development from conception to age six, with emphasis on the origins and dynamic processes of change during this age range. Theory and research regarding physical, cognitive, and socio-emotional development will be explored in depth.

Prerequisite: PSY 136.

**PSY 362 - Child Psychology (3)**

Advanced study of physical, cognitive, and socio-emotional development during the elementary- and middle-school years, with a focus on original, seminal work in the field.

Prerequisite: PSY 136.

**PSY 363 - Adolescent Psychology (3)**

Advanced study of developmental psychology during adolescence with special emphasis on psychosocial development.

Prerequisite: PSY 136.

**PSY 364 - Adult Development & Aging (3)**

Advanced study of developmental psychology during adulthood with a greater focus on older adulthood. The biopsychosocial changes that accompany the normative aging process will be examined, emphasizing how to maximize resilience and engagement throughout later life. The impact of ageism will be explored in depth.

Prerequisite: PSY 136 or permission of instructor.

**PSY 365 - Psychology of the Exceptional Child (3)**

Survey of the psychological/educational needs of children with intellectual, physical, emotional, and behavioral exceptionalities.

Prerequisite: PSY 136.

**PSY 371 - Personality Psychology (3)**

Nature of personality theory and critical analysis of major contemporary theories of personality, including empirical evidence relevant to these theories.

Prerequisite: PSY 112

**PSY 372 - Social Psychology (3)**

Influence of social factors on behavior, cognition, and emotions of individuals. Analysis of research in social psychology.

Prerequisite: PSY 112.

**PSY 380 - Psychology of Dying and Death (3)**

Psychological issues of death and dying. Topics include fear of death, grief and bereavement, developmental perspectives on death, psychological stages of dying, suicide, euthanasia, and cultural views of death.

Prerequisite: PSY 112 or equivalent.

**PSY 390 - Human Sexuality (3)**

Survey of theories and studies relevant to understanding human sexuality. Topics include reproductive technology, attraction, sexual minorities, sexual response cycle, therapeutic interventions, sexually-transmitted infections, and human development.

Prerequisite: PSY 112 and one other course in psychology.

Cross-Listed as: Cross listed with WGSS 391. No credit may be received by students who have received credit for PSY 390.

**PSY 401 - Data Collection in Psychological Science: Learning, Memory & Cognition (1)**

Optional 1-credit practicum for PSY 200 or PSY 281 that focuses on data collection experiences in the cognitive domain of psychological science, with emphasis on hypothesis development, experimentation, data collection and analysis, and written reports.

Prerequisite: Students must have taken or be concurrently enrolled in PSY 200 or PSY 281

**PSY 402 - Data Collection in Psychological Science: Biopsychology and Sensation & Perception (1)**

Optional 1-credit practicum for PSY 441 or PSY 450 that focuses on data collection experiences in the biological domain or psychological science with emphasis on hypothesis development, experimentation, data collection and analysis, and written reports.

Prerequisite: Students must have taken or be concurrently enrolled in PSY 441 or PSY 450

**PSY 410 - Media Psychology (3)**

Seminar examining the impact of electronic media on human behavior, feelings, thinking, and psychological development. Primary focus on the psychological impact of television and newer electronic media technologies (e.g., computers and the Internet).

Prerequisite: One psychology course and at least junior standing or graduate status; or permission of the instructor.

**PSY 412 - Diversity of Latino/a Psychology (3)**

This course will cover the diverse groups that make up the Latina/o population from Spanish speaking countries that reside in the U.S. These groups vary greatly from each other by race (e.g., white, black, indigenous, and mestizo), country of origin, sexual orientation, age, class, immigration and discrimination history. Coexisting with the diversity, the groups that make up the Latina/o population share a history of Spanish colonization and the integration of Spanish customs and values with those of the indigenous peoples of Latin America, thus there is also a shared history of oppression and cultural values.

Prerequisite: PSY 112 or permission of the instructor

**PSY 420 - Cross-Cultural Psychology (3)**

Explores human behavior in a global context. Emphasis will be placed on the influence of cultural factors on behavior cognition, emotion, mental/physical health and group dynamics.

Prerequisite: PSY 112. Open to students with Junior or higher standing.

**PSY 430 - Intergroup Relations (3)**

Focuses on the impact of social categorization on human psychology. Examines the motivational, cognitive, and socio-structural factors that contribute to diverse perspectives and social relations within a national context. Topics may include stereotyping, prejudice, gender issues, race relations, and multiculturalism.

Prerequisite: PSY 112 or permission of instructor. Open to students with junior or higher standing.

**PSY 441 - Sensation and Perception (3)**

Study of the physiological, psychophysical, and psychological processes through which organisms interact with the environment.

Prerequisite: Six credits in psychology or permission of instructor.

**PSY 444 - Psychology of Happiness (3)**

Investigates the phenomena of human strengths and resilience. Topics include optimism, flourishing, relationships, meaning, and creativity.

Prerequisite: PSY 112 and 3 additional credits in Psychology or permission of instructor.

**PSY 446 - Introduction to Psychotherapy (3)**

An introduction to the basic theories underlying psychotherapeutic process. Explores the primary assumptions of the behavioral, biological, cognitive, humanist-existential, and psychodynamic models. Topics include ethical and professional standards and diversity.

Prerequisite: PSY 330 and 6 other credits in Psychology or permission of instructor or admission to M.A. Psychology.

**PSY 448 - Psychology of Women (3)**

Review of research and theories pertaining to the psychology of women. The dynamic aspects of being female in the development of cognitive, emotional, motivational, and social behavior is emphasized. Psycho-social implications and consequences of changing gender roles will be examined.

Prerequisite: None

**PSY 450 - Biopsychology (3)**

Analysis of relationships between bodily processes and behavior. Additional work required for graduate credit.

Prerequisite: Six credits in psychology or permission of instructor.

### **PSY 451 - Psychological Evaluation (3)**

Principles and problems basic to construction, choice and use of psychological measuring instruments, and study of application to classification. Additional work required for graduate credit.

Prerequisite: PSY 330 and two other courses in psychology, or permission of instructor.

### **PSY 454 - Drugs and Behavior (3)**

Overview of the major classes of psychoactive drugs and their effect on the brain and behavior. Legal drugs, such as alcohol and caffeine, and illegal drugs are considered.

Prerequisite: PSY 112.

### **PSY 458 - Human Neuropsychology (3)**

Relationship between the brain and behavior is examined. Topics include disorders of speech and memory, common neurological disorders such as dementia and stroke, and alcohol-related disorders.

Prerequisite: PSY 330 and PSY 450, or permission of instructor.

Notes:

Course may be taken for graduate credit.

### **PSY 460 - Behavior Modification: Theory and Practice (3)**

Application of learning principles to the modification of both normal and abnormal behavior. The settings for application include areas such as personal, social, and marriage counseling; individual and group psychotherapy; formal and informal education and re-education; personal, vocational, and correctional rehabilitation.

Prerequisite: PSY 200 or permission of instructor.

### **PSY 490 - History & Systems of Psychology (3)**

Historical study with emphasis on general philosophical bases, development of psychology as an experimental science, and comparative analysis of principal modes of psychological inquiry.

Prerequisite: PSY 112, three other courses in psychology and junior standing.

### **PSY 496 - Internship in Psychological Applications (1-4)**

Supervised work in public and private agencies and institutions requiring the application of psychological principles. A study of appropriate references and a written

report of procedures and conclusions required. May be repeated for a total of 6 credits.

Prerequisite: Written permission of instructor.

### **PSY 498 - Topics in Psychology (1-3)**

Study of selected topics in psychology. Topics announced each semester. May be repeated with different topics for a total of 6 credits.

Prerequisite: None

### **PSY 499 - Independent Reading and Research in Psychology (1-3)**

Directed independent studies in psychology. May be repeated for a total of 6 credits.

Prerequisite: Junior, senior, or graduate standing and written permission of instructor.

### **PSY 501 - Thesis and Capstone Preparation (1)**

Processes and procedures related to developing and completing a research-based thesis/capstone project.

Prerequisite: Admission to M.A. in Psychology or permission of instructor. Must be taken before or concurrently with PSY 596

### **PSY 511 - Psychology of Aging (3)**

Seminar with a focus on understanding successful aging and the biopsychosocial opportunities and challenges faced by older adults. Topics include the influence of community, health, legal and policy systems on older adults and their families.

Prerequisite: Admission to M.A. in Psychology or permission of instructor.

### **PSY 512 - Seminar in Developmental Psychology (3)**

Study of human development from conception through old age, including analysis of theory and research findings.

Prerequisite: Admission to graduate program or permission of instructor.

### **PSY 520 - Global Psychology (3)**

Examines global cultural contexts which inform human behavior and cognition.

Prerequisite: Admission to M.A. in Psychology or permission of instructor.

### **PSY 530 - Psychopathology (3)**

Psychopathological conditions and their etiologies will be considered in the context of differing major theoretical

perspectives. In-depth information about the diagnosis and assessment of abnormal behavior will be provided. Recent research will be reviewed.

Prerequisite: Admission to M.A. in Psychology or permission of instructor.

### **PSY 541 - Health Psychology (3)**

Examination of health-related behaviors, stress, risk factors and methods to improve well-being. Mind-body aspects of chronic illness, addiction, and immune system disorders are discussed.

Prerequisite: Admission to graduate program in M.A. Psychology or permission of instructor.

### **PSY 542 - Psychology of Stress (3)**

Seminar on the biological, emotional, behavioral and cognitive effects of stress. Critical examination of stress theories and research methodology. Focus on factors that modify the relationship between stress and health outcomes (e.g., social support, optimism).

Prerequisite: Admission to M.A. in Psychology or permission of instructor.

### **PSY 543 - Stress Management: Theory & Research (3)**

Introduction to the field of stress management and biofeedback. A general overview of current theory, research, and practice as well as ethics and the controversies in biofeedback, and other areas of health psychology.

Prerequisite: Admission to M.A. in Psychology or permission of instructor.

### **PSY 544 - Biofeedback: Principles and Practices (3)**

Basics of theory underlying biofeedback; use of biofeedback equipment; overview of biofeedback assessment, treatment, and evaluation.

Prerequisite: Admission to graduate program in psychology.

### **PSY 545 - Introduction to Clinical Psychology (3)**

Survey of current clinical practice, theory, and research with an emphasis on ethical issues.

Prerequisite: Admission to M.A. in psychology or permission of instructor.

### **PSY 546 - Psychotherapy and Health Care (3)**

Examination of American health care system and psychotherapy practice. Topics include description of

short-term therapy models, ethics, diversity, and controversies.

Prerequisite: Admission to M.A. in Psychology or permission of instructor.

### **PSY 547 - Clinical Health Psychology and Chronic Illness (3)**

Review of psychological/environmental influences in progression of chronic diseases. Role of primary care psychologists in prevention and treatment.

Prerequisite: Admission to M.A. in Psychology or permission of instructor.

### **PSY 550 - Community Psychology (3)**

Examination of the history, methodologies, and theoretical frameworks for the field of community psychology.

Prerequisite: Admission to M.A. in psychology or permission of instructor.

### **PSY 551 - Prevention and Community-Based Research (3)**

Intensive examination of the theoretical and empirical underpinnings of prevention programs in community settings.

Prerequisite: PSY 550 or permission of instructor.

### **PSY 553 - Evaluation Research (3)**

Introduction to the design and conduct of evaluative research in a variety of settings, including process and outcome evaluations.

Prerequisite: Admission to any graduate program or permission of instructor

### **PSY 571 - Psychology of Women's Health (3)**

Seminar examining psychological theories and research relevant to women's health. Topics include chronic disease, gynecological health, health beliefs and behaviors, minority women, aging, menopause, stress, role strain, and coping.

Prerequisite: Admission to graduate program in M.A. Psychology or permission of instructor.

### **PSY 585 - Professional Development in Oral Presentations (3)**

Instruction in and practice of presenting, proposing, and teaching material at a professional level.

Prerequisite: Admission to graduate program or permission of instructor

**PSY 590 - Advanced Topics in Psychology (3)**

Study of advanced topics in psychology. Topics will vary and will be announced each semester. May be repeated under different topics for a total of 6 credits.

Prerequisite: Admission to graduate program or permission of instructor.

**PSY 591 - Advanced Independent Reading and Research in Psychology (1 to 3)**

Directed advanced independent studies in psychology.

Prerequisite: Permission of instructor.

**PSY 595 - Graduate Internship in Psychological Applications (3)**

Supervised internship at an agency or institution that provides psychological services. Minimum of 120 hours per semester required. Evaluations will be conducted by faculty and field supervisors.

Prerequisite: Permission of instructor.

**PSY 596 - Psychological Research: Design and Analysis I (4)**

Topics include experimental and quasi-experimental design, program evaluation, single case, and survey design, with application of statistical software packages (e.g., SPSS). Each student will plan an independent research project.

Prerequisite: Admission to M.A. program in psychology or permission of instructor.

**PSY 597 - Psychological Research: Design and Analysis II (4)**

An overview of research methods in psychology, continued from PSY 596. Each student will complete the independent project proposed in PSY 596.

Prerequisite: PSY 596.

**PSY 599 - Thesis (3)**

Preparation of the thesis under the supervision of the thesis advisor.

Prerequisite: 21 credits of graduate work, PSY 501, and a 3.00 overall GPA. Students must consult with their advisor before registering for thesis credits.

**REC-Recreation-Physical-Education-and-Human-Performance****REC 168 - Weight Training (1)**

Tactics, strategy, and proper methods in performing a variety of weight training techniques.

Prerequisite: None

**REL - Religious Studies****REL 101 - Introduction to Religious Studies (1)**

Introduction to the academic study of religions, with focus on core themes such as the nature of religion, the rationality of religious belief, religious ethics, and the use of myth, symbol and ritual.

**REL 105 - Development of Christian Thought (3)**

Critical survey of the central, formative ideas of Christian thought and their development from New Testament times to the present.

Prerequisite: None

**REL 110 - World Religions (3)**

Investigation of the essence of religion, the variety of religious phenomena and systems, and various approaches to the study of religion.

Prerequisite: None

**REL 250 - Japanese Religion (3)**

Survey of Japanese religion from ancient times to the present, including Shinto, various forms of Japanese Buddhism, and Japanese "new religions."

Prerequisite: None

**REL 256 - Religion, Philosophy, and Culture (3)**

Philosophical examination of the ways in which religious traditions contribute to the shaping of cultures, and the ways in which cultural traditions contribute to the shaping of religions.

Prerequisite: None

**REL 257 - Special Topics in Religion (3)**

Study of selected topics in religion. May be repeated under different topics for up to 6 credits.

Prerequisite: None

**REL 361 - African-American Religion (3)**

We shall examine multiple complex religious issues relating to Black religious life and identity from West Africa (prior to European colonization) to the present era in the United States.

Prerequisite: None

Cross-Listed as: Cross-listed with AFAM 361

**REL 492 - Independent Study (1 TO 3)**

Individual research in selected topics. Open to any interested student who wishes to pursue a topic of special interest for which the student is qualified.

Prerequisite: Permission of instructor.

**RJ - Racial Justice****RJ 200 - Studies in Racial Justice (3)**

This course will introduce students to core concepts, theories, and issues related to race and racial justice in the United States. The course emphasizes racial injustice as a systemic phenomenon that simultaneously privileges and oppresses, and which pervades all aspects of society. Students will examine the historical and social construction of race and racial identities; and will be introduced to key concepts such as white privilege, white supremacy, racial oppression, and intersectionality. The course will also discuss contemporary issues of racial injustice, such as those involved in policing and mass incarceration; and the role that cultural representation plays in perpetuating racial injustices. Moreover, students will be introduced to valuable strategies and tools with which they can engage in anti-racist advocacy.

Prerequisite: None

**RJ 371 - Race and Immigration in CT (4)**

This course will focus on race and immigration/migration in particular communities in Connecticut within the context of the broader North American experience. The course will trace the demographic transformation in the city in the past century and on the impact it has had in many arenas, including civil, social, cultural, economic, and political institutions in the area and in the rest of the United States. This course will work closely with a local high school classroom and students will be able to better understand the origin, experiences, conditions, and aspirations of the diverse population.

Prerequisite: None

Corequisite: None

Cross-Listed as: This course is cross-listed with HIST 371 and SOC 371. No credit given if any of these other courses have been taken.

**RJ 400 - Internship in Racial Justice (1-3)**

This course provides students with the opportunity to apply theoretical work in racial justice to real life experiences at local, national, or international levels. This course includes consultation with faculty, analysis of related resources, and two reports with a final faculty evaluation.

**ROBO - Robotics****ROBO 110 - Introduction to Robotics and Mechatronics (3)**

Introduction to fundamentals of Mechatronics and Robotics systems. Topics include programming, types of sensors and actuators and their use. Two hours of lecture and two hours of lab per week.

Prerequisite: None

**ROBO 210 - Engineering Mechanics for Automation ( )**

The course objective is to introduce the basic knowledge with application in robotics and automation and it includes the following topics: Forces, Moments, and Couples. Equilibrium. Center of mass. Moment of inertia. Friction. Beams, Cables. Kinematics and kinetics. Newton's laws. Work-Energy. Impulse-Momentum. Conservation laws. Rigid body dynamics. Reflected inertia. Gyroscopic motion. Free and excited vibration. Transmissibility and Isolation.

Prerequisite: PHYS 121 or PHYS 125

**ROBO 220 - Parametric Modeling and Simulation (3)**

Parametric design techniques applied to part and assembly modeling. Topics include solid, surface, and assembly modeling, design simulation, optimization, and documentation. Two hours of lecture and two hours of lab per week.

Prerequisite: None

**ROBO 240 - Electric Machines (3)**

Introduction to electromagnetic energy conversion, DC and induction motors, power electronics, adjustable speed drives for control of motors and their function in control systems. Two hours of lecture and two hours of lab per week.

Prerequisite: CET 236 or CET 233.

**ROBO 260 - Programmable Controllers (4)**

A study of programmable controllers for motion and process control. The use of sequential flow chart ladder logic and state logic is included. HMI; Human Machine Interface. Basics of PLC networking. Three hours of lecture and two hours of lab per week.

Prerequisite: None

**ROBO 280 - Embedded Systems Design (3)**

Embedded Systems Design covers hardware and software design for higher-end embedded systems development. Includes structured laboratory exercises in programming, peripheral interfacing, device driver implementation, real-time operating system, structure programming, task scheduling, simple digital signal processing (DSP), and other related topics. Two hours of lecture and two hours of lab per week.

Prerequisite: ROBO 110 and CET 363.

**ROBO 310 - Data Acquisition & Processing (3)**

Microprocessor-based techniques for data acquisition and processing, including sensors, interfacing, sampling, reconstruction, and computer communications. Signal processing based on error analysis and statistics. Two hours of lecture and two hours of lab per week.

Prerequisite: CET 270, CET 363.

**ROBO 320 - Fluid Power Control ( )**

Study of the design and fabrication of fluid-based power systems, including hydraulics and pneumatics. Study includes fluid statics and dynamics, Bernoulli equation, momentum, energy, different types of flow, pipes, pumping systems, actuators and valves. Thermal control of mechatronics devices and implementing of control systems for real industrial systems.

Prerequisite: ROBO 210

**ROBO 330 - Fluid Power Systems (3)**

Study of the design and fabrication of fluid-based power systems, including hydraulics and pneumatics. Study includes fluid statics and dynamics, Bernoulli equation, momentum, energy, different types of flow, pipe and open channel flow, pumping systems, actuators and valves. Two hours of lecture and two hours of lab per week.

Prerequisite: ET 251.

**ROBO 340 - Modeling and Simulation in Mechatronics (3)**

Multi domain dynamic modeling of physical systems such as; mechanical, electrical, and thermo-fluid systems or combinations of them. Course topics are suitable for design and control implementation in mechatronic systems. Simulation tools for improving systems' design. Two hours of lecture and two hours of lab per week.

Prerequisite: ROBO 210, MATH 221, CET 236

**ROBO 350 - Applied Control Systems I (3)**

Feedback and feed forward regulation for continuous and discrete systems; performance analysis and design for automatic control systems; transfer functions; block diagrams. PID and lead-lag compensation. Two hours of lecture and two hours of lab per week.

Prerequisite: ROBO 260, ROBO 310, and MATH 221.

**ROBO 370 - Mechanisms for Automation (3)**

Analysis and synthesis of mechanism. Introduction to mechanical transmission and control components. Two hours of lecture and two hours of lab per week.

Prerequisite: ROBO 210, ROBO 220, MM 216.

**ROBO 380 - Mechatronics (4)**

Analysis, modeling and prototyping of embedded systems. Identification of commonly used digital controller; introduction to nonlinear effects and their compensation in mechatronic systems. Implementation and fabrication of Mechatronic Engineering systems. Three hours of lecture and two hours of lab per week.

Prerequisite: ROBO 240, CET 270

**ROBO 390 - Robotics, Theory and Applications ( )**

The course will cover topics such as: Joints, Drives, Transmission, and Sensors. Joint and space frames. Forward and Inverse kinematics. Lagrange-Euler dynamics. Jacobian. Static and dynamic joints' forces and torques. Path generation. Robot control methods. Interaction with the environment.

Prerequisite: ROBO 210

**ROBO 420 - Manufacturing Automation (3)**

Study of programmable controllers, machine vision, robotic arm, sensors, actuators, and drivers. Application of automation components principles to design and facilitate integrated manufacturing workcell that includes mistake proof and automation. Two hours of lecture and two hours of lab per week.

**ROBO 425 - Advanced Programmable Logic Controllers ( )**

Programming technique, addressing formats, input/output instructions, development of advanced ladder logic, sequential flow logic. Implementation of controllers, Supervisory control & data acquisition, DCS, communication protocol and networking, and development for process system. Two hours of lecture and two hours of lab per week.

Prerequisite: ROBO 260 or Permission of Instructor.

**ROBO 440 - Machine Vision and Image Processing (3)**

The main focus for this course is image processing techniques and problems of machine vision. Topics covered include an overview of problems of machine vision and pattern classification, image formation and processing, feature extraction from images, object recognition, and geometric measurements.

Prerequisite: ROBO 280, MATH 221

**ROBO 450 - Autonomous and Intelligent Mobile Robots (3)**

This course provides an introduction to the fundamentals of autonomous mobile robots, and it is focused on designing robotic systems that navigate independently. This include topics such as localization, kinematics, mapping, path planning, and computer vision.

Prerequisite: ROBO 380, ROBO 440

**ROBO 460 - Applied Control Systems II (3)**

Process control of level, heat, flow, pressure, and PH. Analysis and design of modern digital control systems. Implementation and performance analysis of digital control systems. Case Study.

Prerequisite: ROBO 350, MATH 355 or instructor permission.

**ROBO 470 - Robotics Systems Engineering and Analysis (3)**

Principles of design and practical approaches to systems engineering. Life-cycle costing, scheduling, risk management, funtional analysis, conceptual and detail design, test evaluation, project management. Three hours of lecture per week.

Prerequisite: ROBO 110.

**ROBO 480 - Industrial Robotics (3)**

Introduction to the science of flexible automata and robot kinematics. Students will model, design, plan, program,

select, and implement industrial robot systems. Two hours of lecture and two hours of lab per week.

Prerequisite: ROBO 310, ROBO 390

**ROBO 490 - Special Topics in Robotics and Mechatronics (3)**

An individualized inquiry of comprehensive study into a selected technical area. The student may elect to examine products, programming, integration or developmental aspects of Robotics and Mechatronics industry. Open only to Robotics and Mechatronics majors. Course may be repeated for a maximum of 6 credits for different topics.

Prerequisite: Senior Standing with RMET major

**ROBO 496 - Industrial Internship (3)**

Supervised work opportunity in an industrial environment directly related to the program. Written technical reports and program assessments are required. Students are recommended to take intership after junior year. Graded on a pass/fail basis.

Prerequisite: Senior standing and permission of instructor.

**ROBO 497 - Capstone Senior Project (3)**

Research leading to the simulation and construction of a prototype robotics/mechatronics project that is presented orally and in writing. Projects must satisfy relevent requirements and show sound technical judgement.

Prerequisite: Open only to Robotics and Mechatronics majors; senior standing, and permission of instructor.

**ROBO 520 - Advanced Manufacturing Automation (3)**

Study of programmable controllers, machine vision, robotic arm, sensors, actuators, and drivers. Application of automation components principles to design and facilitate integrated manufacturing workcell that includes mistake proof and autonotation. Two hours of lecture and two hours of lab per week. This is a link course with ROBO 420. No credit will be given to students with credit for ROBO 420

Prerequisite: Permission of instructor.

**SCI - Science Education****SCI 211 - Earth and Physical Science (3)**

Exploration of science disciplinary core ideas, science and engineering practices, and crosscutting concepts in the earth and space and physical sciences through an inquiry-based approach. The course content supports the K-5 grade bands of the Next Generation Science Standards



(NGSS) that includes Earth Systems, Earth and Human Activity, Earth's Place in the Universe, Matter, Forces and Motions, Waves, and Energy. Two lectures and one two-hour laboratory per week.

Prerequisite: Open only to students who have officially declared a major within the elementary education program.

### **SCI 400 - Nature of Science and Technology (3)**

The study of the nature of science and technology. Examination of scientific discoveries and technological innovations through a cultural, political, and economic lens and how science distinguishes itself from other ways of knowing while addressing common misconceptions of science and technology. Approaches to include the nature of science and technology in the context of science teaching will be explored. No credit given for students who took SCI 320 or SCI 420.

Prerequisite: Junior Standing or permission by instructor.

### **SCI 412 - Elementary Science Methods (2)**

Subject matter majors with complementary area of earth science are exempt from SCI 111. Methods of science instruction and assessment using developmentally appropriate activities. Introduction to science curriculum, the National Science Standards, and the State of Connecticut Frameworks. Not open to Summer participants without permission of instructor. CT law requires fingerprinting and a criminal background check for the field experiences in this class. Fingerprinting must be completed prior to the beginning of class.

Prerequisite: BIO 211, SCI 211, admission to the Professional Program in Teacher Education.

### **SCI 414 - Interdisciplinary Science, Practices, and Pedagogy (3)**

Exploration of contemporary interdisciplinary science topics, practices, and concepts (e.g., climate change, air quality). Critical analysis of pedagogy within the context of the Next Generation Science Standards (NGSS) will be explored.

Prerequisite: SCI 400

### **SCI 417 - Science Methods in Secondary School (3)**

Taken concurrently with SCI 418 and EDSC 425. Examination and evaluation of science-specific pedagogical practices and the development of curriculum, instruction, and assessment within the context of the Next Generation Science Standards (NGSS). The independent

development of an NGSS science unit to align with the edTPA state licensure assessment.

Prerequisite: Admission to the Professional in Teacher Education for Science, SCI 414, EDTE 316, SPED 315 or SPED 501

Corequisite: SCI 418, EDSC 425, LLA 440 or LLA 505

### **SCI 418 - Fieldwork in Secondary Science Education (1)**

Taken concurrently with SCI 417 and EDSC 425. Thirty hours of supervised field experience in a secondary science classroom setting assigned by the instructor. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional in Teacher Education, SCI 414, EDTE 316, SPED 315 or SPED 501

Corequisite: SCI 417, EDSC 425, LLA 440 or LLA 505

### **SCI 419 - Student Teaching Seminar (1)**

Discussion, reflection, and collaboration with peers on issues that arise in secondary science education in the areas of curriculum, instruction, classroom management, and student assessment.

Prerequisite: SCI 417 (EDSC 435 taken concurrently).

### **SCI 452 - Independent Study in Science (1-6)**

Includes special work in the laboratory or study of theory to meet the individual requirements in areas not covered by the regular curriculum. May be taken for more than one semester up to a limit of 6 credits.

Prerequisite: Approved plan of study by arrangement with the supervising instructor and approval of the science department chair.

### **SCI 456 - Teaching Science to Young Children (3)**

Develops teaching strategies which assist young children in expanding their awareness, understanding, and appreciation of their natural environment. Teachers will learn active involvement techniques and will prepare hands-on science curriculum materials for use with children from preschool through grade 3.

Prerequisite: Permission of instructor.

**SCI 500 - Advanced Topics of Nature of Science and Technology (3)**

Advanced Study of the nature of science and technology. Examination of scientific discoveries and technological innovations through a cultural, political, and economic lens and how science distinguishes itself from other ways of knowing while addressing common misconceptions of science and technology. Approaches to include the nature of science and technology in the context of science teaching will be explored. A safety plan based on state and national recommendations for implementation in the classroom is required. No credit given for students who took SCI 320 nor SCI 400.

Prerequisite: Admission to Master's Program

Cross-Listed as: SCI 400

**SCI 514 - Advanced Interdisciplinary Science, Practices and Pedagogy (3)**

Exploration of contemporary interdisciplinary science topics, practices, and concepts (e.g., climate change, air quality). Advanced critical analysis of pedagogy within the context of the Next Generation Science Standards (NGSS) will be explored. No credit given for students who took SCI 414.

Cross-Listed as: SCI 414

**SCI 517 - Advanced Science Methods in the Secondary School (3)**

Advanced examination and evaluation of science-specific pedagogical practices and the development of curriculum, instruction, and assessment within the context of the Next Generation Science Standards (NGSS). The independent development of an NGSS science unit to align with the edTPA state licensure assessment. No credit given for students who took SCI 417.

Cross-Listed as: SCI 417

**SCI 557 - Science Instruction and Curriculum Development (3)**

Examination and application of elementary and secondary science curriculum, instruction, and assessment strategies in line with the State of Connecticut Standards.

Prerequisite: In-service teacher or permission of instructor.

**SCI 580 - Topics in STEM Education (3)**

Science, Technology, Engineering and Math (STEM) topics will vary each time course is offered. Combination of lecture, discussion, inquiry sessions, and student

presentations. May be taken more than once for credit under different topics.

Prerequisite: None

**SCI 599 - Thesis (Science Education) (3)**

Preparation of the thesis under the supervision of the thesis advisor.

Prerequisite: SCI 598 and admission to the M.S. program in Natural Sciences: Science Education; 21 credits in planned program; permission of advisor; and a 3.00 overall GPA.

**SCLM - Supply Chain Logistics Management****SCLM 510 - Industrial Operations Management (3)**

Principles underlying industrial management. Topics include organization for production, industrial risk, product research and development, and the management of capital goods. SCLM 510 will be an online offering in Fall semesters (intended for the MS-SCLM program).

Cross-Listed as: No credit given for those with credit in TM 510.

**SCLM 560 - Supply Chain Foundations (3)**

The challenges of supply chain and logistics management issues and problems. The integration of emerging technologies within the firm and across the network of partners. The topics include supplier chain structures and channel leadership, postponement, innovation, supply chain 4.0, supply chain resilience, and future challenges such as cybersecurity, supply chain disruption, and risks.

**SCLM 561 - Application of Lean Principles (3)**

The goal is the understanding and application of the fundamental theories and concepts of the modern manufacturing process, problem-solving, quality improvement, just-in-time, lean manufacturing, and six sigma implementations. Students will learn to identify strategies for improving organizational performance by designing quality services, setting optimal quality goals, and implementing statistical methods and six sigma tools.

Cross-Listed as: No credit given for those with credit in TM 561.

**SCLM 562 - Supply Chain Strategy (1)**

Strategies and key concepts in industrial supply chain management. Examines strategies, resultant management decision-making, and impact on supply chain performance.

**SCLM 563 - Strategic Logistics Management ( )**

Issues related to logistics at the global level, emphasizing the integration of manufacturing logistics with operations and procurement to achieve optimal supply chain performance.

**SCLM 564 - Quality Systems Management ( )**

Emphasis on the development and application of total quality system management (TQM) documents. Students will develop a planned quality document to meet domestic and international standards as defined by ISO-9000 and United States supplier certification programs.

**SCLM 565 - Logistics: Traffic and Transportation ( )**

Practical techniques for improving the traffic and transportation performance of a company and its supply chain. Topics include transportation documentation and pricing, inbound/outbound freight control, international transportation, e-logistics and third-party logistics providers.

**SCLM 566 - Distribution and Warehouse Management ( )**

Methodologies for planning, managing and controlling warehouse/distribution operations in the supply chain. Topics include equipment selection, warehouse layouts, inventory control and work methods. Topics linked to measuring productivity and performance of warehouse operations.

**SCLM 596 - Topics in Supply Chain & Logistics Management ( )**

Extensive study of selected supply chain and logistics management issues and problems.

Prerequisite: Acceptance to the School of Graduate Studies

**SE-Systems Engineering****SE 301 - Introduction to Systems Engineering (3)**

This course introduces systems engineering fundamentals, establishing a framework for designing complex engineered systems from a holistic perspective using system engineering's "Vee" model. The emphasis is on the core activities of systems engineering, which are requirements analysis, functional analysis, design synthesis, testing, and evaluation to provide a comprehensive, lifecycle balanced approach regarding operational cost, reliability, maintainability, environmental impact, and human factors.

Prerequisite: Junior standing

**SE 302 - Systems Engineering Design and Analysis (3)**

This course provides a comprehensive understanding of systems engineering principles, methodologies, and tools essential for designing and analyzing complex systems. Students will learn about system lifecycle processes, systems decomposition, decomposition tools, and the application of systems engineering principles in real-world projects.

Prerequisite: SE 301 (C- or better, may be taken concurrently)

**SE 303 - Systems Simulation and Optimization (3)**

This course provides a hands-on introduction to systems simulation and optimization principles and techniques. Students will learn how to model complex systems, simulate their behavior, optimize them using various optimization algorithms, and apply sensitivity analysis.

Prerequisite: Junior standing. C- or better in both SE 301 and SE 302. C- or better in either STAT 104 or MATH 226.

**SE 400 - Special Topics in Systems Engineering (3)**

This course explores advanced or specialized areas within systems engineering. Topics vary each semester. May be repeated with different topics for a total of 6 credits.

Prerequisite: Senior Standing and SE 301 (C- or better)

**SE 404 - Model-Based Systems Engineering (3)**

This course provides an in-depth understanding of Model-Based Systems Engineering principles, methods, and tools. System complexity is continually increasing, demanding more rigorous approaches to modeling. Document-based approaches become cumbersome with large-scale systems, and a model-based approach helps to manage complexity better, improve quality, and lower cycle time. This course addresses modeling of the system description as well as its functions using Systems Modeling Language. This formal modeling language supports all aspects of the systems engineering process from specification through verification and is applicable across a broad range of industries. Students will learn to develop and utilize models to represent, analyze, and model complex systems, enabling effective systems engineering practices. Topics include modeling languages, model representation, requirements analysis, system architecture, verification and validation, and integration with system development.

Prerequisite: Senior Standing and SE 301 (C- or better)

Cross-Listed as: This course is linked with SE 504. No credit for students who have taken SE 504 with the same topic.

**SE 405 - Decision and Risk Analysis in Systems Engineering (3)**

This course introduces students to the principles and techniques of decision analysis and risk assessment in systems engineering. Students will learn to make informed decisions by evaluating risks and uncertainties associated with complex systems. Topics include decision modeling, risk assessment, uncertainty analysis, and risk mitigation strategies.

Prerequisite: Senior Standing, SE 301, SE 302 and either STAT 104 or MATH 226. (All with C- or better)

**SE 500 - Special Topics in Systems Engineering (3)**

This course explores advanced or specialized areas within systems engineering. Topics vary each semester.

Prerequisite: SE 501

Cross-Listed as: Linked with SE 400. No credit granted for students who have taken SE 400 on the same topic.

**SE 501 - Systems Engineering Principles and Practices (3)**

This course is an introduction and overview of the methods and tools systems engineers use to define, develop, and deploy systems. Essential elements of systems engineering, including systems thinking, concept and system definition, integration and test, product and service life management, systems engineering management, logistics and supportability, and system retirement with applications in aerospace, defense, transportation, energy, communications, and software systems.

Prerequisite: Admission to the Systems Engineering Official Certificate program or permission of the Engineering Department chair.

**SE 502 - Systems Design and Integration (3)**

This course focuses on advanced principles and practices in systems design and integration. Students will learn about system architecture, integration processes, verification and validation techniques, and how to manage the design and integration of large-scale complex systems. Specific topics include technology quality and fundamentals of system designs, system and design requirements, system element designs, system design verification and validation, and sustainability design.

Prerequisite: SE 501

**SE 503 - Systems Modeling and Simulation (3)**

This course introduces system modeling and simulation techniques for analyzing complex systems. Students will

learn to develop models, simulate system behavior, and analyze results to gain insights into discrete event simulation. Emphasis will be on practical applications and hands-on experience using simulation software.

Prerequisite: SE 501

**SE 504 - Model-Based Systems Engineering (3)**

This course provides an in-depth understanding of Model-Based Systems Engineering principles, methods, and tools. System complexity is continually increasing, demanding more rigorous approaches to modeling. Document-based approaches become cumbersome with large-scale systems, and a model-based approach helps to manage complexity better, improve quality, and lower cycle time. This course addresses modeling of the system description as well as its functions using Systems Modeling Language. This formal modeling language supports all aspects of the systems engineering process from specification through verification and is applicable across a broad range of industries. Students will learn to develop and utilize models to represent, analyze, and model complex systems, enabling effective systems engineering practices. Topics include modeling languages, model representation, requirements analysis, system architecture, verification and validation, and integration with system development.

Students are required to undertake an independent research project related to MBSE, exploring advanced topics, emerging methodologies, or applications specific to their area of interest within systems engineering. This project may encompass the creation of an innovative modeling approach, the execution of a case study, or an exploration of the integration of MBSE with cutting-edge technologies. Students will explore and utilize advanced MBSE tools, which may include exposure to industry-standard tools used in prominent companies in Connecticut.

Prerequisite: SE 501

**SET - School of Engineering and Technology****SET 490 - Topics in International Field Studies (3)**

International field study experience related to selected topics in Engineering, Technology, Technology Engineering Education, and Biomolecular Sciences. May be repeated under different topics for a maximum of 6 credits.

Prerequisite: Permission of academic advisor.

**SET 590 - Topics in International Field Studies (3)**

International field study experience related to selected topics in biomolecular sciences, technology management, technology education, and construction management. This course may be used as an elective in the M.S. programs in Technology Education, Technology Management, and Construction Management, and the M.A. program in Biomolecular Sciences.

Prerequisite: Permission of academic advisor.

**SOC - Sociology****SOC 110 - Introductory Sociology (3)**

Major theoretical models and research methodologies used by sociologists in examining the institutions of societies and everyday lives of individuals. Topics include social stratification, ethnic relations, race, poverty, gender roles, aging, the family, population and urban/suburban communities. CSUS Common Course.

Prerequisite: None

**SOC 111 - Social Problems (3)**

Conditions or patterns of behavior that are considered to be harmful to society or its members, about which it is considered that something should be done. Included as possible topics are sexism, physical and mental health, drug and alcohol abuse, sexuality, inequality, discrimination, environmental problems and abuses of power.

Prerequisite: None

**SOC 208 - Sociology of LGBTQ+Communities (3)**

Examines the history and structure of American gay and lesbian communities. Questions the social forces that have contributed to the formation, growth and consequences of such communities. Topics such as the gay and lesbian civil rights movement, the role of organizations and the development of gay and lesbian identity are addressed (Cross-listed with WGSS 208. No credit may be received by students who have received credit for WGSS 208).

Cross-Listed as: WGSS 208

**SOC 209 - Sociology of Culture (3)**

Examines social processes shaping the production and reception of cultural objects. Considers the impact of cultural meanings with a particular focus on the role of cultural capital, symbolic boundaries and power struggles.

Substantive topics may include music, literature, food, technology, art, and popular culture.

**SOC 212 - Race, Class, and Gender (3)**

Sociological definition of race, class, and gender, at academic and experiential levels; the interrelationship of these social characteristics as they affect individual consciousness, group interaction, and access to institutional power and privileges in the United States.

Prerequisite: None

**SOC 233 - The Family (3)**

The family in its social context, including cross-cultural perspectives and theories of family structure and change. The contemporary American family and its emerging alternatives will be studied, with special reference to the family life cycle and current issues in family studies.

Prerequisite: None

**SOC 234 - The Social Construction of Self and Society (3)**

Symbolic interactionism and social constructionist theories are used to explore the making of meanings and identities by individuals, groups and institutions, and the influence of these constructions on society.

**SOC 240 - The Sociology of Gender (3)**

Gender as biology, social learning, social organization, and social structure. The gendered nature of friendships, sexuality, conversation, power, and violence. Interpersonal/institutional sexism as it affects women and men. Issues of inequalities in work, education, politics, and health. Women's and men's movements.

Prerequisite: None

Cross-Listed as: Cross listed with WGSS 240. No credit given to students with credit for WS 240 or WGSS 240.

**SOC 250 - Latina Identity and Empowerment (3)**

This course focuses on Latina identity construction and social practices that can foster empowerment among Latino/a communities. The epistemological approach encourages students to assess course material and their own experiences from a *critical viewpoint* that seeks *truth* and *knowledge* (about Latinas and empowerment strategies). Thus, the knowledge gained through course material will seek to be *justified* through research and through experiences with Latinas and community organizations. Topics that will be covered throughout the semester will revolve around the Latina population and include some of the following: sexuality, sexual behavior, youth and adolescence, portrayal in mass media,

immigration, family, culture and the arts, music, the construction of identity, education, body image, work and globalization, and dance.

Cross-Listed as: Cross-listed with LTN 250. No credit for this course if you have credit for the cross-listed equivalent.

#### **SOC 300 - Sociological Theory (4)**

Examines the dominant theoretical perspectives in sociology, which includes consideration of the works of Marx, Weber, Durkheim and selected other theorists within their historical context. Discussion of the role of theory in producing sociological explanations. Writing Intensive Course.

Prerequisite: SOC 110 or SOC 111 and 6 additional credits in Sociology.

#### **SOC 302 - Sociology of Music (4)**

Examines the ways in which people use music to define social rituals, build collective identities, and make meaning of our everyday lives. Emphasized how music relates to core sociological concepts, including norms, power, inequality, and social change.

Prerequisite: SOC 110 or SOC 111

#### **SOC 305 - Social Movements and Collective Action (4)**

Goals, composition, and impact of collective efforts to address an injustice or achieve social change are considered in historical and cultural context. Emphasis on recent American movements in opposition to government policies, established elites, and dominant cultural norms, such as the Civil Rights Movement, the women's movement, the peace movement, and the environmental movement.

Prerequisite: SOC 110 or SOC 111 or LTN 110

#### **SOC 306 - Social Construction of Sexuality (4)**

Explores how sexuality is constructed in American culture in the 21st century. Criticizes common assumptions that naturalize sex and sexuality to investigate complex and changing social contexts of sexualities. Cross-listed with WGSS 306. No credit received by students who have received credit for WGSS 306.

Prerequisite: SOC 110 or SOC 111 or WGSS 200

Cross-Listed as: WGSS 306

#### **SOC 307 - Schools, Education & Society (4)**

Examines the role of educational institutions with a particular focus on social processes that create,

reproduce, or alleviate various social inequalities. Some of the following topics may be covered: relations between communities and schools; effects of government control and privatization; and interactions between individuals in schooling contexts.

Prerequisite: SOC 110 or SOC 111

#### **SOC 308 - Animals and Society (4)**

Using Symbolic Interaction and conflict theory as the main theoretical perspective, this course explores the social relationship between humans and animals and examines the social meanings which shape the role and status of animals in society.

Prerequisite: SOC 110 or SOC 111

#### **SOC 309 - U.S. Immigration (4)**

Explores the sociological dynamics of coming to the U.S. and changing it. Includes such issues as undocumented immigration, the impact of immigration on the economy, and questions of assimilation. Cross-listed with LTN 309. No credit may be received by students who have received credit for LTN 309.

Prerequisite: SOC 110 or SOC 111 or LTN 110

Cross-Listed as: LTN 309

#### **SOC 310 - Research Methods (4)**

Examines scientific method as used in sociology. Topics include inductive and deductive reasoning, quantitative and qualitative research designs, measurement, sampling, methods of data collection, and analysis strategies. Students will design a research project, collect and analyze data, and summarize their findings.

Prerequisite: SOC 110 or SOC 111 and 6 additional credits in Sociology.

#### **SOC 312 - Class, Power, and Status (4)**

Examines theories and forms of class inequalities and social stratification. Assess the consequences of class and status inequality on prospects for social change, the degree of political influence, institutional structures, opportunities for mobility, and life chances.

Prerequisite: SOC 110 or SOC 111

#### **SOC 322 - Race and Racism (4)**

Examines selected racial and ethnic groups, their history, social and ethnic patterns, and position in the social structure in the United States. Includes theories of racial and ethnic relations. Cross-listed with LTN 322. No credit

received by students who have received credit for LTN 322.

Prerequisite: SOC 110, or SOC 111, or LTN 110

Cross-Listed as: LTN 322

#### **SOC 340 - Aging and Life Course (4)**

Focuses on life course theory and the study of aging from a sociological perspective. Explores the centrality of age and life stage to the structure of society, the social construction of age and generation, how individuals age within a social context, and how social institutions structure how we age. Particular attention is given to cumulative inequality and how the intersections of age, race, class, and gender impact later-life outcomes.

Prerequisite: SOC 110 or SOC 111 or GERO 101

#### **SOC 351 - Oppression and Liberation (4)**

This seminar uses sociological and social justice frameworks to explore how systems of oppression impact the lives of individuals, families and communities. It also explores the way that individuals have confronted injustice and domination, and how they have labored to overcome oppression in their lives and communities.

Prerequisite: SOC 110 or SOC 111

#### **SOC 355 - The Culture and Politics of Food (4)**

Introduction to the sociology of food. Examines the cultural meanings of food as well as the production, preparation, and consumption of food. Focuses on the Industrial Food Complex. Explores the health, environmental and ethical problems related to food industries, some alternative food movements, and the globalization of food.

Prerequisite: SOC 110 or SOC 111

#### **SOC 371 - Race and Immigration in CT (4)**

This course will focus on race and immigration/migration in particular communities in Connecticut within the context of the broader North American experience. The course will trace the demographic transformation in the city in the past century and on the impact it has had in many arenas, including civil, social, cultural, economic, and political institutions in the area and in the rest of the United States. This course will work closely with a local high school classroom and students will be able to better understand the origin, experiences, conditions, and aspirations of the diverse population.

Prerequisite: None

Corequisite: None

Cross-Listed as: This course is cross-listed with HIST 371 and RJ 371. No credit given if any of these other courses have been taken.

#### **SOC 400 - Topics in Social Theory (4)**

Selected topics in social theory. May be repeated with different topics for a maximum of 8 credits

Prerequisite: SOC 110 or SOC 111 and 3 additional credits in Sociology

#### **SOC 406 - Women of Color in the U.S. (4)**

Using a sociohistorical perspective, this course will examine the double and multiple jeopardy that women of color have faced and continue to face in the United States. It will also highlight women of color who have made advances in the area of social justice and their personal lives despite race-based and gender-based oppression.

Prerequisite: SOC 110 or SOC 111

#### **SOC 407 - Sociology Book Club (1)**

Designed like a book club, the purpose of the course is to enjoy and enhance the experience of reading. Students will choose the books. No credit given to students with credit for SOC 399.

Prerequisite: SOC 110 or SOC 111 or SOC 212

#### **SOC 408 - Gas, Food and Lodging: How the Automobile Changed Society (4)**

Few technological changes have reshaped our society as rapidly and completely as the automobile has during the last century. Examines the social influence of the automobile on identity, geography, the environment, community culture, work, and the family.

Prerequisite: SOC 110 or SOC 111

#### **SOC 409 - Why Unions Matter (4)**

Examines the role of labor unions in American society, highlighting their impact on social integration, political participation, and economic equality. Analyzes neoliberal economic and political transformation on labor relations, union operation, and union membership, as well as contemporary labor issues and debates.

Prerequisite: SOC 110 or SOC 111

#### **SOC 410 - Quantitative Analysis (4)**

Analysis of quantitative data using computer applications to test hypotheses and to complete a research project.

Three hours class lectures and one-on-one work to develop and refine a research project.

Prerequisite: SOC 310, STAT 215 (C- or better in STAT 215)

#### **SOC 411 - Oral History for the Social Sciences (4)**

Examination of oral history as a social science methodological approach. Emphasis on the collection, transcription, analysis, archiving, indexing, and dissemination of primary data. Students will write a final research report. Graduate students will be required to find a repository for their research project as approved by the instructor of the course. Three hours class lectures and one-on-one work to develop and refine a research project.

Prerequisite: SOC 310 or HIST 301 or ANTH 374 or permission of instructor.

#### **SOC 412 - Qualitative Analysis (4)**

Intensive exposure to participant observation, in-depth interviewing, and content analysis. Emphasis on the collection, coding, and interpretation of primary data. Additional focus on the ethics and politics of qualitative research designs. Students will write a final research report. Three hours class lectures and one-on-one work to develop and refine a research project. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: SOC 310.

#### **SOC 413 - Community Research (4)**

Students design and carry out a community research project, including meeting with research subjects off campus. Taken concurrently with SOC 477. May include the collection and analysis of quantitative and/or qualitative data. May not be repeated.

Prerequisite: SOC 310.

Corequisite: SOC 477.

#### **SOC 424 - Genocide and the Modern World (4)**

Genocide, mass murder, and ethnic cleansing have been a defining feature of the 20th century. Explores the causes and varieties of genocide, as well as the responses of the international community.

Prerequisite: SOC 110 or SOC 111

#### **SOC 426 - Sociology of Revolution (4)**

Examines major theoretical perspectives used by sociologists to interpret and explain revolutions. Emphasis on Bourgeois, socialist, nationalist, populist, and post-modern revolutions.

Prerequisite: SOC 110 or SOC 111

#### **SOC 427 - American Poverty and Social Welfare (4)**

This course explores how poverty is measured and understood, and how it has changed over time. Explores the emergence and development of the American welfare state.

Prerequisite: SOC 110 or SOC 111

#### **SOC 428 - Globalization and Its Discontents (4)**

Exposes students to the political, cultural, and economic processes of globalization. Social consequences of globalization are examined, including its impact on the state, production, and the movement of people.

Prerequisite: SOC 110 or SOC 111

#### **SOC 433 - Independent Studies in Sociology (1-4)**

Advanced study and projects in sociology of special interest to students under the supervision of one or more department members. May be repeated for a maximum of 8 credits.

Prerequisite: None

#### **SOC 440 - Death and Dying: Sociological Implications (4)**

Different cultural, social, and historical perspectives on death and their impact on social roles and institutional change. Problems faced by the health care profession in meeting the needs of the terminally ill and the bereaved. Student will be required to have a field experience with a terminally ill patient and/or bereaved family.

Prerequisite: SOC 110 or SOC 111 or GERO 101

#### **SOC 441 - Sociology of the Aging Body (4)**

This course uses a life-course and postmodern perspective to explore the social construction of the aging body in society. The course begins with a look at the historical portrayal and social construction of the aging body over time. It then examines postmodern perspectives of the aging body related to culture and consumerism, medicalization of the aging body, cosmetic surgery, and media exposure of the aging body. May be taken for graduate credit. Additional work required for graduate students.



Prerequisite: SOC 110 or SOC 111 or GERO 101

**SOC 444 - Sport and Play in America (4)**

Examines the institution of sport from the social, political, economic, and cultural perspectives. Substantive topics include sexism and racism in sport, sport and the mass media, deviance in sport, sport and social mobility, and the relationship of sport with religious, political, and economic structures.

Prerequisite: SOC 110 or SOC 111

**SOC 452 - Organizations, Occupations, and Work (4)**

Systematic study of large scale, bureaucratic organizations with emphasis on relations among the organization's members, the organization as a social entity and its social and physical environment. Can be taken for Graduate credit.

Prerequisite: SOC 110 or SOC 111 or admission to Masters in Public Policy.

**SOC 455 - Men, Masculinity, and Manhood (4)**

Overview of men's studies with an emphasis on historical conceptualizations of masculinity and masculine identity and its social construction. Special topics to be covered include men's socialization; men and relationships, sex, and friendships; men and power/violence; fatherhood; and depictions of men in the mass media.

Prerequisite: SOC 110 or SOC 111 or WGSS 200

**SOC 461 - Intimacy and Aging (4)**

No credit will be given to students with credit in WGSS 461. This course examines the variety of intimate and sexual relationships of older adults as well as a broad range of issues related to sexuality and aging in a social, historical and political context. Emphasis is placed on understanding the type, nature, content, and meaning of relationships, as well as on identifying contextual factors including gender, race, ethnicity, class, sexual orientation, and health status that structure these relationships. May be taken for graduate credit. Additional work required for graduate students.

Prerequisite: SOC 110 or SOC 111 or GERO 101 or permission of instructor, or admission to Gerontology Certificate Program

Cross-Listed as: No credit will be given to students with credit in WGSS 461.

**SOC 462 - Worlds in Motion: Gender, Race and Global Migration (4)**

Examines the debates surrounding contemporary global migration, using race and gender as analytical tools to understand the lived experiences of migrants. Topics include labor migration, refugees, women workers in the global economy, human trafficking, the global market in reproductive technologies and sex tourism.

Prerequisite: SOC 110 or or SOC 111 or WGSS 200

Cross-Listed as: WGSS 462

**SOC 464 - Sociology of Emotions (4)**

Examines how emotions are socially experienced, constructed, shaped, learned, expressed, patterned, regulated, and controlled. Additional topics include the social consequences of emotion norms, emotion management, emotional labor, and emotional deviance for a wide variety individuals, groups, and societies.

Prerequisite: SOC 110 or SOC 111

**SOC 465 - Art and Society (4)**

This course examines art through cultural and social meaning, artists and performers as a social identity, and the social institutions that structure and shape our understanding of "high" and "low" culture.

Prerequisite: SOC 110 or SOC 111 and 3 additional credits in Sociology

**SOC 466 - Sociology of Children & Childhood (4)**

Examines childhood from social, historical, economic, and cultural perspectives. Focus on the socialization process, peer cultures and friendship networks, as well as the effects of work/leisure, technology, media, divorce/single parenthood on the childhood experience.

Prerequisite: SOC 110 or SOC 111

**SOC 468 - Sociology of Religion (4)**

Examines the institution of religion from socio-cultural perspective. Particular attention on religious movements, religious organizations, and the relationship of religion to politics, globalization, and social change as well as its intersection with social class, race/ethnicity, and gender/sexuality.

Prerequisite: SOC 110 or SOC 111

**SOC 477 - Community Research Topics (4)**

Indepth review of sociological literature and examination of community interests and viewpoints related to the

community research project undertaken in SOC 413 (taken concurrently). Includes meeting with community members and stakeholders off campus. May not be repeated.

Prerequisite: SOC 310.

Corequisite: SOC 413.

#### **SOC 478 - Current Topics in Sociology (3 - 4)**

Analysis and evaluation of special topics in the field of sociology. Not a seminar. May be repeated with different topics.

Prerequisite: SOC 110 or SOC 111

#### **SOC 480 - The Polish-American Immigrant and Ethnic Communities (3)**

Explores the processes of migration and resettlement of Polish immigrants and their descendants in America with a focus on economic, political and social factors.

Prerequisite: SOC 110 or SOC 212 or HIST 301 or permission of instructor.

Cross-Listed as: Cross-listed with HIST 482; no credit given to students with credit for HIST 482.

#### **SOC 485 - Ads, Fads, and Consumer Culture (4)**

Examination of the socio-cultural causes and consequences of consumption and consumer behavior including socially constructed motives, meanings, and outcomes of shopping, and the role of advertising and market research.

Prerequisite: SOC 110 or SOC 111

#### **SOC 490 - Community Intern Experience and Seminar (4)**

An internship application and two letters of recommendation subject to review and approval by the instructor. Accepted students are assigned to work in either a profit or a nonprofit community-based organization for 8 to 10 hours per week and attend a once weekly seminar to discuss assigned readings and research projects related to internship placement. Available only to Majors and Minors. May be repeated at different placements.

Prerequisite: 2.7 GPA or higher and at least 10 credits in Sociology.

#### **SOC 494 - Sociological Field Studies Abroad (3)**

Classroom and study abroad exploring sociological topics from any world region. Involves travel outside the United

States. May be taken under different topics for up to 9 credits.

Prerequisite: None

#### **SOC 499 - Senior Seminar in Sociology (4)**

This capstone course for majors provides students with a structured environment in which to complete an independent research project. Students will engage in peer workshops, and reflect upon the knowledge they have acquired in the discipline while honing their research and communication skills.

Prerequisite: SOC 300; either SOC 410, SOC 411, SOC 412, or SOC 413; and 16 additional credits in Sociology.

### **SPAN - Spanish**

#### **SPAN 111 - Elementary Spanish I (3)**

Open only to students with one year or less of high school study. Not open to native speakers of Spanish. No credit given to students who have received credit for SPAN 118. Through a direct conversational approach, foundations of Spanish linguistic structure are established. CSUS Common Course.

Prerequisite: None

#### **SPAN 112 - Elementary Spanish II (3)**

Not open to native speakers of Spanish. No credit given to students with previous credit for more advanced course work in Spanish except by permission of the department chair. Study of spoken and written Spanish is continued with analysis of Spanish language structure. CSUS Common Course.

Prerequisite: SPAN 111 or equivalent (normally, two years high school study).

#### **SPAN 118 - Intensive Elementary Spanish (6)**

Open only to students with one year or less of Spanish at the high school level. Not open to native speakers of Spanish. No credit for students who have received credit for SPAN 111 and/or SPAN 112. Intensive oral-proficiency based Spanish language course designed to bring students to intermediate level production and receptive skills in one semester. Six classroom hours per week.

Prerequisite: None

#### **SPAN 123 - Basic Spanish Review (3)**

Refresher course in structure patterns and sound systems of the Spanish language. Open only to non-native speakers of Spanish. No credit will be given to those with

credit for more than three years of high school study of Spanish.

Prerequisite: Three years of Spanish in high school or equivalent preparation.

### **SPAN 125 - Intermediate Spanish I (3)**

Principles of Spanish language structure reviewed. Short stories and plays are read and discussed. Conversation and composition on topics of general interest. Open only to non-native speakers of Spanish. No credit given to students with credit for more advanced course work in Spanish. CSUS Common Course.

Prerequisite: One year college Spanish or equivalent.

### **SPAN 126 - Intermediate Spanish II (3)**

Continuation of SPAN 125 with the study of grammatical structures. Open only to non-native speakers of Spanish. No credit given to students with credit for more advanced course work in Spanish. CSUS Common Course.

Prerequisite: SPAN 125 or equivalent.

### **SPAN 129 - Spanish for the Health Professions I (3)**

This is an intermediate Spanish course designed for students majoring in the health professions. This course will teach the students vocabulary and basic interaction skills that will allow them to speak with their patients and perform common tasks related to health care. SPAN 129 focuses on developing the students' oral proficiency, so the course involves pair and group activities as well as oral and vocabulary reports, and video projects.

Prerequisite: SPAN 112 or permission from instructor

### **SPAN 130 - Spanish for the Health Professions II (3)**

This is an advanced Spanish course designed for students majoring in the health professions. It continues building on the content and skills learned in SPAN 129 so the students can become more proficient at interacting with their patients and performing routine tasks related to health care. This course focuses on developing the students' oral proficiency; therefore, the course involves pair and group activities as well as oral and vocabulary reports, and video projects.

Prerequisite: SPAN 129 or permission by the instructor.

### **SPAN 190 - Language for Heritage Speakers of Spanish I (3)**

Designed to activate oral command and improve presentational and expository skills in Spanish through the

study of pertinent cultural topics. For heritage speakers of Spanish only. Equivalent to SPAN 125.

Prerequisite: Permission of department chair.

### **SPAN 191 - Language for Heritage Speakers of Spanish II (3)**

Continuation of SPAN 190. Further study of grammar and additional practice in diction, reading, and writing. Eligible Spanish speakers will take this course in place of SPAN 126.

Prerequisite: Permission of instructor.

### **SPAN 225 - Intermediate Spanish III (3)**

Designed to help students improve listening and speaking skills through a variety of texts. Further study of grammar. Open only to non-native speakers of Spanish.

Prerequisite: SPAN 125 or SPAN 126 or permission of instructor.

### **SPAN 226 - Intermediate Spanish IV (3)**

Designed to help students improve reading and writing skills through a variety of texts. Further study of grammar. Open only to non-native speakers of Spanish.

Prerequisite: SPAN 125 or SPAN 126 or permission of instructor.

### **SPAN 229 - Advanced Intermediate Spanish for Health Professionals (3)**

This is an advanced intermediate Spanish course designed for students majoring in the health professions. It continues building on the content and skills learned in SPAN 129 and SPAN 130 so the students can become more proficient at interacting culturally with their patients and performing routine tasks related to health care.

Prerequisite: SPAN 130

### **SPAN 261 - Business Spanish (3)**

Development of skills geared to specific situations which would be encountered in business offices, foreign firms, travel agencies, and the like.

Prerequisite: SPAN 190 or SPAN 225, or permission of instructor.

### **SPAN 290 - Hispanic Culture for Heritage Speakers of Spanish I (3)**

Designed to improve reading and writing skills in Spanish through the study of pertinent cultural topics. For heritage speakers of Spanish only. Equivalent to SPAN 225.

Prerequisite: SPAN 190 or permission of instructor.

**SPAN 291 - Hispanic Culture for Heritage Speakers of Spanish II (3)**

Study of major current issues related to the Hispanic culture in the US and Latin America. Topics may include immigration, politics, and religion. Primarily for heritage speakers of Spanish. Equivalent to SPAN 226.

Prerequisite: SPAN 191 or permission of instructor.

**SPAN 300 - Literary Analysis (3)**

Taught in Spanish. Instruction in the techniques of literary analysis as an instrument for the development of critical reading ability, and as a necessary step in literary research.

Prerequisite: SPAN 225 or SPAN 226 or SPAN 290 or SPAN 291 (any may be taken concurrently), or permission of instructor.

**SPAN 304 - Introduction to Spanish Literature I (3)**

Taught in Spanish. Introduction to great literary works of Spain from the Middle Ages to 1700.

Prerequisite: SPAN 225 or SPAN 226 or SPAN 290 or SPAN 291 or SPAN 300 (any may be taken concurrently), or permission of instructor.

**SPAN 305 - Introduction to Spanish Literature II (3)**

Taught in Spanish. Introduction to the major works in Spanish literature since 1700.

Prerequisite: SPAN 225 or SPAN 226 or SPAN 290 or SPAN 291 or SPAN 300 (any may be taken concurrently) or permission of instructor.

**SPAN 315 - Spanish Civilization (3)**

Taught in Spanish. Cultural evolution of Spain with emphasis on modern period.

Prerequisite: SPAN 225 or SPAN 226 or SPAN 290 or SPAN 291 (any may be taken concurrently), or permission of instructor.

**SPAN 316 - Latin American Civilization (3)**

Taught in Spanish. Cultural evolution of Latin America with emphasis on modern period.

Prerequisite: SPAN 225 or SPAN 226 or SPAN 290 or SPAN 291 (any may be taken concurrently), or permission of instructor.

Cross-Listed as: Cross listed with LAS 316. No credit given to students with credit for LAS 316.

**SPAN 335 - Advanced Spanish Composition and Conversation (3)**

Advanced Composition and Conversation is a course focused on developing the written and oral presentational communication skills of the students. It is conducted 100% in Spanish.

The course focuses on developing speaking and writing skills at the Advanced-Low level as described by ACTFL's Proficiency guidelines. This rating is necessary to obtain certification as a WL Teacher in the State of Connecticut, and it is a very common standard in other industries. Students will review select lexical and grammatical problems that tend to interfere in written and spoken communication in Spanish.

Prerequisite: SPAN 225 or SPAN 291.

**SPAN 375 - Introduction to Spanish American Literature I (3)**

Taught in Spanish. Study of selected writings of major Spanish-American authors from the age of discovery and the colonial period up to the end of the nineteenth century.

Prerequisite: SPAN 225 or SPAN 226 or SPAN 290 or SPAN 291 or SPAN 300 (any may be taken concurrently) or permission of instructor.

Cross-Listed as: Cross listed with LAS 375. No credit given to students with credit for LAS 375.

**SPAN 376 - Spanish American Literature II (3)**

Taught in Spanish. Readings and interpretation of great works of Spanish American literature from end of Romanticism to present.

Prerequisite: SPAN 300 or permission of instructor.

Cross-Listed as: Cross listed with LAS 376. No credit given to students with credit for LAS 376.

**SPAN 401 - Introduction to English-Spanish Translation (3)**

This course is an introduction to English-Spanish translation and an advanced-grammar review, taught in Spanish, in accordance with the American Translators Association guidelines. The course offers an overview of different translation techniques, and fundamental concepts, set alongside a professional-development practicum in the context of a community-engagement project. Students will leave the course with a professional portfolio that includes: a set of professional documents; examples of their translation work; and experience with

community engagement via translation services. Such a portfolio demonstrates students' capacities for cross-cultural translation, reading, thinking, and writing, as culturally competent, global citizens.

Prerequisite: Completion of SPAN 335, enrollment in the graduate program, or permission of instructor. If the course is taken for undergraduate credit, it cannot be used for graduate credit.

#### **SPAN 402 - English-Spanish Business Translation (3)**

This is an advanced course that focuses on acquiring and developing translation skills and specialized knowledge and competencies related to the business worlds of the US, Spain, and Latin America.

Prerequisite: SPAN 225 or permission by the instructor.

#### **SPAN 404 - English-Spanish Medical Translation (3)**

This course introduces students to the linguistic knowledge and translation skills necessary to work with texts related to the medical domain.

Prerequisite: SPAN 225 or permission by the instructor.

#### **SPAN 441 - Cross-Cultural Communication (3)**

Open only to non-native speakers of Spanish. Development of fluency in oral expression. Speech analysis and phonetic theory to improve pronunciation and intonation. Introduction to problems of translation, enhancement of oral competence, and development of cross-cultural understanding.

Prerequisite: Permission of instructor.

#### **SPAN 451 - Introduction to Spanish Linguistics (3)**

Taught in Spanish. Studying grammatical construct and covering many areas of linguistics; phonology, morphology, syntax, semantics, and pragmatics. A course designed for students interested in teaching Spanish in the future and to those who enjoy examining the varieties of Spanish spoken by populations around the world.

Prerequisite: Permission of instructor.

#### **SPAN 515 - Colonial Spanish-American Literature (3)**

Taught in Spanish. Study of major authors and literary works of the Colonial period in their cultural context.

Prerequisite: Permission of instructor.

#### **SPAN 520 - Modernismo (3)**

Taught in Spanish. Study of the most significant authors of the Modernista period.

Prerequisite: Permission of instructor.

#### **SPAN 525 - Contemporary Spanish-American Poetry (3)**

Taught in Spanish. Study of major Spanish-American poets and poetic themes from the period following Modernismo to the present.

Prerequisite: Permission of instructor.

#### **SPAN 526 - The Spanish-American Short Story (3)**

Survey of representative authors and selected works with emphasis on the twentieth century. Course to be taught in Spanish.

Prerequisite: Permission of instructor.

#### **SPAN 530 - Contemporary Spanish Novel (3)**

Taught in Spanish. Study of significant novels from the 1940s to the present.

Prerequisite: Permission of instructor.

#### **SPAN 534 - Women Writers of the Spanish-Speaking World (3)**

Taught in Spanish. Discussion of representative works will center around cultural and gender issues.

Prerequisite: Permission of instructor.

#### **SPAN 535 - Contemporary Spanish-American Novel (3)**

Taught in Spanish. Study of representative Spanish-American novels from the 1950s to the present.

Prerequisite: Permission of instructor.

#### **SPAN 545 - The Spanish-American Essay (3)**

Taught in Spanish. Analysis of major works by authors such as Sarmiento, Marti, Rodo, Reyes, Paz and others.

Prerequisite: Permission of instructor.

#### **SPAN 551 - Drama of the Golden Age (3)**

Taught in Spanish. In-depth study of representative plays by great dramatists of the Golden Age, including Lope de Vega, Tirso de Molina, and Calderon.

Prerequisite: Permission of instructor.

#### **SPAN 553 - 19th-Century Spanish Literature (3)**

Taught in Spanish. Study of Spanish romanticism and realism with a consideration of their historical background.

Prerequisite: Permission of instructor.

**SPAN 560 - Structure of Spanish Language (3)**

Taught in Spanish. Study of syntactical and morphological aspects of the Spanish language.

Prerequisite: Permission of instructor.

**SPAN 561 - Topics in Hispanic Literature (3)**

Detailed study of a literary figure, movement, or theme. Subject will vary from semester to semester.

Prerequisite: Permission of instructor.

**SPAN 571 - Generation of '98 (3)**

Detailed study of some major works of authors such as Unamundo, Baroja, Valle Inclan, and Antonio Machado of the Generation of '98 in the context of historical, ideological, and aesthetic trends of their time.

Prerequisite: Permission of instructor.

**SPAN 572 - 20th-Century Spanish Literature (3)**

Taught in Spanish. Representative authors and literary movements of the period following the Generation of '98.

Prerequisite: Permission of instructor.

**SPAN 576 - Cervantes (3)**

Taught in Spanish. Works of Cervantes with particular emphasis on Don Quixote.

Prerequisite: Permission of instructor.

**SPAN 588 - Topics in the Contemporary Spanish-Speaking World (3)**

Taught in Spanish. Contemporary society in the Spanish-speaking world, its institutions, traditions, and values.

Prerequisite: Permission of instructor.

**SPAN 599 - Thesis (3)**

Preparation of thesis under the supervision of thesis advisor.

Prerequisite: Completion of 18 credits of approved graduate study program, approval of advisor, and a 3.00 overall GPA.

**SPED - Special Education****SPED 215 - Diversity, Equity, and Inclusion through (dis)ability Perspectives (3)**

This course examines the historical, legal, social, and cultural experience of (dis)abilities in the United States and other countries. Study of the foundation of (dis)ability-related policies and practices in education,

health care, and community. Investigation of first-person narratives, media, film, art, and literature in relation to the experience of individuals with (dis)abilities. Course topics include national and international (dis)ability perspectives to explore diversity, equity, justice, and inclusion in our communities and around the world. By broadening perspectives based on national and international issues and solutions, the course challenges assumptions toward (dis)ability and explores ways to advance inclusive community practices.

Prerequisite: None

Corequisite: None

Cross-Listed as: None

**SPED 301 - Assessment, Instruction & Curriculum Adaptations for Early Childhood (3)**

Development of Individualized Education Programs, adaptation of curricula, and utilization of assessment and teaching strategies in community and integrated school settings to promote the education and independence of young children with atypical development and/or disabilities.

Prerequisite: Declared major in Early Childhood Studies and Infant/Toddler Mental Health program and EDEC 101

**SPED 315 - Introduction to Educating Learners with Exceptionalities (3)**

Overview of growth and development of students with disabilities, including those identified as gifted and talented, and methods for assessing, planning for and working effectively with these students. Meets State of Connecticut requirement for teacher certification (10 hours of off-campus field experience required). In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Teacher Education.

**SPED 321 - Establishing Learning Environments for Young Children (3)**

Emphasis on establishing learning environments and universal design to support and promote the development and independence of infants and toddlers with atypical

development and/or diagnosed disabilities in a variety of home, community, and integrated school settings.

Prerequisite: Declared major in Early Childhood Studies and Infant/Toddler Mental Health program and EDEC 101 or EDEC 103.

### **SPED 412 - Teaching Students with Special Needs How to Access K-12 General Education Content (3)**

In this course you will learn a framework for understanding the various learning challenges of students with disabilities and how to implement individualized intensive, evidence-based instruction for struggling learners and students with identified disabilities in K – 12 classrooms. CT law requires fingerprinting and a criminal background check for the field experiences in this class.

Prerequisite: Admission to the Professional Program in Special Education, LLA 315 & LLA 316, SPED 415 & SPED 416.

Corequisite: LLA 412

### **SPED 414 - Cognitive Behavior Management and Social Skill Strategies (3)**

Examination of methodologies for evaluation, management of student behavior, program planning, cognitive restructuring, and functional behavior analysis utilized in special education settings.

Prerequisite: SPED 315 and admission to the professional program in Special Education.

Cross-Listed as: No credit given for those with credit in SPED 514.

### **SPED 415 - Assessment in Special Education (3)**

Review of the methods and materials used in the assessing and evaluating the performance of students who may be eligible for special education. Topics include psychometric theory, selecting/administrating tests, scoring, interpreting, and communicating test results/findings; 10 hours of off-campus field experience required. CT law requires fingerprinting and a background check for the field experiences in this class. Fingerprinting must be completed prior to the beginning of class.

Prerequisite: Prerequisite: Admission to the Professional Program in Special Education and SPED 315

Corequisite: SPED 416 and SPED 421

### **SPED 416 - Instructional Programming for Students with Exceptionalities (3)**

Designing the individualized education program (IEP) and subsequent lesson plans in academic and non-academic areas to meet the needs of exceptional students. Areas to be addressed include IEP development, developing appropriate accommodations and modifications for students with disabilities, Universal Design for Learning, Understanding by Design, instructional design concepts and skills, and current best practices in instructional planning.

Prerequisite: Prerequisite: Admission to the Professional Program in Special Education and SPED 315.

Corequisite: SPED 415 and SPED 421

### **SPED 417 - Special Education Methods in Teaching Reading (K-12) (3)**

Methods in planning and implementing evidence-based reading instruction in K-12 settings for students with special needs (10 hours of off-campus field experience has been adapted due to COVID-19). CT law requires fingerprinting and a criminal background check for the field experiences in this class. Fingerprinting must be completed prior to the beginning of class.

Prerequisite: Admission to the Professional Program in Special Education, LLA 315 & LLA 316, SPED 415 & SPED 416.

### **SPED 419 - Special Education Methods in Content Area Instruction (K-12) (3)**

Methods in planning and implementing evidence-based content area instruction in K-12 settings for students with special needs (10 hours of off-campus field experience required). In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Special Education, LLA 315 & 316, SPED 415 & 416.

### **SPED 421 - Special Education Practicum #1 – Elementary (3)**

Practicum in elementary special education classroom. CT law requires fingerprinting and a criminal background check for the field experiences in this class.

Prerequisite: Admission to the Professional Program in Special Education

Corequisite: SPED 415 and SPED 416

**SPED 422 - Special Education Practicum #2 – Secondary (3)**

Practicum in secondary special education classrooms with a focus on science, technology, engineering, and math (STEM). CT law requires fingerprinting and a criminal background check for the field experiences in this class.

Prerequisite: Admission to the Professional Program in Special Education

Corequisite: Taken concurrently with SPED 414, SPED 419, and SPED 440.

**SPED 440 - Classroom Assessment (3)**

This course provides an examination of the uses of currently employed assessment practices, materials, and strategies for assessing and evaluating educational progress. The focus is on methods, materials, and strategies in the development, organization, and delivery of assessment in the K-12 school system. Attention is given to assessment before, during, and after instruction with a special emphasis on the development and interpretation of data to drive decision making.

Prerequisite: SPED 315

**SPED 443 - Special Education Practicum #3 – Secondary (3)**

Practicum in secondary special education classrooms. CT law requires fingerprinting and a criminal background check for the field experiences in this class.

Prerequisite: Admission to the Professional Program in Special Education

Corequisite: SPED 543

**SPED 501 - Education of the Exceptional Learner (3)**

Examines growth and development of students with disabilities, including those identified as gifted and talented, and methods for assessing, planning for and working effectively with these students. No credit given to students with credit for SPED 315.

Prerequisite: Undergraduate degree or permission of department chair

**SPED 502 - Principles of Learning for Special Education (3)**

Examination of teaching and learning principles. Emphasizes the use of theories, research findings, and

practices applicable to K-12 students with exceptionalities; learning communities; and learners' developmental levels.

Prerequisite: Admission to Graduate School.

**SPED 503 - Evidence-Based Practices for Diverse Learners (3)**

Examines academic, behavioral, and emotional characteristics of diverse learners and identifies evidence-based practices to support their needs. 15 hours of off-campus field experience required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: SPED 315 or SPED 501, AND Admission to Official Certificate Program in Transition Specialist, admission to an MS program in Special Education, or permission of chair

**SPED 504 - Universal Design, Inclusion and Accessibility in Learning, Teaching, and Beyond (3)**

Explore the concept and engage in the application of *universal design (UD)* as a means of creating accessible and inclusive environments in education, business, and other community-based settings. Students from a variety of program majors will define terms, dispel myths, discover new lenses on universal design, and develop authentic projects connecting UD to particular areas of interest.

Prerequisite: Admission to a graduate program or permission of the department chair

**SPED 506 - Foundations of Language for the Exceptional Child (3)**

Review of the basis of language competence in the exceptional child, including phonology, morphology, semantics, syntax, and other component factors. This course is for teachers certified in education.

Prerequisite: Admission to any M.S. education program.

**SPED 510 - Inclusive Education (3)**

Identification of the issues, legislation, and litigation affecting inclusion as a method of integrating special needs children in regular education. Methods and assessment strategies of learning which facilitate inclusion



along with alternate curriculum and classroom management strategies will be presented.

Prerequisite: Certification in any area of education or permission of instructor.

### **SPED 513 - Developmental Disabilities (2)**

Examination of developmental disabilities including students with intellectual disabilities, pervasive developmental disorder, cerebral palsy, and other physical disabilities, with emphasis on current issues, classroom practices, and contemporary research (10 hours of off-campus field experience required). In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: SPED 315 or SPED 501, admission to the School of Graduate Studies and admission to the Special Education program; or permission of the chair.

### **SPED 514 - Behavioral Assessment and Interventions (3)**

Focus on the effective use of behavioral assessment and intervention in inclusive and special education classrooms. Students will learn to identify, analyze, implement, and evaluate interventions through the framework of positive behavior supports (PBS). Emphasis will be placed on developing evidence-based behavior intervention plans (BIPs) for students who exhibit challenging behaviors in schools by working through the Functional Behavior Assessment (FBA) process. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: SPED 315 or SPED 501; admission to the graduate program in Special Education M.S.: For Initial Certification or Teachers Seeking Cross Endorsement in Special Education; admission to the Special Education M.S.: Specialization in Inclusion and Transition, or permission of the department chair.

Cross-Listed as: No credit given for those with credit in SPED 414.

### **SPED 515 - Assessment in Special Education (3)**

Review of the methods and materials used in the assessing and evaluating the performance of students who may be eligible for special education. Topics include psychometric theory, selecting/administrating tests, scoring, interpreting and communicating test results/findings; 10 hours of off-campus field experience required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Special Education, SPED 503, (may be taken concurrently with SPED 514 or SPED 516), or Admission to the Special Education MS: Inclusion and Transition

Cross-Listed as: No credit given for those with credit in SPED 415.

### **SPED 515 - Assessment in Special Education (3)**

Review of the methods and materials used in the assessing and evaluating the performance of students who may be eligible for special education. Topics include psychometric theory, selecting/administrating tests, scoring, interpreting and communicating test results/findings; 10 hours of off-campus field experience required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Special Education, SPED 503, (may be taken concurrently with SPED 514 or SPED 516)

Cross-Listed as: No credit given for those with credit in SPED 415.

### **SPED 516 - Instructional Programming for Students with Exceptionalities (3)**

Designing the individualized education program (IEP) and subsequent lesson plans in academic and non-academic areas to meet the needs of exceptional students. 10 hours of off-campus field experience required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to

participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Special Education MS: Inclusion and Transition or Admission to the Professional Program in Special Education , SPED 502, SPED 503, SPED 515 (May be taken concurrently with SPED 515)

**SPED 517 - Special Education Methods in Teaching Reading (K-12) (3)**

Methods in planning and implementing evidence-based reading instruction in K-12 settings for students with special needs (10 hours of off-campus field experience required). In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Special Education, LLA 509 or equivalent, SPED 515, SPED 516; or Admission to the Special Education MS: Inclusion and Transition

Cross-Listed as: No credit given for those with credit in SPED 417.

**SPED 518 - Special Education Methods in Teaching Writing (K-12) (3)**

Methods in planning and implementing evidence-based writing instruction in K-12 settings for students with special needs (10 hours of off-campus field experience required). In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Special Education, or Admission to the Special Education MS: Specialization Inclusion and Transition, AND SPED 515, SPED 516,

**SPED 519 - Special Education Methods in Content Area Instruction (K-12) (3)**

Methods in planning and implementing evidence-based content area instruction in K-12 settings for students with

special needs (10 hours of off-campus field experience required). In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the Professional Program in Special Education, LLA 509 or equivalent, SPED 515, SPED 516, SPED 517, and SPED 518 (may be taken concurrently with SPED 517 and SPED 518); or Admission to the Special Education MS: Inclusion and Transition

Cross-Listed as: No credit given for those with credit in SPED 419.

**SPED 520 - Student Teaching Seminar (1)**

Examines current issues in special education which affect teaching and learning including multiculturalism and diversity, leadership, collaboration, professional ethics, and codes of conduct.

Prerequisite: None

Corequisite: SPED 521.

**SPED 521 - Student Teaching in Special Education - Elementary (3)**

Eight week supervised student teaching in elementary special education classrooms, agencies, or institutions. Attendance at on-campus seminars is required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: SPED 517 and permission of the Director of Field Experiences.

**SPED 522 - Student Teaching in Special Education - Secondary (3)**

Eight week Supervised student teaching in secondary special education classrooms, agencies, or institutions. Attendance at on-campus seminars is required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and

are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: SPED 518 and permission of the Director of Field Experiences.

### **SPED 523 - Practicum in Special Education - Elementary (2)**

Supervised practicum in elementary special education classrooms, agencies, or institutions. For certified general education teachers with 2 or more years of full-time teaching experience only. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: SPED 517, SPED 518, SPED 519; Co-requisites SPED 524, SPED 520

### **SPED 524 - Practicum in Special Education - Secondary (2)**

Supervised practicum in secondary special education classrooms, agencies, or institutions. For certified general education teachers with 2 or more years of full-time teaching experience only. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: SPED 517, SPED 518, SPED 519; Co-requisites: SPED 523, SPED 520

Corequisite: SPED 523, SPED 520

### **SPED 525 - Elementary Internship in Special Education (3)**

Eight week full-time internship in assigned elementary special education classrooms, agencies, or institutions. Supervised by certified teacher. Gradual assumption of full responsibility for classroom. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: SPED 517 and permission of the Office of Student Teaching.

### **SPED 526 - Secondary Internship in Special Education (3)**

Eight week full-time internship in assigned secondary special education classrooms, agencies, or institutions. Supervised by certified teacher. Gradual assumption of full responsibility for classroom. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: SPED 518 and permission of the Office of Student Teaching.

### **SPED 527 - Internship in Inclusion and/or Transition Services (1-3)**

Supervised internship in assigned K-12 special education classroom, rehabilitation agency, or other appropriate community-based settings. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: CNSL 585

### **SPED 528 - Multisensory Structured Language Instruction (3)**

Design and implementation of a multisensory, structured phonetic approach to teaching reading, writing, and spelling for all students, including struggling learners and those with disabilities. This approach to literacy instruction can be incorporated into an already existing literacy program or used as a stand-alone curriculum.

Prerequisite: Admission to a Master's program or permission of Department Chair.

Cross-Listed as: LLA 528

### **SPED 529 - Multisensory Structured Language Instruction Practicum (3)**

Supervised practicum in elementary or secondary classrooms, agencies, or institutions focused on the design and implementation of multisensory structured language instruction. CT law requires fingerprinting and a criminal

background check for the field experiences in this class which must be completed prior to the beginning of class.

Prerequisite: B or better in LLA/SPED 528

Cross-Listed as: LLA 529

### **SPED 532 - Contemporary Issues in Special Education (3)**

Overview of current theory and practices in various aspects of special education, including topics in etiology, identification, classification, assessment, and education.

Prerequisite: Acceptance into any MS in Special Education or permission of the chair

### **SPED 536 - Autism Spectrum Disorder (3)**

Historical and current views regarding the characteristics, etiology, and prognosis of autism spectrum disorder. Current educational and treatment programs will be reviewed. This course is for teachers certified in education.

Prerequisite: Admission to any M.S. education program.

### **SPED 537 - Executive Function, ADHD, and Learning (3)**

Knowledge and understanding of executive functioning and its relationship to behavior and learning. Provides an understanding of Executive Functions (EF) and ADHD and the important role they play in learning and an introduction to evidence-based practices for working with students with EF deficits and ADHD.

Prerequisite: Teaching certification, admission to a Master's program, or permission of Department Chair.

### **SPED 541 - Person-Centered Planning and Transition (3)**

Emphasizes the person-centered planning process from a school to post-school options for students with disabilities. Promotes the use and values of compatibility analyses, self-determination, and natural supports.

Prerequisite: Admission to Official Certificate Program in Transition Specialist, Special Education M.S.: Specialization in Inclusion and Transition, Special Education M.S.: Specialization for Special Educators, or permission of the chair.

### **SPED 542 - Designing Classroom Environments for Creative Learning (3)**

Examines creative practices in assessment, instruction and curriculum development for students with special education needs. Participants share experiences from

their own content areas and add to the richness of options in working with students in special education.

Prerequisite: Admission to graduate school or permission of department chair.

### **SPED 543 - Collaboration and Special Education Case Management (3)**

This course is designed to provide students with the background, knowledge base, experience, and personal contact to work collaboratively with professionals and parents. Learning consultation and collaboration skills assures that the needs of individuals with disabilities are addressed throughout their school career. Identifies and describes strategies that show the teacher candidate how to form successful partnerships with families, other educators, outside community agencies and other professionals in the community for individuals with disabilities. It also enhances the view of Special Educators as specialists and a resource to colleagues for instruction, inclusion, transition, and collaboration with outside agencies.

Prerequisite: Acceptance to a graduate program or permission of the department chair

### **SPED 566 - Legal and Administrative Issues in Special Education (3)**

Federal and state laws and regulations for special education are studied. Emphasis is placed on the theories and processes in pupil personnel services including writing an individualized education program (IEP) and organizing and participating in planning placement team (PPT) meetings.

Prerequisite: Acceptance to any M.S. program in Special Education; Acceptance into the Official Certificate Program in Transition Specialist; or permission of department chair.

### **SPED 581 - Assistive Technology in Special Education (3)**

Considering, designing, and implementing a range of assistive technologies for people with individualized education or rehabilitation programs; individualizing instruction through the use of adaptive devices, hardware, and software; applying instructional technology applications to the roles and responsibilities of special educators.

Prerequisite: Admission to Special Education M.S.: Specialization for Special Educators, Special Education M.S.: Specialization in Inclusion and Transition, or permission of the chair.

**SPED 582 - Supervision of Special Education Teaching I (3)**

Supervised teaching experience for graduate students who possess a Durational Shortage Area Permit (DSAP) from the State of Connecticut signed by the SEPS Assistant Dean. To meet teacher certification program requirements, student must enroll in two supervision courses and earn at least a C in each course. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks. Students are required to follow the background check policies of the district in which they are located and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Permission of Special Education Department Chair and Assistant Dean of Education and Professional Studies

**SPED 583 - Supervision of Special Education Teaching II (3)**

Continuation of SPED 582. Supervised teaching experience for graduate students who possess a Durational Shortage Area Permit (DSAP) from the State of Connecticut signed by the SEPS Assistant Dean. To meet teacher certification program requirements, student must enroll in two supervision courses and earn at least a C in each course. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks. Students are required to follow the background check policies of the district in which they are located and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Permission of Special Education Department Chair and Assistant Dean of Education and Professional Studies

Corequisite: SPED 520

**SPED 591 - Independent Study in Special Education (1 to 3)**

Directed independent studies in special education. May be repeated under different topics for no more than twice.

Prerequisite: None

**SPED 592 - Effective Leadership for Equitable and Inclusive Schools (3)**

Knowledge and skills for general and special education leaders focused on the design of school-level supports for students with exceptionalities (including gifted and talented learners), including referral, eligibility,

assessment, IEP Development, student climate and behavioral support, related services, assistive technology, coordinating instruction with families, and school-level organization of special education services and applicable special education regulations, procedures, and processes. Course requirements include field-based application of key concepts and skills.

Prerequisite: Admission to the Sixth-Year Certificate Program in Educational Leadership

**SPED 595 - Topics in Special Education (1-3)**

Seminar addressing a specific area of special education, with emphasis on current trends in the field. May be repeated with different topics for a maximum of 6 credits. This course is for teachers certified in education.

Prerequisite: Admission to any M.S. education program.

**SPED 596 - Capstone Intervention Project I (3)**

Development of a capstone project using principles of intervention design. Students will identify a K-12 instructional context and develop an intensive instructional intervention plan in partial completion of the Master's Degree Capstone (Plan E) project. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: Admission to the M.S. in Special Education, SPED 598, GPA of 3.00 or better, 18 credits towards Planned Program completed

**SPED 597 - Culminating Project I (3)**

Development of a culminating project using principles of intervention design in partial completion of the Master's Degree Capstone (Plan E). Use research quality indicators to evaluate research methods, approaches, and publications in the special education literature base. Examination of strategies used to document learning and growth in individuals requiring intensive instructional interventions project. CT Law requires fingerprinting and a criminal background check for the field experiences in this class. Fingerprinting must be completed prior to the beginning of class.

Prerequisite: Admission to M.S. in special education; GPA of 3.00 or better, 18 credits towards Planned Program completed.

**SPED 598 - Culminating Project II (3)**

Continuation of the project started in SPED 597. Implementation, documentation, and presentation of a culminating, capstone project using principles of intervention design. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies.

Prerequisite: SPED 597

**SPED 605 - Special Education Leadership in Teaching and Learning I (3)**

Study of special education leadership in the teaching and learning process. Focus on responsive curriculum, instruction, and assessment of learning across intervention tiers, supervision of instruction, and creative problem solving to support implementation and student progress. Course requirements include field-based application of key concepts and skills.

Prerequisite: EDL 590 and Admission to the Sixth-Year Certificate Program in Educational Leadership

**SPED 620 - Collaborative Leadership for Special Education Leaders (3)**

Focus on cultural competence, mobilizing community resources for the benefits of families and students, advocacy for children with disabilities and their families, stewardship for the school district, special education program, and the profession, and skills for constituency building. Course requirements include field-based application of key concepts and skills.

Prerequisite: EDL 590 and Admission to the Sixth-Year Certificate Program in Educational Leadership

**SPED 630 - Special Education Law, Ethics, and Equity (3)**

Candidates apply legal, ethical, and equity-based knowledge to special education scenarios presented through case studies. Candidates are expected to demonstrate sound decision-making skills for effective special education management and leadership for learning. Course requirements include field-based application of key concepts and skills.

Prerequisite: EDL 590 and Admission to the Sixth-Year Certificate Program in Educational Leadership

**SSCI - Social Sciences****SSCI 415 - Social Studies Methods at the Secondary Level (3)**

Concepts, methods, and materials for teaching social studies in the secondary school. Emphasis on the use of documents, learning styles, process skills, and the interdisciplinary nature of social studies. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies. Must be taken concurrently with SSCI 416.

Prerequisite: Admission into the Professional Program of teacher education for History/Social Studies, EDTE 316, and either SPED 315 or SPED 501.

Corequisite: SSCI 416

**SSCI 416 - Fieldwork in Secondary Social Studies Education (1)**

Thirty hours of supervised field experience in a social studies secondary setting assigned by the instructor. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies. Must be taken concurrently with SSCI 415.

**SSCI 421 - Social Studies Student Teaching Seminar (1)**

Seminar during student teaching semester enabling students to share resources and ideas for upcoming lessons, difficulties, and successes, and discover how various schools and teachers approach the same issues. Must be taken concurrently with EDSC 435.

Prerequisite: None

**SSCI 501 - Advanced US History for Teachers (3)**

Advanced survey of U.S. History from colonial era to present designed for future teachers. No credit given for students with credit in HIST 401.

Cross-Listed as: HIST 401

**SSCI 510 - Advanced World History for Teachers (3)**

Advanced survey of modern world history, with a regional geography focus, designed for future teachers. No credit given for those with credit in HIST 410.

Cross-Listed as: HIST 410

**SSCI 515 - Advanced Social Studies Methods at the Secondary Level (3)**

Advanced concepts, methods, and materials for teaching social studies in the secondary school. Emphasis on the use of documents, learning styles, process skills, and the interdisciplinary nature of social studies. No credit given for those with credit in SSCI 415.

Prerequisite: None

Cross-Listed as: SSCI 415

**STAT - Statistics****STAT 104 - Elementary Statistics (3)**

Intuitive treatment of some fundamental concepts involved in collecting, presenting, and analyzing data. Topics include frequency distributions, graphical presentations, measures of relative position, measures of variability, probability, probability distributions (binomial and normal), sampling theory, regression, and correlation. No credit given to students with credit for STAT 108, STAT 200, STAT 215, STAT 314 or STAT 315. CSUS Common Course.

Prerequisite: MATH 101 (C- or higher) or MATH 102 (C- or higher) or MATH 103 (C- or higher) or placement exam.

**STAT 200 - Business Statistics (3)**

Application of statistical methods used for a description of analysis of business problems. The development of analytic skills is enhanced by use of one of the widely available statistical packages and a graphing calculator. Topics include frequency distributions, graphical presentations, measures of relative position, measures of central tendency and variability, probability distributions including binomial and normal, confidence intervals, and hypothesis testing. No credit given to students with credit for STAT 104, STAT 108, STAT 215, STAT 314, or STAT 315.

Prerequisite: MATH 101 (C- or higher) or MATH 102 (C- or higher) or MATH 103 (C- or higher) or placement exam.

**STAT 201 - Business Statistics II (3)**

Application of statistical methods used for a description and analysis of business problems. The development of analytical skills is enhanced by use of one of the widely

available statistical packages. Topics include continuation of hypothesis testing, multiple regression and correlation analysis, residual analysis, variable selection techniques, analysis of variance and design of experiments, goodness of fit, and tests of independence. No credit given to students with credit for STAT 216, STAT 416 or STAT 453.

Prerequisite: STAT 200 or equivalent (C- or higher).

**STAT 208 - Introduction to Biostatistics (3)**

Introductory treatment of research statistics used in the life sciences. Quantitative descriptive statistics, including frequency distributions, measures of central tendency and variability, correlation, and regression. A treatment of probability distributions including binomial and normal. Introduction to the idea of hypothesis testing. No credit given to students with credit for STAT 104, STAT 108, STAT 200, STAT 215, or STAT 314.

Prerequisite: MATH 101 (C- or higher) or MATH 102 (C- or higher) or MATH 103 (C- or higher) or placement exam.

**STAT 215 - Statistics for Behavioral Sciences I (3)**

Introductory treatment of research statistics used in behavioral sciences. Quantitative descriptive statistics, including frequency distributions, measures of central tendency and variability, correlation, and regression. A treatment of probability distributions including binomial and normal. Introduction to the idea of hypothesis testing. No credit given to students with credit for STAT 104, STAT 108, STAT 200, STAT 314 or STAT 315.

Prerequisite: MATH 101 (C- or higher) or MATH 102 (C- or higher) or MATH 103 (C- or higher) or placement exam.

**STAT 216 - Statistics for Behavioral Sciences II (3)**

Continuation of STAT 215. Survey of statistical tests and methods of research used in behavioral sciences, including parametric and nonparametric methods. No credit given to students with credit for STAT 201, STAT 416 or STAT 453.

Prerequisite: STAT 215 or permission of instructor.

**STAT 314 - Introductory Statistics for Secondary Teachers (3)**

Techniques in probability and statistics necessary for secondary school teaching. Topics include sampling, probability, probability distributions, simulation, statistical inference, and the design and execution of a statistical study. Computers and graphing calculators will be used. No credit given to those with credit for STAT 104, STAT 200 or STAT 215. Graphing calculator required.

Prerequisite: MATH 218 and MATH 221.

**STAT 315 - Mathematical Statistics I (3)**

Theory and applications in statistical analysis. Combinations, permutations, probability, distributions of discrete and continuous random variables, expectation, and common distributions (including normal).

Prerequisite: MATH 221; and MATH 218 or permission of department chair.

**STAT 401 - Biostatistics (4)**

Introduction to statistical models applied in the health sciences, with a focus on the estimation and interpretation of odds ratios, risk ratios and hazard ratios. Topics may include contingency tables, binary and ordinal logistic regression, Poisson regression, log-binomial regression, generalized linear models, survival analysis, cox proportional hazards and failure time models; use of computer software such as R.

Prerequisite: STAT 201 or STAT 216, or equivalent, or permission of department chair.

**STAT 402 - Introduction to Categorical Data Analysis (4)**

Introduction to analysis and interpretation of categorical data using analysis of variance or regression analogs. Topics include contingency tables, generalized linear models, logistic regression, log-linear models, and models for matching pairs. Extensive use of open-source software such as R.

Prerequisite: STAT 201 or STAT 216, or equivalent, or permission of department chair.

**STAT 403 - Analysis of Correlated Data (4)**

Introduction to statistical methods for analysis of correlated or clustered data arising in many settings in health and biomedical research. Topics include basic descriptive methods, methods for cluster analysis, methods for repeated measures and longitudinal data analysis, likelihood-based methods and quasi-likelihood methods for estimating population parameters, and regression methods for both continuous and discrete outcomes. The course emphasizes practical application and makes extensive use of open-source software such as R.

Prerequisite: STAT 402 or permission of department chair.

**STAT 416 - Mathematical Statistics II (3)**

Continuation of theory and applications of statistical inference. Elements of sampling, point and interval

estimation of population parameters, tests of hypotheses, and the study of multivariate distributions.

Prerequisite: STAT 315.

**STAT 425 - Loss and Frequency Distributions and Credibility Theory (3)**

Topics chosen from credibility theory, loss distributions, simulation, and time series.

Prerequisite: STAT 416 (may be taken concurrently).

**STAT 453 - Applied Statistical Inference (3)**

Statistical techniques used to make inferences in experiments in social, physical, and biological sciences, and in education and psychology. Topics included are populations and samples, tests of significance concerning means, variances and proportions, and analysis of variance. No credit given to students with credit for STAT 201 or STAT 216.

Prerequisite: Graduate standing with at least one course in statistics or STAT 315 or permission of instructor.

**STAT 455 - Experimental Design (3)**

Introduction to experimental designs in statistics. Topics include completely randomized blocks, Latin square, and factorial experiments.

Prerequisite: STAT 201 or STAT 216 or STAT 416 or permission of instructor.

**STAT 456 - Statistical Computation (3)**

Introduction to statistical software. Topics may include creation and manipulation of data sets; and implementation of the following statistical analyses: basic descriptive statistics, hypotheses tests, multiple regression, generalized linear models, discriminant analysis, clustering and analysis, factor analysis, logistic analysis and model evaluation. Course may be taken for graduate credit.

Prerequisite: STAT 201 or STAT 216, or equivalent, or permission of instructor.

Notes:

**STAT 465 - Nonparametric Statistics (3)**

General survey of nonparametric or distribution-free test procedures and estimation techniques. Topics include one-sample, paired-sample, two-sample, and k-sample problems as well as regression, correlation, and contingency tables. Comparisons with the standard



parametric procedures will be made, and efficiency and applicability discussed.

Prerequisite: STAT 201 or STAT 216 or STAT 416 or permission of instructor.

### **STAT 467 - Applied Linear Regression Models (3)**

Introduction to linear regression models. The course provides an introduction to the most commonly used models in statistical data analysis. Topics may include: simple linear regression, multiple regression, least squares estimators, inference, hypothesis testing, analysis of variance, and statistical model-building strategies. Regression diagnostics, analysis of complex data sets and scientific writing skills are emphasized. Methods are illustrated with data sets drawn from the health, biological, and social sciences. Computations require the use of a statistical software package such as R.

Prerequisite: STAT 201 or STAT 216 or STAT 453 or permission of department chair.

### **STAT 469 - Monte Carlo Methods (4)**

Introduction to computational techniques used by statistical researchers and practitioners beyond standard statistical software packages. We will focus on Monte Carlo simulation and computational methods as a complement to the theoretical training received throughout mathematical statistics courses. Extensive use of open-source software such as R.

Prerequisite: STAT 456 or permission of department chair.

### **STAT 476 - Topics in Statistics (3)**

Topics depending on interest and qualifications of the students will be chosen from sampling theory, decision theory, probability theory, Bayesian statistics, hypothesis testing, time series or advanced topics in other areas. May be repeated under different topics to a maximum of 6 credits.

Prerequisite: Permission of instructor.

### **STAT 525 - Web Mining (3)**

Methods and techniques for mining information from web structure, content, and usage. Topics may include web log cleaning and filtering, de-spidering, user identification, session identification, path completion exploratory data analysis for web mining, and modeling for web mining, including clustering, association, and classification.

Prerequisite: STAT 521 or permission of department chair.

### **STAT 526 - Data Mining for Genomics and Proteomics (4)**

Topics include selection of data mining methods appropriate for the goals of a biomedical study (supervised versus unsupervised, univariate versus multivariate), analysis of gene expression microarray data, biomarker discovery, feature selection, building and validation of classification models for medical diagnosis, prognosis, drug discovery, random forests, and ensemble classifiers.

Prerequisite: STAT 521 or permission of the instructor.

### **STAT 527 - Text Mining (4)**

Intensive investigation of text mining methodologies, including pattern matching with regular expressions, reformatting data, contingency tables, part-of-speech tagging, top-down parsing, probability and text sampling, the bag-of-words model and the effect of sample size. Extensive use of Perl and Perl modules to analyze text documents.

Prerequisite: STAT 521 or permission of the instructor.

### **STAT 529 - Current Issues in Data Mining (3)**

Topics depending on interest and qualifications of the students will be chosen from recent developments in data mining, including statistical pattern recognition, statistical natural language processing, bioinformatics, text mining, and analytical CRM. Use of statistical and data mining software. May be repeated under different topics to a maximum of 9 credits. Migration and Attrition. Extensive use of SPSS' Clementine data mining software is required.

Prerequisite: Admission to the M.S. Data Mining program or permission of department chair.

### **STAT 534 - Applied Categorical Data Analysis (3)**

Introduction to analysis and interpretation of categorical data using analysis of variance or regression analogs. Topics may include contingency tables, generalized linear models, logistic regression, log-linear models, models for matching pairs, and modeling correlated and clustered responses; use of computer software such as SAS and R.

Prerequisite: STAT 201 or STAT 216, or equivalent, or permission of department chair.

### **STAT 535 - Graduate Loss and Frequency Distributions and Credibility Theory (3)**

Topics chosen from credibility theory, loss distributions, simulation, and time series. This is a link course with STAT 425. Not open to students who have passed STAT 425.

Prerequisite: STAT 416 (C or higher), or equivalent, or permission of department chair.

### **STAT 551 - Applied Stochastic Processes (3)**

An introduction to stochastic processes. Topics include Markov, Poisson, birth and death, renewal, and stationary processes. Statistical inferences of Markov processes are discussed.

Prerequisite: STAT 315 and MATH 228 or permission of instructor.

### **STAT 567 - Linear Models and Time Series (3)**

Introduction to the methods of least squares. Topics include general linear models, least squares estimators, inference, hypothesis testing, and forecasting with ARIMA models.

Prerequisite: STAT 416.

### **STAT 570 - Applied Multivariate Analysis (3)**

Introduction to analysis of multivariate data with examples from economics, education, psychology, and health care. Topics include multivariate normal distribution, Hotelling's T<sup>2</sup>, multivariate regression, analysis of variance, discriminant analysis, factor analysis and cluster analysis. Computer packages assist in the design and interpretation of multivariate data.

Prerequisite: MATH 228, STAT 416 or, with permission of instructor, STAT 201, STAT 216, or STAT 453.

### **STAT 575 - Mathematical Statistics III (3)**

Continuation of theory and applications of statistical inference. Advanced topics in the estimation of population parameters and the testing of hypotheses. Introduction to Bayesian methods, regression, correlation and the analysis of variance.

Prerequisite: STAT 416 or equivalent.

### **STAT 576 - Advanced Topics in Statistics (3)**

Seminar in probability theory, sampling theory, decision theory, Bayesian statistics, hypothesis testing, or other advanced area. Topic depending on needs and qualifications of students. May be repeated under different topics to a maximum of 6 credits.

Prerequisite: Permission of instructor.

## **STEM-Science-Technology-Engineering-Mathematics**

### **STEM 501 - Applying Mathematical Concepts (3)**

Integrating and assessing K-12 students' attainment of grade-appropriate mathematics content and abilities. Focus on Connecticut Common Core State Standards including the Standards for Mathematical Practice.

Prerequisite: Admission to the M.S. in STEM Education program.

### **STEM 502 - Modeling with Mathematics in STEM Education (3)**

Designed for K-12 in-service or pre-service teachers in a STEM field. Students will deepen their understanding of core mathematics concepts through mathematical modeling and build connections to other STEM fields. Students will engage in the mathematical modeling cycle in a variety of STEM contexts and learn how to implement appropriate modeling tasks for their grade-level specializations. The course topics span the K-12 mathematics curriculum including geometry, patterning and functions, statistics and discrete mathematics. The relationship between the mathematical modeling cycle and Next Generation Science Standards will be explored.

Prerequisite: Enrollment in a graduate program at CCSU or permission of instructor.

Cross-Listed as: This course is cross-listed with MATH 502. No credit is given if this other course has been taken.

### **STEM 506 - Inquiry-Based Learning (3)**

Study of techniques for integrating STEM content in an engaged learning curriculum. Focus on the Next Generation Science Standards, Common Core, and Standards for Technology and Engineering Literacy.

Prerequisite: Admission to the M.S. in STEM program or permission of instructor..

### **STEM 517 - Robotics Applications in STEM Education (3)**

Exploration of robotics design involving interdisciplinary aspects of science, technology, engineering and mathematics (STEM).

Prerequisite: Admission to the M.S. in STEM Education program.

### **STEM 520 - Inquiry in the Physical Sciences: Energy and the Environment (3)**

There is an intricate and dynamic relationship between energy and the environment in physical sciences. K-12

educators to develop their conceptual knowledge and understanding of energy, such as electricity and power generation through inquiry, and its impacts of energy usage on natural and human-built systems. K-12 educators also develop an interdisciplinary STEM standards-based curriculum, instruction, and assessments that emphasize the physical sciences to equip their students with the knowledge and skills needed to understand the fundamental principles that govern energy dynamics and its impact on our environment.

Prerequisite: Admission to the M.S. in STEM Education program, or admission to any Master's program.

### **STEM 521 - Engineering Design for STEM Education (3)**

Introduction to the fundamentals of engineering design aligned with STEM topics. Design problems are selected from STEM disciplines. Topics include problem identification, brainstorming, project planning, development and design alternatives.

Prerequisite: Admission to the M.S. in STEM Education program.

### **STEM 530 - Inquiry in the Life Sciences: From Micro to Macro (3)**

Challenges in the life sciences include ethical consideration in gene editing, impact of emerging diseases and personalized medicine. K-12 educators to develop their conceptual knowledge and understandings of these contemporary issues facing humanity. K-12 educators also develop an interdisciplinary STEM standards-based curriculum, instruction, and assessments that emphasizes the life sciences to equip their students with the knowledge and skills needed to understand the challenges and the ethical considerations in the life sciences as our technology advances.

Prerequisite: Admission to the M.S. in STEM Education program, or admission to any Master's program.

### **STEM 540 - STEM Practices in the Life Sciences (3)**

Emphasis on conceptual understanding of life science core concepts and technology, engineering, and mathematics (STEM) practices in the National Framework for K-12 Science Education and Standards for Technological Literacy. Development of curricular and instructional activities, labs, and assessments for use in the classroom.

Prerequisite: Admission to the M.S. in STEM Education program, or admission to any Master's program.

### **STEM 590 - Research I (3)**

Review of current issues and related to STEM education. Students synthesize and summarize a variety of scholarly work to provide a new interpretation of a current issue. This is the first of a two-course capstone sequence.

Prerequisite: Completion of nine credits in the M.S. in STEM Education program with a program GPA of at least 3.0 prior to enrollment in STEM 590.

### **STEM 595 - Research II (3)**

Completion of a student-directed STEM education research project that addresses immediate school-based issues or problems. Quantitative and/or qualitative methods with emphasis on reflective practices. Plan E Capstone.

Prerequisite: STEM 594 and the completion of nine credits in the M.S. in STEM Education program with a program GPA of at least 3.0 prior to enrollment in STEM 595. {{note: we are proposing to renumber STEM 598 to STEM 594, which is why STEM 598 is listed below}}

## **SUST - Sustainability**

### **SUST 100 - Search in Sustainability (3)**

Introduction to processes and value systems in sustainability. Theme and title of course may vary from section to section. Course may be repeated one time with a different topic.

Prerequisite: Permission of Sustainability Program Director.

### **SUST 140 - Introduction to Sustainability (3)**

Introduction to the basic principles, theories, methods, and applications of sustainability.

Prerequisite: None

### **SUST 275 - Sustainable Soils & Vegetation (3)**

An analysis of major soil groups, soil properties, associated vegetation, and a critical review of human activities that impact the natural state of soils and vegetation. An overview of sustainable practices that can address human impacts on soils and vegetation.

Prerequisite: None

Cross-Listed as: GEOG 275

### **SUST 430 - Internship in Sustainability (3)**

Students will work in a professional setting directly related to one or more of the three pillars of sustainability (i.e.,

environmental, social, and economic pillars), under the guidance of a faculty member. Written reports and a supervisor evaluation are required.

Prerequisite: Permission of Sustainability Program Director.

### **SUST 442 - Field Methods in Sustainability (3)**

Design and execution of applied field research methods and research in one or more of the three pillars of sustainability (i.e., environmental, social, and economic pillars), under the guidance of a faculty member. Students will perform individual and/or group field work and research methods and techniques.

Prerequisite: 3 credits in Sustainability or permission of Sustainability Program Director.

### **SUST 459 - Field Studies in Sustainability (3)**

On-site group studies in sustainability studies and systems related to one or more of the three pillars of sustainability (i.e., environmental, social, and economic pillars). This course normally involves travel outside the United States. Only 3 credits may be applied to General Education requirements. May be repeated for a maximum of twelve credits, but only six of these credits may be used towards Sustainability Program requirements.

Prerequisite: Permission of Sustainability Program Director.

### **SUST 469 - Readings in Sustainability (1-3)**

Directed independent studies in one or more of the three pillars of sustainability (i.e., environmental, social, and economic). May be repeated with a different topic for a maximum of 6 credits.

Prerequisite: Permission of Sustainability Program Director.

### **SUST 472 - Topics in Sustainability (3)**

Selected topics in one or more of the three pillars of sustainability (i.e., environmental, social, and economic). Selected topics related to sustainability, including those focusing on environmental, social, and economic systems and processes.

Prerequisite: SUST 140 or permission of Sustainability Program Director.

### **SUST 475 - Sustainable Energy & Climate Change (3)**

Seminar on social, economic, and environmental dynamics of renewable and nonrenewable energy resources and their impacts on global climate change.

Prerequisite: GEOG 272 or GEOG 374

Cross-Listed as: GEOG 475

### **SUST 500 - Social, Political, and Ethical Dimensions of Global Sustainability (3)**

Study of the complex interrelationships between natural, social, and political systems. An interdisciplinary examination of principles, practices, and policymaking that underlie global sustainability including environmental impact on intergenerational equity, public health, social and economic justice, gender equity, education, human rights and democracy.

Prerequisite: Admission to graduate school or permission of instructor.

### **SUST 501 - Contemporary Challenges in Environmental Sustainability (3)**

Review of the principles of sustainability. Interdisciplinary discussion of current global environmental challenges and potential sustainable solutions. Topics to be covered include population growth, climate change, water scarcity and pollution, persistent toxics, fossil fuels, and alternative energy resources.

Prerequisite: Admission to graduate school or permission of instructor.

### **SUST 502 - Science for Sustainability (3)**

Interdisciplinary course provides core science background necessary for understanding current environmental problems in sustainability. Emphasizes interrelationships of natural global systems and focuses on global biogeochemical cycles (water, carbon, nitrogen, sulfur), atmospheric chemistry, terrestrial and aquatic ecosystems, biological diversity, and effects of toxics.

Prerequisite: Admission to the graduate school or permission of instructor.

### **SUST 530 - Graduate Internship in Sustainability (3)**

Students will work in a professional setting directly related to one or more of the three pillars of sustainability (i.e., environmental, social, and economic pillars), under the supervision of a Geography faculty member. Written reports, plan of activity, and a supervisor evaluation are required.

Prerequisite: Acceptance into M.S. Geography, two graduate courses in Geography or Sustainability, and permission of Sustainability Program Director.

**SUST 542 - Advanced Field Methods in Sustainability (3)**

Design and execution of applied field research methods and research in one or more of the three pillars of sustainability (i.e., environmental, social, and economic pillars), under the guidance of a faculty member. May be conducted as individual study or as group field work.

Prerequisite: 3 credits of graduate study in Sustainability or permission of Sustainability Program Director.

**SUST 559 - Advanced Field Studies in Sustainability (3)**

On-site group studies in sustainability studies and systems related to one or more of the three pillars of sustainability (i.e., environmental, social, and economic pillars). This course normally involves travel outside the United States.

Prerequisite: Permission of Sustainability Program Director.

**SUST 569 - Graduate Readings in Sustainability (1-3)**

Directed graduate level independent studies in one or more of the three pillars of sustainability (i.e., environmental, social, and economic). May be repeated under different topics for up to 6 credits.

Prerequisite: Permission of Sustainability Program Director.

**SUST 575 - Advanced Sustainable Energy & Climate Change (3)**

Sustainability focused seminar regarding environmental, social, and economic challenges related to energy resources and climate change. Emphasizes the impacts energy resources development and consumption have on global climate regions and society.

**SW - Social Work****SW 100 - Exploration in Social Work (3)**

For students with a strong desire to help people and facilitate social change to determine if they wish to pursue a career in social work. Students will be introduced to the full range of client and practice settings in the global context. Limited to students with 45 credits or less or permission of the instructor.

Prerequisite: Pre-Social Work Major

**SW 225 - Writing for the Social Work Profession (3)**

Prepares generalist social work students to write for the profession; emphasis is on professional reports, assessments, research, case notes, courtroom, and writing agency-based documents. Restricted to pre-social work

majors and must be taken concurrently with SW 226 or SW 227.

Prerequisite: ENG 110.

Corequisite: SW 226 or SW 227.

**SW 226 - Social Welfare Policy and Services I (3)**

Pre-Social Work majors only. Exploration of the historical background of social work and social welfare institutions in the United States and around the world; knowledge, values, and practice skills that distinguish social work as a discipline. Field work required. Pre-Social Work majors only.

Prerequisite: SW 100, SOC 110 or ANTH 140, SOC 111 and PS 110 or PS 230.

**SW 227 - Human Behavior and the Social Environment I (3)**

Examination of individuals, families, and communities, taking an ecological perspective of the life span; various cultural, economic, and ethnic factors that influence lives; application of social work values and how these relate to developmental tasks in a socio-political environment. Field work required. Pre-Social work majors only.

Prerequisite: BIO 111 or BMS 111, SOC 233.

**SW 360 - Generalist Social Work Practice with Individuals and Families (3)**

Study of delivery of direct service to individuals and families interacting within groups and communities; tasks and skills necessary for generalist social workers to empower clients to modify and change their situations. Field work required.

Prerequisite: Admission to Social Work major, SW 226, and SW 227.

**SW 361 - Generalist Social Work Practice with Small Groups (3)**

Use of the small group as a resource for delivering direct service in generalist social work practice; tasks and skills necessary for the social worker to use group process to empower clients. Field work required.

Prerequisite: Admission to Social Work major, SW 226, and SW 227.

**SW 362 - Generalist Social Work Practice with Organizations and Communities (3)**

Interventions and strategies for assisting families, organizations, and communities in the context of

generalist social work practice; tasks and skills necessary to bring about change in large systems.

Prerequisite: Admissions to Social Work major, SW 360, and SW 361.

Corequisite: Recommend SW 450 and SW 451 or SW 452 and SW 453 be taken concurrently.

### **SW 368 - Human Behavior and the Social Environment II (3)**

Using ecosystems framework provides the perspective to examine macro systems. Special attention given to the impact of human diversity, globalization, discrimination, and oppression in the context of these social systems.

Prerequisite: SW 360 (may be taken concurrently) and admission to the Social Work major.

### **SW 374 - Introduction to Social Work Research (3)**

Research knowledge, values, and skills essential for beginning social work research practice. Application of scientific method in social work research, hypothesis testing, research design, sampling, data collection techniques, and ethical issues germane to social workers including evidence based research practice. Quantitative and qualitative design, the problem-solving model, a research proposal applicable to social work research will be developed.

Prerequisite: Admission to Social Work major, and STAT 215.

### **SW 426 - Social Welfare Policy and Services II (3)**

Uses of policy analysis and planning as intervention strategies in generalist social work practice.

Recommended that SW 450 and 451 or SW 452 and 453 be taken concurrently.

Prerequisite: Admission to Social Work major, SW 360, SW 361, and ECON 200.

### **SW 436 - Health and Social Work (3)**

Examination of health issues such as cancer, AIDS, Alzheimer's, and other disabilities; prevention, treatment, and attitudes; policies and programs in both public and private sectors which impinge upon the lives of clients with health problems.

Prerequisite: Admission to Social Work major, SW 226, and SW 227.

### **SW 437 - Child Welfare I (3)**

Examination of the role of the social worker in meeting the needs and protecting the rights of children.

Prerequisite: Admission to Social Work major, SW 226, and SW 227.

### **SW 438 - Child Welfare II (3)**

Examination of current social issues, such as war, poverty, and divorce, that impact the lives of children.

Prerequisite: Admission to Social Work major, SW 226, and SW 227.

### **SW 440 - Social Work Practice with African Populations (3)**

Critical aspects in understanding the African communities and how they relate to social work. Micro, mezzo, and macro approaches to providing strength-based culturally relevant interventions are highlighted.

Prerequisite: Admission to Social Work major, SW 226, and SW 227.

### **SW 441 - Social Work Practice with Latinos (3)**

Critical aspects in understanding the Latino community and how they relate to social work. Micro, mezzo and macro approaches to providing strength-based culturally relevant interventions are highlighted.

Prerequisite: Admission to Social Work major.

### **SW 442 - The Social Consequences of Immigration (3)**

Explores the development of immigration policies, social service delivery structures, and practices that help social workers provide services to immigrants and refugees.

Prerequisite: Admission to Social Work major.

### **SW 450 - Field Education Experience I (3)**

Placement in a social work agency in the community for a minimum of 200 hours. Students are engaged in social work roles and activities which help them to develop generalist practice skills and knowledge.

Prerequisite: Admission to Social Work major and all other requirements for the major except SW 362 and SW 426 (may be taken concurrently with this course); completed field application and permission of field coordinator.

Corequisite: Must be taken concurrently with SW 451.

### **SW 451 - Field Education Seminar I (3)**

Shared learning experience among all students placed in a community social work agency to provide an opportunity for information exchange in depth. Case processes and agency analysis are required. Social work philosophies, values, and ethics in the social service delivery system are reinforced. Relevant readings, assignments, and projects

to help students integrate theory, values, and ethics with practice.

Prerequisite: Admission to Social Work major and all other requirements for the major except SW 362 and SW 426 (may be taken concurrently with this course); completed field application and permission of field coordinator.

Corequisite: Must be taken concurrently with SW 450.

### **SW 452 - Field Education Experience II (3)**

Continued placement in a social work agency in the community for a minimum of 200 hours. Students are engaged in social work roles and activities to develop generalist practice skills, values, and knowledge.

Prerequisite: Admission to Social Work major, SW 450, SW 451, and permission of field coordinator.

Corequisite: Must be taken concurrently with SW 453.

### **SW 453 - Field Education Seminar II (3)**

Shared learning experience among all students placed in a community social work agency to provide an opportunity for information exchange in depth. Evaluation of practice and organized community outreach in the social service delivery system are reinforced. Relevant readings, assignments, and projects help students integrate theory, values, and ethics with practice.

Prerequisite: Admission to Social Work major, SW 450, SW 451 and permission of field coordinator.

Corequisite: Must be taken concurrently with SW 452.

### **SW 478 - Current Topics in Social Work (3)**

Analysis and evaluation of special topics in the general field of social work. Topics will vary from year to year. If topics vary, may be taken more than once.

Prerequisite: Admission to Social Work major.

### **SW 501 - Integrative Seminar: Social Work Theory with Practice - Year 1 Semester 1 (3)**

This course introduces students to the concepts and theories of initial engagement with clients, starting where the client is, and person-in-environment (PIE), including family, group, and the larger social context. Students build their knowledge of their role as an agent of change within the structure of their host agency. This course also provides a foundation for later concepts and theories, such as psychodynamic, cognitive behavioral, ego psychology, and self-psychology.

Prerequisite: Admission to the Master of Social Work program or permission from the department chair.

Corequisite: SW 505

### **SW 502 - Social Welfare & Mental Health Policy and Services (3)**

This course introduces students to the history of social welfare and mental health policy in the United States as informed by power, economics, and values. Students will examine these issues through the lenses of critical race theory, standpoint feminist theory, intersectionality, and social justice. Students will learn about the origins of "asylums" for people with mental illness in the United States, established first in Pennsylvania and Virginia in the 18th century. Students will understand the social, political, religious, economic, and medical influences on mental health policies from these earliest machinations of institutionalization to consequences of underfunded and ill-conceived deinstitutionalization in the 20th century. Students will be able to articulate and advocate for their position regarding current needs for clients within the mental health and larger healthcare systems. This course also provides a foundation for later concepts and theories, such as qualitative and quantitative research methodologies in preparation for the student's capstone project and the identification of trauma-related social determinants of health affecting large populations.

Prerequisite: Admission to the Master of Social Work program or permission from the department chair.

### **SW 503 - Human Behavior in the Social Environment I (3)**

This course introduces students to the study of human development across the lifespan from prenatal/birth through middle childhood, in the context of their environment, including gender, race, sexual orientation, ethnicity, socioeconomic, and disability. The study of mental health and mental illness, resilience, "the four psychologies", narrative, humanistic, and existential theories. Intersectionality, feminist and critical race theory inform the lectures and discussions. This course also provides a foundation for later concepts and theories, such as the second semester of this course (SW 508) studying adolescence through late adulthood, qualitative and quantitative research methodologies in preparation for the student's capstone project and the identification of trauma-related social determinants of health affecting large populations.

Prerequisite: Admission to the Master of Social Work program or permission from the department chair.

**SW 504 - Disrupting for Social Justice and Equity within the Social Construct of Race (3)**

This course introduces students to understanding all forms of oppression on the micro, mezzo, and macro levels and how to conceptualize and operationalize effective understanding and interventions in a systemic, sustained manner. This course also builds on concepts and theories covered earlier in the curriculum, such as through an integration of our understanding of human attachment, adaptation, motivation, behavior, psychopathology, and trauma, both individually and within groups.

Prerequisite: Admission to the Master of Social Work program or permission from the department chair.

**SW 505 - Practicum Instruction I (4)**

This course introduces students to the concepts of professionalism, ethics, clinical judgment, understanding theories of human development and behavior change with clients in the practice setting, the impact of policy on the clients they serve, social justice, and advocacy. This course also provides a foundation for later concepts and theories, such as psychodynamic, cognitive behavioral, ego psychology, and self-psychology. This course also builds on concepts and theories covered earlier in the curriculum, such as through the presentation of more in-depth analysis of complex clinical assessments, differential diagnosis, and treatment planning/intervention efficacy evaluation.

Prerequisite: Admission to the Master of Social Work program or permission from the department chair.

Corequisite: SW 501

**SW 506 - Integrative Seminar: Social Work Theory with Practice - Year 1 Semester 2 (4)**

This course introduces students to the concepts and theories of ongoing engagement and intervention with clients. Students build their knowledge of their role as an agent of change within the structure of their host agency. This course also provides a foundation for later concepts and theories, such as psychodynamic, cognitive behavioral, ego psychology, and self-psychology.

Prerequisite: SW 501 and SW 505

Corequisite: SW 510

**SW 507 - Social Work: Practice with Groups (3)**

This course introduces students to the study of Irvin Yalom and other group theorists combined with mock group therapy exercises. Students will bring in group (both

process and task-oriented) process recordings from their field experience to understand more fully the theoretical basis for when and how to intervene at the group level. Students will learn about the therapeutic factors of group therapy including the instillation of hope, universality, socialization, practicing emotional expression, corrective experiences from family of origin, and others. This course also builds on concepts and theories covered earlier in the curriculum, such as through an ongoing examination of the process of preparation, engagement, and intervention with diverse client populations.

Prerequisite: SW 501 and SW 505

**SW 508 - Human Behavior in the Social Environment (3)**

This course introduces students to the study of human development across the lifespan from adolescence through late adulthood/end of life, in the context of their environment, including gender, race, sexual orientation, ethnicity, socioeconomic, and disability. The study of mental health and mental illness, resilience, "the four psychologies," narrative, humanistic, and existential theories. Intersectionality, feminist and critical race theory inform the lectures and discussions. This course also builds on concepts and theories covered earlier in the curriculum, such as through a continuation of the theories of human development from prenatal/birth through middle childhood.

Prerequisite: SW 503

**SW 509 - Social Work Research Methods I (3)**

This course introduces students to quantitative, qualitative, and mixed method research methodology and practice in order to be able to discern the quality and relevance of research they are consuming and producing. First semester is foundational regarding vocabulary, concepts, and methods. This course helps students understand how client population data is created in a way that allows objective analysis, which is then used to inform further research, and micro, mezzo, macro clinical and policy decisions. Students learn about sampling methods, data collection strategies, and how to understand the significance of that data to make valid and reliable predictions. This course also builds on concepts and theories covered earlier in the curriculum, such as through an examination of the history of social welfare and mental health policies and their impact on diverse client populations.

Prerequisite: SW 501 and SW 505



**SW 510 - Social Work Practicum Instruction I - Year 1 Semester 2 (4)**

This course is taken in the second semester and deepens students' understanding of the concepts of professionalism, ethics, clinical judgment, understanding theories of human development and behavior change with clients in the practice setting, the impact of policy on the clients they serve, social justice, and advocacy. This course also builds on concepts and theories covered earlier in the curriculum, such as psychodynamic, cognitive behavioral, ego psychology, and self-psychology, and the presentation of more in-depth analysis of complex clinical assessments, differential diagnosis, and treatment planning/intervention efficacy evaluation.

Prerequisite: SW 501 and SW 505

Corequisite: SW 506

**SW 550 - Social Work Practice in Health Care (3)**

This course focuses on health social work at the nexus of practice and policy. It provides students with core advanced year knowledge applicable to a wide range of settings, populations and fields of practice within the broader domain of health social work. Most social workers in health care provide *clinical/direct practice services* to individuals, families, groups and communities, often in *collaboration with interdisciplinary teams*, and continuously informed by *complex organizational and policy contexts*. Social workers in health also directly engage in *work at the organizational and policy levels*, since so many of the intractable issues individuals, families and groups encounter in U.S. health care systems (e.g., lack of access to quality care; lack of insurance coverage; lack of affordable medications; lack of coordination of care; disparities in health outcomes by race, ethnicity, and gender; lack of cultural sensitivity/ competence in the delivery of care) demand coordinated organizational, public health and policy solutions.

Prerequisite: SW 573

**SW 551 - Social Work in the Military and with Veterans (3)**

Students will build knowledge of and skills in working with active military and veterans as they deal with the results of trauma and other military-related health conditions. Topics include post traumatic stress disorder, stigma, barriers to help-seeking, transitions from active duty back to the community, suicidality.

Prerequisite: SW 573

**SW 552 - School Social Work and the Education of Exceptional Students (3)**

This course provides students with an overview of social work practice within public schools. It will provide a strong emphasis on the diverse practice roles and necessary skills in order to function professionally and effectively within the multi-disciplinary academic setting. This course will examine the field of special education and litigation (IDEA) along with the American with Disabilities Act. The class will review effective means of communicating and collaborating with parents, teachers, special education staff and administration. The course will also examine the definitions of exceptionalities with an emphasis on skill development in making behavioral assessments as well as behavior intervention plans. Particular attention will be given to various common child and adolescent diagnoses and will examine various, age appropriate trauma interventions that may be utilized within the school program. Students will also examine social-cultural, political, and economic forces that shape public education.

Prerequisite: SW 572

**SW 553 - Social Work Practice with the Latino Community (3)**

This course provides a culturally sensitive social work framework for understanding and helping Latino clients. Based on a strengths perspective the course provides a vivid description of unique cultural characteristics and strengths in the Latino community to help social work students learn, appreciate and amplify Latino client's personal and cultural strengths and values.

Prerequisite: SW 572

**SW 554 - Social Work Crisis Intervention (3)**

This course provides a comprehensive exploration of crisis intervention techniques and strategies for a variety of settings and diverse client populations. Grounded in sound research and proven theoretical frameworks, students will develop knowledge skills necessary to assess and intervene effectively, to keep clients safe and to move them forward in their treatment.

Prerequisite: SW 573

**SW 555 - Social Work with Trauma and Substance Use Disorders (3)**

Students in this class will learn the implications that trauma imposes on the client, especially as it relates to self-medication with substances. Students will explore such areas as: the biopsychosocial impact of interpersonal

violence as well as community violence. Students will gain an understanding of the numerous manifestations of trauma on developmental stages, and how its long-term impacts are carried into adulthood and contribute to substance dependency and addiction. Students will explore therapeutic approaches that allow for healthy development of coping mechanisms and the detrimental ramifications that effect future generations as a result of negative coping such as chemical dependency.

The course focuses on the numerous types of trauma. This includes, but is not limited to: childhood trauma, adult trauma, domestic violence, military trauma, trauma related to first responders, community trauma, and trauma as it relates to social justice and oppression.

Emphasis throughout the class is also placed on such issues as: secondary trauma or vicarious trauma, compassion fatigue and burnout. Students will learn to self-evaluate and develop strategies of self-care and burnout prevention. A greater understanding of both self-care and approaches to peer support will be enhanced.

Students will learn the necessity for trauma-informed approaches. They will be exposed to methods of intervention that include: individual and group insight oriented psychotherapy, cognitive behavioral therapy, exposure therapy, eye movement desensitization reprocessing (EMDR), child and family interventions such as attachment regulation and competency (ARC). Discussion will also focus on how these interventions lead to both client-focused healing as well as development of resiliency.

Prerequisite: SW 573

### **SW 556 - Social Work and Trauma Informed Community Practice (3)**

This course looks at the challenges of community development through the lens of trauma, historical and structural racism, exclusion, poverty, and community violence, among other factors. Students will learn how to assess the multiple contributions to individual and collectively experienced trauma and its sequelae. Based on this assessment, students will then develop recommendations for intervention with specific goals, taking into account barriers and facilitators of community building in collaboration with all relevant stakeholders.

Prerequisite: SW 573

### **SW 571 - Integrative Seminar: Social Work Theory with Practice - Year 2 Semester 1 (3)**

This course introduces students to understanding and applying various social work theories to real-world practice situations, emphasizing the synthesis of multiple frameworks; Developing advanced micro, mezzo, and macro-level social work skills through case studies, role-plays, and simulations; Developing more advanced integration of theory and practice from either their BSW or from the first year of their MSW program; Consolidating a clearer sense of their emerging professional identity as an aspiring clinical social worker; Honing their skills of identifying their own cognitive and affective responses to clients and client systems; Continuing to develop their own cultural humility in the service of joining and working with clients from diverse backgrounds and advocating for inclusive and equitable interventions; Making more effective and efficient use of clinical supervision; Deepening their self-reflection as it relates to a fuller, more effective, authentic use of self in the work; Consistently considering ethics and values inherent in our profession as it relates to day-to-day decisions with clients regarding boundaries, confidentiality, and roles; Beginning to finalize decisions regarding their fourth semester capstone project. This course also provides a foundation for later concepts and theories, such as laying the groundwork for helping to inform decisions made in the formulation of the student's capstone problem statement, thereby contextualizing the issue to be addressed, establishing relevance, and setting initial objectives for the capstone research.

Prerequisite: SW 506 and SW 510; or admission to the Master of Social Work: Advanced Specialization program

Corequisite: SW 575

### **SW 572 - Psychopathology: Advances in psychological theory and advances in differential assessment/diagnosis I (3)**

This course introduces students to knowledge of psychosocial, medical, and psychodynamic clinical diagnosis and assessment in the intervention process; knowledge of LGBTQ+ and BIPOC issues in assessment and diagnosis, and ethical considerations when using formal, informal, and standardized instruments; skills in utilizing the vocabulary and decision-making process of the most up to date DSM and the PDM-2, and an overview of standardized assessment instruments and self-report inventories available for use with individuals, couples, and families; knowledge of the major theoretical perspectives (biological, behavioral, cognitive, psychodynamic) in

assessing psychopathology; skills in conducting comprehensive psychosocial assessments; exploration of the impact of cultural diversity on the manifestation and treatment of psychopathology. This course also provides a foundation for later concepts and theories, taught in SW 577 and more in-depth understandings of the impact of psychological trauma on human development, in a variety of contexts, taught in SW electives.

Prerequisite: Admission to the Master of Social Work Advanced Standing Track or (SW 506 and SW 507 and SW 508 and SW 509 and SW 510)

### **SW 573 - Understanding Trauma, Attachment, and Neurobiology in Social Work Practice (3)**

This course introduces students to basic concepts of trauma and attachment, recognizing the impact on brain functioning, behavior, and human development; understanding the neurobiological underpinnings of trauma, including the role of the amygdala, hippocampus, and the prefrontal cortex. Integration of trauma-informed principles into social work practice, developing sensitivity to trauma survivors' needs; learning comprehensive methods for assessing trauma and attachment issues in clients; understanding the intersection of culture and trauma, developing culturally sensitive interventions; recognizing and responding to complex trauma presentations, including dissociative responses; exploration of the role of attachment in forming and maintaining therapeutic relationships; developing self-care strategies for social workers engaging in trauma work, and recognizing signs of burnout and secondary or vicarious trauma; navigating ethical challenges in trauma practice, prioritizing client well-being and autonomy, preventing re-traumatization of clients by treating where they are at and going at their pace (i.e. respecting clients' defenses); understanding the impact of trauma on legal matters and advocating for trauma-informed approaches in legal settings. This course also provides a foundation for later concepts and theories, such as through the development of the student's capstone project with a focus on a trauma-related problem and proposed intervention.

Prerequisite: Admission to the Master of Social Work Advanced Standing Track or (SW 506 and SW 507 and SW 508 and SW 509 and SW 510)

### **SW 574 - Social Work Research II (3)**

This course introduces students to advanced principles of the scientific analysis of client data to produce, evaluate and apply new knowledge for the social work profession; distinguishing and explaining the difference between

deductive and inductive methods and implications for the production of social work research; explaining the role of theoretical frameworks (explaining phenomena, drawing connections, making predictions) in the research process, and how this applies to their capstone project; creating a literature review on a research topic related to a social work issue and applying it to their capstone project; locating and identifying social work and social work-related empirical resources via electronic databases; understanding the role of research in developing a capstone project that advances economic and social justice and enhances the quality of life for populations at risk; understanding how race, ethnicity, gender, class, etc. influences the research process, findings and implications of their capstone project; identifying and explaining risks, benefits and any (potential) ethical dilemmas that may occur during student data collection of their capstone project and taking appropriate steps to mitigate same, with the approval of the Institutional Review Board; identifying and explaining actions to minimize risks and potential dilemmas regarding research methods of their capstone project; identifying personal values and preconceived notions (biases) as it pertains to the topic of study for the student's capstone project; sample selection and data collection methods for the student's capstone project; learning how to use different types of surveys, observations, interviews, and focus groups; analyzing the data obtained; becoming familiar with electronic data analysis resources available (classroom demonstration of SPSS and ethnographic analysis); learning how to create a final report. This course also builds on concepts and theories covered earlier in the curriculum, such as through an application of the student's understanding of human development, working with marginalized communities, and advocating for sustained, second-order systems change to ensure equity, and social and economic justice.

Prerequisite: Admission to the Master of Social Work Advanced Standing Track or (SW 506 and SW 507 and SW 508 and SW 509 and SW 510)

### **SW 575 - Social Work Practicum Instruction III (3)**

This course is taken in the first semester (Advanced Standing) and introduces students to advanced opportunities to practice applying their social work knowledge, values, skills, and cognitive and affective processes learned in their academic courses to the field situation at an advanced level of specialist social work practice. Field provides opportunities to learn the person-in-environment framework; the application of scientific inquiry, ethical principles, and critical thinking in practice at the micro, mezzo, and macro levels; and strategies to

engage diversity in practice and advocate for human rights and social and economic justice. Students are placed in a wide variety of organizational settings for their field experience, including the public, private, and nonprofit sectors. Placement settings include the range of opportunities available to social work practitioners, with a particular emphasis on mental health and, when possible, clients suffering from a variety of trauma-related conditions. It is expected that all field placements will provide students with both clinical and macro practice learning opportunities. It is expected that educational planning for each placement is co-produced with the student, field instructor, and faculty-field liaison, and described in the learning agreement. This course also builds on concepts and theories covered earlier in the curriculum, such as human behavior and human development, engagement, assessment and intervention with individuals, families, groups and larger client systems, while working for equity, and social and economic justice.

Prerequisite: SW 506 and SW 510; or admission to the Master of Social Work: Advanced Track program

Corequisite: SW 571

**SW 576 - Integrative Seminar: Social Work Theory with Practice - Year 2 Semester 2 (3)**

This course teaches students to integrate diverse social work theories into the development and implementation of interventions aimed at addressing complex social issues related to trauma and social determinants of health; utilizing research methods to critically analyze and inform the capstone project, ensuring evidence-based practice in addressing and working to solve a part of a wicked problem; synthesizing practical experiences with social work principles; applying insights gained from fieldwork to inform and enhance the capstone project; engaging in collaborative problem-solving by working with interdisciplinary teams, acknowledging diverse perspectives, and fostering inclusive and culturally competent solutions; demonstrating an understanding of ethical considerations in social work practice, particularly when dealing with sensitive issues related to trauma and health disparities. Students also use the lessons learned from their advanced psychopathology course and concurrent electives to help frame and contextualize the design of their capstone project. This course also builds on concepts and theories covered earlier in the curriculum, such as advanced research methodology from SW 574 and advanced understanding of trauma and its effects gained from SW 573.

Prerequisite: SW 571 and SW 575

**SW 577 - Psychopathology: Advances in psychological theory and advances in differential assessment/diagnosis II (3)**

This course introduces students to the differential application of evidence-based interventions to the spectrum of psychopathological disorders, including but not limited to anxiety, depression, obsessive-compulsions, tics, thought disorders, personality disorders, and substance use-related conditions; the development of advanced skills in differential diagnosis and case conceptualization; exploration of the role of resilience and protective factors in sustaining one's mental health; critical evaluations of current research in psychopathology and its implications for social work practice, especially in the context of race, culture, socioeconomic, and gender; effective communication skills when working with clients experiencing symptoms of psychopathology; engaging in case presentations and discussions to integrate theoretical knowledge with practical applications in client settings and to better inform research for the capstone project. This course also builds on concepts and theories covered earlier in the curriculum, such as through SW 572 and SW 573 where students gain knowledge and skills working with clients suffering from a variety of trauma-related, biopsychosocial challenges.

Prerequisite: SW 572

**SW 578 - Social Work Practicum Instruction IV (4)**

This course provides students an advanced understanding of how to engage, assess, and intervene with clients and client systems and to gather data from their work with a designated group of clients in order to evaluate efficacy of their interventions. Students then formulate a research problem statement and design an intervention based on an analysis of client data. This course also builds on concepts and theories covered earlier in the curriculum, through the student's experiences in their internships, combined with their study of professional values (see NASW Code of Ethics), knowledge of normative and disordered mental health, human development, and historical and contemporary injustices perpetrated against vulnerable and marginalized communities.

Prerequisite: SW 571 and SW 575

Cross-Listed as: SW 576

## TE-Technology & Engineering Education

### TE 101 - STEM and Society (3)

STEM as a human endeavor, including interrelationships among natural and human-made systems; uses of modeling and prediction; and changing views of science, technology, engineering, and mathematics.

### TE 115 - STEM Laboratory Management and Safety (3)

Management of and safety procedures for STEM laboratory classes. Topics include: laboratory safety rules and procedures, emergency protocols, personal protective equipment and tool safety. Includes laboratory activities.

Prerequisite: None

### TE 150 - Fundamentals of Engineering and Technology for Teachers (3)

How technology affects people and societies, and how people engineer solutions to technological problems. Includes applications of science, mathematics, and the engineering-design process. Emphasis will also be placed on STEM-related educational standards, including the Standards for Technological Literacy.

Prerequisite: MATH 115 or MATH 119 or MATH 124 or MATH 135 or MATH 152

### TE 201 - Children's Creativity & Engineering (3)

STEM as an integrative approach to pre-K-6 education. Development, implementation, and assessment of engineering-design activities that integrate studies of technology, science, social studies, language arts, and mathematics. 10 hours field experience required. No credit for students with credit for TE 155. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies. Thirty hours of content area major field experience is required for teacher candidates.

Prerequisite: TE 101 or TE 110

### TE 215 - Materials Processing (3)

Concepts involved in the efficient processing of multiple materials. Appropriate hand tools and equipment are employed to demonstrate the relationship between materials, properties and processes. Attention is given to procedures common to a variety of manufactured

products. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: None

### TE 217 - Laboratory Practices (4)

Laboratory practices designed to promote Science, Technology Engineering, and Math (STEM) activities and projects. Three hour lecture and two hours laboratory, course meets five hours per week.

Prerequisite: TE 115.

### TE 218 - Electrical Applications for STEM (3)

Study of electrical phenomena including energy conversion, transmission, and control applied to problem-based STEM learning experiences. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: None

### TE 221 - Innovation & Invention for Makerspaces and Labs (4)

Focus on activities that lead to innovation and invention, problem identification, research methods, prototype development and presentation of results. Three hours lecture and two hours laboratory, course meets five hours per week.

Prerequisite: None

### TE 224 - People, Biotechnology, and Robots in the Future (3)

We will investigate probable and possible impacts biotechnologies may have on individuals, societies, and human relationships in the future. Primary topics will be genetics, social robotics, and human augmentation.

### TE 245 - Building Design & Construction (4)

Means used to design and construct buildings. Investigation of building codes, site work, wood frame, masonry, concrete and steel frame design and construction techniques. A residential structure design project is required. Three hour lecture and two hours laboratory, course meets five hours per week.

Prerequisite: None

### TE 299 - Technology & Engineering Education Practicum (3)

Organization and management of technology exhibitions and competitions for middle- and high-school students. Focus on developing children's knowledge, abilities, and leadership through extracurricular and classroom

activities. Field experience required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies. Thirty hours of content area major field experience is required for teacher candidates.

Prerequisite: TE 115 and TE 201;

Corequisite: EDTE 314.

Notes:

Fingerprinting required.

### **TE 310 - Communication Systems (3)**

Application of graphic and electronic communication systems with focus on how the individualized components function together as a system. Research and lab activities include computer graphics, desktop publishing, video, and telecommunications. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: None

### **TE 330 - Transportation Design (4)**

Application of the systems which extend the means of transportation beyond the physical capability of the human body. Includes terrestrial, atmospheric, marine, and space transportation technologies and their social, environmental, and economic impact. Three hours lecture and two hours laboratory, course meets five hours per week.

Prerequisite: TE 215 and TE 221.

### **TE 340 - Coding and Computational Thinking for STEM (3)**

*Focuses on coding found in K-12 curricula; the core computing concepts required to support coding-related projects; and nurturing the computational and algorithmic thinking of K-12 students through coding. Attention also given to open source software and hardware.*

Prerequisite: MATH 101 (C- or higher) or MATH 102 (C- or higher) or MATH 103 (C- or higher) or placement exam.

### **TE 350 - Current Topics in STEM Education ( )**

Course focuses on contemporary issues and emerging topics in STEM education.

Prerequisite: TE 299

### **TE 399 - Teaching Technology and Engineering (3)**

Develops background for technology and engineering student teaching and professionalism. Emphasis on the development, presentation, and evaluation of student-developed lessons and methods of student assessment, applied to K-12 technology and engineering laboratories.

Prerequisite: TE 299

### **TE 400 - Professional Practices and Responsibilities in Technology and Engineering Education (K-12) (3)**

Professional course which stresses preparation for student teaching, or supervised teaching, and objectives, planning techniques, and problems of teaching technology education at the secondary, middle and elementary school levels. Required of all undergraduate majors in Technology Education, and post-baccalaureate students in the Technology Education certification program. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies. Thirty hours of content area major field experience is required for teacher candidates.

Prerequisite: TE 399, may be taken concurrently; admission into the Professional Program.

Corequisite: EDSC 425.

### **TE 417 - Robot Design & Construction (4)**

Examines the use of robotics in education. Topics include robot applications in education, system development methodologies, project planning and scheduling, robot design and implementation, competitions, and educational resources. Three hour lecture and two hours laboratory, course meets five hours per week

Prerequisite: TE 215 and TE 221.

### **TE 419 - Student-Teaching Seminar (1)**

Discussion, reflection, and collaboration with peers on issues that arise in K-12 technology and engineering education in the areas of curriculum, instruction, classroom and laboratory management, and student assessment. Must be taken with EDSC 431 and EDSC 432.

Prerequisite: Corequisites: EDSC 431 and EDSC 432

**TE 488 - Independent Study in Technology Education (1-3)**

Directed independent studies in technology education for students who wish to pursue specialized areas which are not covered in regular course offerings. May be repeated with different topics for a maximum of 6 credits.

Prerequisite: Senior or graduate standing and permission of instructor.

**TE 498 - Technology & Engineering Education Senior Design Project (3)**

Team work or individual project of study, design and/or research a project related to technology education. Final reports submitted to the department for archiving. Oral presentations and electronic portfolio are required. Two hours lecture and two hours laboratory, course meets four hours per week.

Prerequisite: TE 400, may be taken concurrently, and senior standing.

**TE 513 - Professional Strategies for Teaching Technical Subjects to Adults (3)**

Approaches and strategies designed for use with adult learners. The development, presentation and evaluation of student-prepared lessons unique to technical subjects will be emphasized.

Prerequisite: None

**TE 519 - Technology & Engineering Education Practicum Advanced (3)**

Advanced Organization and management of technology exhibitions and competitions for middle-and high-school students. Focus on developing children's knowledge, abilities, and leadership through extracurricular and classroom activities. Field experience required. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies. Thirty hours of content area major field experience is required for teacher candidates. No credit given for students with TE 299 credit.

Prerequisite: Admission to the MAT Program

Cross-Listed as: TE 299

**TE 529 - Content Pedagogy in Certification Area I (3)**

Introduction to discipline-specific standards, pedagogy, and assessment strategies. Taught in certification area: English, History/Social Studies, Mathematics, Modern Language, Science.

Prerequisite: Admission to the M.A.T. program and MAT 510

**TE 539 - Content Pedagogy in the Certification Area II (3)**

Continuation of study of discipline-specific standards, pedagogy and assessment strategies in the certification area: English, history/social studies, mathematics, modern language, science. Taught in the certification area.

Prerequisite: Admission to the M.A.T. program, and MAT 520 with a grade of C or higher

**TE 540 - Curriculum Materials in Technology Education (3)**

Preparation of curriculum guides, instruction sheets, lesson plans, tests, special references, appropriate texts, and use of audio-visual material in technology education and vocational-technical education will be studied and evaluated.

Prerequisite: None

**TE 580 - Topics: Technical Seminar (3)**

Exploration of problems, trends, or emerging technology relevant to technology education programs. May be repeated under different topics for a maximum of 9 credits.

Prerequisite: None

**THS-Tourism-Hospitality-Studies****THS 101 - Introduction to Hospitality and Tourism (3)**

This introductory level class examines the nature of various segments of the tourism-hospitality industry, including lodging, restaurants, meetings, conventions and events, and entertainment. Several major topics that will be covered in this course include tourism, lodging, restaurants and food and beverage service, managed services, tourism, theme parks, clubs, gambling, and cruise ship management. THS 101 addresses historical and current impacts of various tourism and hospitality industries on culture and society.

**THS 300 - The Hospitality Industry (3)**

Examines the nature of various segments of the tourism-hospitality industry including lodging, restaurants,

meetings, conventions, and entertainment. Emphasis on issues and trends facing this industry.

### **THS 410 - Tourism & Hospitality Operations (3)**

Examination of the operational dimensions of the spectrum of tourism and hospitality-oriented attractions and services. This may include topics such as gaming operations, occupancy analysis, Star reports, and tour operations.

Prerequisite: THS 300.

### **THS 457 - Food & Beverage Management (3)**

Analysis of worldwide cuisines and their impact on today's society, tourism, and the food industry. Students consider geographic locational factors of food establishments, the food chain from farm to wholesaler to grocery stores to tables, and explore regional cuisines, iconic chefs, industry components including food service marketing and back-of-the-house operations, dietary regulations and the impact of non-residential dining in today's culture.

Prerequisite: THS 300

### **THS 430 - Internship in Tourism and Hospitality (3)**

Students will work in an environment directly related to their specific interest under the guidance of a faculty member. Written reports and a supervisor evaluation are required.

Prerequisite: Permission of program director.

### **THS 460 - Hotel and Lodging Practicum (3)**

Combines detailed analysis of issues and trends affecting this sector of the industry with a real-world project supervised by the instructor and the host organization.

Prerequisite: THS 300.

### **THS 465 - Convention, Event, and Meeting Planning (3)**

Introduces operational issues associated with planning and managing conventions, meetings, and events. Combines detailed analysis of issues and trends with a real-world project. Issues may include facility management, identifying and selecting venues, negotiating with vendors, developing event budgets, and organizing employees.

Prerequisite: THS 300

### **THS 490 - Current Topics in Tourism & Hospitality (3)**

Analysis and evaluation of current topics and issues that confront the tourism/hospitality industry. Course may include on-site facility visits and guest lectures from

industry professionals. May be repeated for up to 6 credits.

Prerequisite: THS 300.

## **TH - Theatre**

### **TH 101 - Performance Practicum (1)**

Studies in the practice of making performance driven works and the collaborative art of theatre making. May be repeated for a maximum of 4 credits.

Prerequisite: None

### **TH 110 - Introduction to Theatre (3)**

Introduction to theatre as a social institution. Students are required to attend Theatre Department productions during Fall and Spring semesters. CSUS Common Course. No credit given towards theatre majors or minors.

Prerequisite: None

### **TH 111 - Stagecraft (3)**

Constructing and rigging scenery for different stages. Two lectures and average of two hours laboratory work per week.

Prerequisite: None

### **TH 115 - Play Production (1-2)**

Students will work on productions in areas including but not limited to stagecraft, management, lighting, sound, properties, costuming, make-up, and scene painting. May be repeated for a maximum of 6 credits.

Prerequisite: Departmental Permission.

### **TH 117 - Lighting (3)**

Lighting techniques in modern theatre practice. Three hours of lecture and an average of two hours laboratory work per week.

Prerequisite: None

### **TH 121 - Costuming (3)**

Introduction to the principles, elements and practicalities of costume design and their relation to design in the Theatre. Two lectures and average of two hours laboratory work per week.

Prerequisite: None

Notes:



**TH 126 - Makeup I (3)**

Laboratory course in stage makeup.

Prerequisite: None

**TH 135 - Speaking Voice I (3)**

Students will develop an awareness and understanding of their own voice and proper techniques to use it as an instrument of expression, through experiential and analytical work.

Prerequisite: None

**TH 143 - Improvisation and Ensemble (3)**

Improvisation and ensemble work to build awareness and confidence in communication and creation.

Prerequisite: None

**TH 145 - Acting I (3)**

Introduction to fundamental approaches used in acting including exercises, terminology, and textual analysis.

Prerequisite: None

**TH 146 - Theatre for Social Change (3)**

Introduction to theatre techniques which promote personal, social and/or political transformation, with special emphasis on the teachings of Augusto Boal. Studies of plays, theatre makers, and movements that were/are socially and politically impactful.

Overview: Theatre for Social Change, is an area of practice that uses theater techniques as a teaching tool, a vehicle for self-study, as a problem solving technique for groups of any size, and as community building. Practitioners have the skills to facilitate social change using the medium of theatre in a variety of venues; thus enhancing their abilities as artists, educators and catalysts for positive human growth. This introductory course will provide an over-view of the field and techniques including experiential practice, discussion and reflection, and research throughout.

Prerequisite: None

**TH 147 - Theatre Design Fundamentals (3)**

Focuses on understanding foundational elements of theatrical design and developing skills to translate ideas into visual content.

Prerequisite: None

**TH 201 - Introduction to Sound ( )**

Through practical application of the fundamental concepts of design to the role of sound in theatrical texts, this class instills fresh concepts of creation and collaboration in the theatrical environment. Various platforms are employed to gain professional technical expertise and skill.

Prerequisite: None

**TH 211 - Rendering and Drawing for the Theatre (3)**

Studio course covering the various media for drawing and rendering stage and costume designs. The emphasis will be in developing student skills in drawing and rendering with watercolor, gouache, pen and ink.

Prerequisite: TH 121 and TH 147.

**TH 213 - Scene Painting (3)**

Studio course in the techniques of painting scenery for the stage.

Prerequisite: None

**TH 217 - Computer Aided Design (CAD) for the Theatre (3)**

Studio course in various methods of graphic presentations of stage sets and designs, including measurements and specifications, drafting, model making, and CAD drawing techniques.

Prerequisite: TH 111 and TH 211

**TH 219 - Properties Design and Construction (3)**

Through hands-on instruction, solo and collaborative assignments, and group discussion/ evaluation, this class covers all aspects of prop design and construction. Employing up-to-the minute applications including Computer Aided Design and 3-D printing, students research the demands of the texts, identify examples of existing items, and consider the functioning of the prop on stage.

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Prerequisite: None

**TH 222 - History of Fashion (3)**

Study of the history of dress stressing the influences of culture upon fashion and original period research for the theatre.

Prerequisite: None

**TH 235 - Movement for Actors I (3)**

Introduction to movement studies and physical theatre approaches for the performer.

Prerequisite: None

**TH 246 - Acting II (3)**

Emphasis on the fundamental techniques of acting, including an introduction to scene study and character development.

Prerequisite: TH 143 and TH 145.

**TH 253 - Script Analysis for the Theatre (3)**

The goal of theatre is to tell stories of the human condition, hold a mirror up to society, provoke thought and self-reflection, question the world around us, and develop an audiences' sense of empathy – all while entertaining. The larger goal of Script Analysis is to look at how we mine the text in order to take the words given to us by a playwright and put them on stage so that they, in turn, have the power to impact an audience in these ways.

Course Objectives

1. Read and analyze plays from a variety of authors and time periods.
2. Investigate circumstances, facts, actions, themes, characters, and literary devices within a script.
3. Contemplate and discuss how various analytical discoveries might translate into the design, direction, and performance of a play.
4. Apply research to provide contextual understanding of the play, playwright, time period and social issues.
5. Develop an overall understanding and practical approach to translating a play from the page to the stage while remaining truthful to the author's intent.
6. Apply what is on the page to the stage to:
  - impact an audience and encourage them to take action.
  - provide a lens in which to promote diversity of thought.
  - educate audiences on experiences outside themselves.
  - promote healing, create empathy, and uplift humanity.

Example Course Material and Context

*Doll's House* by Henrik Ibsen – Issue of marriage equality, women's rights, societal conventions and expectations

*The Flick* by Annie Baker – Racism, economic inequalities, sexuality, mental health

*August Osage County* by Tracy Letts – Mental health, substance abuse, emotional trauma, economic depression

*Sweat* by Lynn Nottage – Racism, economic inequalities, political oppositions, judicial inequalities

*Zoot Suit* by Luis Valdez – Racism, economic and judicial inequalities

*Kinky Boots* by Harvey Fierstein – Gender identity, sexuality, economic inequalities

Prerequisite: None

**TH 260 - Directing for the Stage (3)**

Principles of stage directing and practice. Emphasis on modern methods of directing and the use of its main elements such as space, time, sound, image and the actor.

Prerequisite: TH 147 and TH 253, or by permission of department.

**TH 274 - History of Theatre I (3)**

A study of theatre from Classical Greece to the 18th century including notable works of the era.

Prerequisite: None

**TH 276 - History of Theatre II (3)**

A study of theatre from 18th century to present day including notable works of the era.

Prerequisite: None

**TH 316 - Scene Design (3)**

Designing scenery for various kinds of stages and plays. Work on ground plans and elevations, perspective drawing, and finished design.

Prerequisite: TH 147, TH 217, and departmental permission.

**TH 318 - Lighting Design (3)**

Lighting design and layout for the proscenium, open, and arena stages. Special emphasis on design problems, equipment, and control systems.

Prerequisite: TH 117 and TH 211.

### **TH 330 - Design Tutorial (1)**

Tutorial to solve skill problems through individual lessons and coaching with design major preparing to fulfill project requirements. May be repeated for a total of six credits.

Prerequisite: Major or minor in Theatre and permission of instructor.

### **TH 332 - Costume Design (3)**

Designing costumes for various styles of plays focusing on design process, techniques, and the ability to deliver design presentations.

Prerequisite: TH 211 or permission of instructor.

### **TH 333 - Period Styles (3)**

An exploration of period styles through examination of stylistic elements from Egyptian through current day. Styles of art, architecture, dance, theatre, music, as well as trends in culture will be studied for their effect upon artistic form.

Prerequisite: None

### **TH 334 - Costume Construction (3)**

Studio course in methods of constructing theatrical costumes including flat patterning and draping in the practical creation of both historical and contemporary garments.

Prerequisite: TH 121 or permission of instructor.

### **TH 335 - Stage Combat (1)**

Introduction to foundational techniques in the study of stage combat, choreography, and the illusion of violence for performance with an emphasis on safety for performers through basic skills, technique, and conditioning.

Prerequisite: TH 235

### **TH 338 - Speaking Voice II (3)**

Building upon skills gained in Speaking Voice I, students will study various dialects and apply their learnings in performance.

Prerequisite: TH 135.

### **TH 347 - Acting III: Scene Study (3)**

Performance considerations in scene study and character development.

Prerequisite: TH 246 and TH 253

### **TH 351 - Stage and Production Management (3)**

Study of function, duties, and methods of operation of the stage manager. Includes the development and completion of a working prompt book, analysis of production contracts and technical riders, and study of the Actor's Equity contracts.

Prerequisite: TH 111 and TH 253 or permission of instructor.

### **TH 435 - Movement for the Actor II (3)**

Continuation of movement studies and physical theatre approaches with advanced applications.

Prerequisite: TH 235

### **TH 447 - Acting IV: Shakespeare (3)**

Performance techniques related to the texts of Shakespeare and Early Modern writers.

Prerequisite: TH 246 and TH 253

### **TH 456 - Acting V: Acting for Recorded Media (3)**

Performance considerations, role development, and audition techniques in relation to the camera and recorded media.

Prerequisite: TH 246 and TH 253

### **TH 474 - Studies in NY Theatre Workshop (3)**

Selected area of study in acting/production not covered in other courses. Topic varies. May be repeated for up to 6 credits.

Prerequisite: Permission of instructor.

### **TH 475 - Studies in London Theatre (3)**

Selected area of study in performance/production not covered in other courses. Topic varies. May be repeated up to 6 credits.

Prerequisite: Permission of instructor.

### **TH 479 - Projects: Production Carpenter (3)**

Individual projects in reading, research, and production under the guidance of the theatre faculty/staff. May be repeated for up to 6 credits.

Prerequisite: TH 115 or Departmental Permission.

### **TH 480 - Projects: Production Electrician (3)**

Individual projects in reading, research and production under the guidance of theatre faculty/staff. May be repeated for up to 6 credits.

Prerequisite: TH 115 or Departmental Permission.

**TH 481 - Projects: Scenery (3)**

Individual projects in reading, research, and production under guidance of member of theatre faculty/staff. May be repeated for up to 6 credits.

Prerequisite: TH 213, TH 316, and/or Departmental Permission.

**TH 482 - Projects: Costuming (3)**

Individual projects in reading, research, or production under guidance of member of theatre faculty/staff. May be repeated for up to 6 credits.

Prerequisite: TH 332 and Departmental Permission.

**TH 485 - Projects: Lighting (3)**

Individual lighting project in reading, research, production and/or design under the guidance of a member of the Theatre staff. May be repeated for up to 6 credits.

Prerequisite: TH 318 or permission of instructor.

**TH 486 - Projects: Sound (3)**

Individual sound projects in reading, research, or production under guidance of member of Theatre staff. May be repeated for up to 6 credits.

Prerequisite: TH 201 or permission of instructor.

**TH 487 - Projects: Research (3)**

Individual projects in reading, research, or production under guidance of member of theatre staff.

Prerequisite: Departmental Permission.

**TH 488 - Thesis Project in Acting or Directing (1)**

Working on a faculty directed production, students will complete a thesis project in either acting or directing. Final thesis document is required.

Prerequisite: BFA theatre majors only and instructor permission

**TH 489 - Studies in Theatre/Drama (3)**

Selected area of theatre and/or drama not covered in other courses. Topic varies. May be repeated for credit.

Prerequisite: Departmental Permission.

**TH 491 - Projects: Technical Direction (3)**

Individual technical direction project in reading, research, engineering, and/or technical direction of a production under the guidance of a member of the theatre staff. May be repeated for up to 6 credits.

Prerequisite: TH 111, TH 115, or Departmental Permission

**TH 492 - Projects: Theatre Computer Technology (3)**

Individual theatre computer technology project in reading, research, engineering, and/or design and execution of production under the guidance of a member of the theatre staff. May be repeated for up to 6 credits.

Prerequisite: Permission of instructor.

**TH 493 - Projects: Stage Management (3)**

Individual stage management project in reading, research, and/or stage management of a production under the guidance of a member of the theatre staff. May be repeated for up to 6 credits.

Prerequisite: TH 117, TH 121, TH 251, or departmental permission.

**TH 495 - Theatre Internship (3-6)**

Substantial work in approved area/regional theatre(s) offering experience or research opportunities unavailable on campus. May be repeated for a total of 12 credits.

Prerequisite: Departmental Permission.

**TM - Technology Management****TM 120 - Introduction to Technology Management (3)**

Current trends in technology management including innovation, technology systems, sustainable energy, materials, and historical perspectives.

Prerequisite: None

**TM 190 - Global Quality Management Systems (3)**

Overview of the influence of the Japanese Lean Management system and the International Organization for Standardization (ISO) have had on contemporary quality management systems. Topics include Six Sigma, team building, change management, problem solving, and continuous improvement.

Prerequisite: None

**TM 202 - Topics in International Studies ( )**

The goal of this course is to conduct a comparison study of industry and business abroad.

**TM 310 - Environment, Health and Safety (EH&S) (3)**

Overview of environment, health and safety issues including: improving employee health and safety, reducing hazards, hazardous waste and air emissions, and reducing the environmental impact of the production facility. Emphasis on sustainability, OSHA, EPA, and ISO 14000 standards and regulations.

Prerequisite: None

### **TM 360 - Production Systems (3)**

An introduction to the design, planning, management and control of production systems. Topics include: capacity planning, material management, plant layout, scheduling and production information systems.

Prerequisite: None

### **TM 362 - Leading Project Teams (3)**

Applying leadership principles to contemporary work situations through creative class participation in industrial case studies. Techniques of leading project teams, including initiating, planning, scheduling and closing projects, motivation, delegation, discipline, teamwork, decision making, and communications.

Prerequisite: None

### **TM 366 - Supply Chain and Purchasing Strategies (3)**

Overview of emerging trends in managing the manufacturing supply and value chains. Strategies, tools and techniques for production, purchasing, inventory control, customer service and distribution.

### **TM 390 - Lean Operation Management (3)**

Principles of lean manufacturing methodologies applied to operations management. Topics include 5S, production flow analysis, value stream mapping, pull systems, cellular manufacturing, waste elimination, visual factory, error proofing, quick changeover, change management.

Prerequisite: None

### **TM 400 - Senior Project (3)**

The selection of a problem in one area or facet of technology and the preparation of a term report. Areas will include planning, supervision, construction techniques, design innovations, and labor relations.

Prerequisite: None

### **TM 401 - Industrial Internship (3)**

Provides students with a supervised opportunity to work in an industrial environment directly related to their program. Written technical reports and program assessments are required. Applications obtained from the department chair. Graded on a pass-fail basis.

Prerequisite: Completion of 75 credits or permission of department chair.

### **TM 402 - Topics in Technology (1-3)**

An individualized inquiry of comprehensive study into a selected technical area. The student may elect to examine processes, products, or developmental aspects of modern industry. Open only to Industrial Technology majors. Course may be repeated for a maximum of 6 credits for different topics.

Prerequisite: Permission of the department chair.

### **TM 411 - Industrial Hygiene (3)**

Lectures and laboratory exercises covering evaluation and control of exposure to dust, fumes, mist, vapors, gases, radiation, noise, and abnormal temperatures.

Prerequisite: None

### **TM 412 - Safety Training Methods (3)**

Theory and practice of training and instructional methods for topics in Environment, Health & Safety (EH&S). Including the need for, types of, methods and technology for, and benefits of effective safety training with emphasis on positive motivation and critical thinking to enhance workplace Safety and Health.

Prerequisite: None.

### **TM 414 - Accident Investigation & Loss Control (3)**

Loss control philosophy and techniques and investigation strategies. Background information and specific techniques to develop and implement an effective company-wide and on-site loss control program, personnel responsibilities and total safety program.

Prerequisite: None

### **TM 426 - Applied Metrology (3)**

Introduce inspection of size dimensions and Geometric Dimensioning and Tolerancing (GD&T) dimensions of manufactured parts. Students will learn how to use popular measuring instruments, such as micrometers, calipers, dial indicators, gage blocks, optical comparators and coordinate measuring machines (CMM) in measuring those dimensions. Students will also learn the fundamentals of inspection data analysis. Two hours lecture and two hours lab.

Prerequisite: MM 121 or ROBO 220 or ETM 260

### **TM 436 - Advanced Applied Metrology (3)**

Introduce advanced topics such as tolerance stack up, tolerance analysis, and tolerance synthesis in Geometric Dimensioning and Tolerancing (GD&T) based on current national and international standards. Students will learn

basic and advanced techniques in coordinate measuring machines (CMM) programming. Students will also learn fundamentals of model-based definition (MBD) and gage repeatability and reproducibility (GR&R).

Prerequisite: TM 426 (C- or better)

### **TM 456 - Hazardous Material Management (3)**

Study of environmental regulations and their impact on industrial operations. Emphasis is on application of statutes, regulations and information sources concerning hazardous materials, waste handling and technical decisions pertinent to environmental and safety issues.

Prerequisite: None

### **TM 463 - Logistics Management (3)**

Logistics Management is an integral part of supply chain management that plans, implements, and controls the supply of materials, storage of goods, and related services between the point of origin and the point of consumption to meet customers' requirements. This course focuses on logistics in supply chain and manufacturing organizations, best practices, logistics services providers, international logistics, supply chain contracts, inventory planning, key performance indicators, warehousing, and sustainable logistics – response to the global challenge. Major topics link to logistics systems, needed to obtain *Professional Logistics Certifications*.

Prerequisite: TM 366 Supply Chain and Purchasing Strategies

### **TM 464 - Six Sigma Quality (3)**

Application of statistical techniques to meet the needs of continuous quality improvement in the industrial environment. Topics include variation, control and capacity, SPC for short run, and advanced process control. Emphasis on developing a continuous quality improvement strategy through supplier certification standards.

Prerequisite: STAT 104 or STAT 200 (C- or better in either course)

### **TM 490 - Advanced Six Sigma Quality (3)**

Planning techniques of Failure Mode and Effects Analysis (FMEA), Quality Function Deployment (QFD), and Design of Experiments (DOE) will be presented.

Prerequisite: TM 464.

### **TM 500 - Product Life Cycle Management (3)**

Process of managing the complete life cycle of a product or structure from concept through design, manufacture, service, and disposal. Integration of people, data, processes, and business systems are essential elements considered across the entire enterprise.

Prerequisite: None

### **TM 502 - Human Relations and Behavior in Complex Organizations (3)**

Analysis of human relations in technological organizations, including motivation, corporate processes, communication, and power.

Prerequisite: None

### **TM 510 - Industrial Operations Management (3)**

Principles underlying industrial management. Topics include organization for production, industrial risk, product research and development, and the management of capital goods.

Prerequisite: Admission to a CCSU graduate program or permission of the department chair.

Cross-Listed as: No credit given for those with credit in SCLM 510.

### **TM 511 - Advanced Safety Training Methods (3)**

Discuss instructional methods for safety professionals. Covers company needs analysis, training content development, basic facilitation and instructional strategies to increase employees safety awareness. Linked with TM 412.

### **TM 512 - Principles of Occupational Safety (3)**

Development of internal policies of a plant in an accident prevention program for its employees. Topics include safety training, job safety analysis, accident investigation, safety promotion, and record keeping.

Prerequisite: None

### **TM 551 - Project Management (3)**

Application of the techniques and tools to manage each state of the project life cycle within the organizational and cost constraints. Utilize project management tools to set goals tied to needs for successful project management.

Prerequisite: Admission to a CCSU graduate program or permission of the department chair.

**TM 561 - Application of Lean Principles (3)**

Tools and techniques of lean manufacturing as they are applied to an entire organization. Core methodologies in lean production include value stream mapping, teaming, productivity improvement, inventory reduction, pull systems, kanban, standard work, and cost reduction.

Prerequisite: None

Cross-Listed as: No credit given for those with credit in SCLM 561.

**TM 562 - Supply Chain Strategy (3)**

Strategies and key concepts in industrial supply chain management. Examines strategies, resultant management decision-making, and impact on supply chain performance.

Prerequisite: None

**TM 563 - Strategic Logistics Management (3)**

Issues related to logistics at the global level, emphasizing the integration of manufacturing logistics with operations and procurement to achieve optimal supply chain performance.

Prerequisite: None

**TM 564 - Quality Systems Management (3)**

Emphasis on the development and application of total quality system management (TQM) documents. Students will develop a planned quality document to meet domestic and international standards as defined by ISO-9000 and United States supplier certification programs.

Prerequisite: None

**TM 565 - Logistics: Traffic & Transportation (3)**

Practical techniques for improving the traffic and transportation performance of a company and its supply chain. Topics include: transportation documentation and pricing, inbound/outbound freight control, international transportation, e-logistics and third-party logistics providers.

Prerequisite: None

**TM 566 - Distribution & Warehouse Management (3)**

Methodologies for planning, managing and controlling warehouse/distribution operations in the supply chain. Topics include: equipment selection, warehouse layouts, inventory control and work methods. Topics are linked to measuring productivity and performance of warehouse operations.

Prerequisite: None

**TM 570 - Supply Chain Modeling and Analysis ( )**

Application and development of mathematical modeling tools for supply chain analysis, strategic coordination, aggregate planning and safety stock management. Related topics include supply-chain process strategy, productivity, forecasting, performance measures, global sourcing, role of quality and decision supports for supply chain systems.

Prerequisite: Acceptance to the School of Graduate Studies

**TM 572 - Innovative Leadership (3)**

Utilizes innovative concepts and methods derived from scientific and industrial management. Topics include: Lean management systems, results- and processes-focused leadership behavioral routines, decision-making flaws, value stream maps and leadership credibility and organizational capability building.

Prerequisite: None

**TM 576 - Autonomous Logistics ( )**

Introduction to modern automation technologies used in logistics. Topics include internet of things (IOT), information processing, warehouse robots, autonomous picking, robotic packing and palletizing, conveyer systems, last mile self-driving vehicle or drone delivery. The course also discusses the challenges and issues in logistics automation.

Prerequisite: Acceptance to the School of Graduate Studies

**TM 582 - Evolution of Industrial Management ( )**

Examines the origin and evolution of progressive manufacturing management from the late 1800s to the late 1900s.

**TM 590 - Decision Failure Analysis in Technology Management (3)**

Examines contemporary decisions made by technology managers that result in outcomes unfavorable to the company and its key stakeholders. Topics include: formal root cause analysis identification of practical countermeasures, predicting future failures, and lessons learned.

Prerequisite: None

**TM 594 - Research in Methods Technology (3)**

Theory and practice of conducting research in technology. Includes study of professional literature, evaluation of data gathering techniques, application of statistical methods to data, formulation and verification of hypothesis.

Prerequisite: Admission to a CCSU graduate program or permission of the department chair.

**TM 595 - Applied Research Capstone Project (3)**

Completion of an advanced project in technology under the supervision of a faculty member. Requirements include a paper and an oral presentation on the project.

Prerequisite: TM 594, permission of advisor, and a 3.00 overall GPA.

**TM 596 - Technological Issues and Problems (1-3)**

Extensive study of selected technological issues and problems. Course may be repeated for different topics, but student may not take this course for credit under the same topic more than once. Course may be repeated with different topics for a maximum of 6 credits.

Prerequisite: None

**TM 599 - Thesis (3)**

Preparation of thesis under the supervision of thesis advisor. Plans A, C, D, and E require completion of 18 credits for programs with 30-35 credits, or 24 credits for programs with greater than 35 credits, and a 3.00 overall GPA.

Prerequisite: TM 594 and permission of advisor.

**VTE - Vocational-Technical Education****VTE 113 - Introduction to Teaching Vocational-Technical Education (4)**

Introductory course for students interested in becoming certified to teach industrial courses in the CT Technical High School System (090 teaching endorsement). Content includes exploring the relationship between teacher identity and teacher roles, principles of teaching and learning and their applications in the development of instructional objectives, writing effective lesson plans, personalized instruction, learning styles, special education, classroom management, assessment of student learning, and examination of 21st Century skills and learning expectations. The Common Core of Teaching, which articulates expectations for teachers in

Connecticut, will be used as the conceptual framework for this course.

Prerequisite: None

**VTE 116 - Teaching Vocational-Technical Education (2)**

Students develop sample planning units and present prepared lessons unique to vocational technical education that include theory, demonstration, and teaching strategies. Development of portfolios based on the BEST program will be integrated into the course.

Prerequisite: VTE 113

**VTE 328 - Shop Organization and Management (3)**

Physical aspects of vocational schools and shops. Purchase and inventory of supplies, surplusing of equipment, selection and installation of equipment, and development of desirable shop layouts. The basic philosophies and practices of exploratory work offered and the specialized training which follows. Laboratory safety, public relations, use of instructional aids, and development of programs for special groups.

Prerequisite: None

**VTE 415 - Principles of Career and Technical Education (3)**

An introduction to the principles and philosophy of vocational education and its impact on society. A brief historical development of career and technical education, supportive legislation, characteristics of the various program fields, delivery systems, and current issues and problems. Award of academic credit for occupational experience. Candidates must demonstrate technical knowledge and manipulative skills by passing a written and performance examination. Open to any vocational-technical instructor enrolled in the baccalaureate program.

Prerequisite: None

**VTE 421 - Occupational Specialization (25)**

Award of academic credit for occupational experience. Candidates must demonstrate technical knowledge and manipulative skills by passing a written and performance examination. Open to any vocational-technical instructor enrolled in the baccalaureate program.

Prerequisite: None



**VTE 450 - Principles and Organizations of Cooperative Work Education (3)**

The development and organization of work experience programs at the secondary school level. Examines those activities necessary to establish, maintain, and improve cooperative work education programs.

Prerequisite: None

**VTE 455 - Labor Market Trends and Student Job Readiness (3)**

Analysis of factors influencing the work placement of cooperative work education students. Special attention given to the study of present needs as well as anticipated trends in Connecticut's labor market, and the development of a curriculum to establish job readiness skills.

Prerequisite: None

**VTE 472 - Strategies for Improving Student Achievement: CAPT (3)**

Examines each section of the CAPT, reviews what is assessed on the CAPT, and examines how and why it is assessed. Students will develop a portfolio of CAPT-like assessments related to their areas of VTE instruction. Course cannot be used to meet the requirements in a CCSU teacher certification program.

Prerequisite: None

**VTE 480 - Curriculum Development for Trade Department Heads (3)**

Curriculum development for trade department heads at Connecticut technical high schools.

Prerequisite: None

**VTE 482 - Instructional Supervision and School Administration for Trade Department Heads (3)**

Instructional supervision and school administration for trade department heads in the Connecticut technical high school system.

Prerequisite: None

**VTE 490 - Topics in Vocational-Technical Education (1-3)**

Special purpose programs designed to meet the needs of selected groups of vocational teachers or directed independent studies for individual students. Provides a mechanism that encourages the vocational instructor to elect, with the guidance of University faculty, job-specific and short-term selective experiences to insure the

instructor's technical expertise. May be repeated on different topics to a maximum of 6 credits.

Prerequisite: None

**WGSS-Women-Gender-Sexuality-Studies****WGSS 200 - Introduction to Women, Gender and Sexuality Studies (3)**

Focus on issues concerning women, gender, and sexuality. Examines these issues in societies, political institutions, education, the arts, medicine, science, and the family. No credit given to students with credit for WS 200.

Prerequisite: None

**WGSS 208 - Sociology of LGBTQ+Communities (3)**

Examines the history and structure of American gay and lesbian communities. Questions the social forces that have contributed to the formation, growth and consequences of such communities. Topics such as the gay and lesbian civil rights movement, the role of organizations and the development of gay and lesbian identity are addressed (Cross-listed with SOC 208. No credit may be received by students who have received credit for SOC 208).

Cross-Listed as: Cross-listed with SOC 208. No credit may be received by students who have received credit for SOC 208.

**WGSS 215 - Introduction to Women Writers (3)**

Introduction to women writers of the world, primarily in the eighteenth, nineteenth, and twentieth centuries.

Prerequisite: None

Cross-Listed as: Cross listed with ENG 215. No credit given to students with credit for ENG 215 or WS 215.

**WGSS 222 - Philosophy and Gender (3)**

Prerequisite: None

Cross-Listed as: Cross listed with PHIL 222

**WGSS 240 - The Sociology of Gender (3)**

Gender as social learning, social organization, and social structure. The gendered nature of friendships, sexuality, conversation, power and violence. Interpersonal institutional sexism as it affects women and men. Issues of inequalities in work, education, politics and health. Women's and men's movements. No credit will be given to students with credit for SOC 240 or WS 240.

Prerequisite: None

**WGSS 241 - Women and American Law (3)**

Prerequisite: None

Cross-Listed as: Cross Listed with PS 241. See PS 241 for detailed description. No credit given to students with credit for PHIL 241.

**WGSS 266 - Women in Art (3)**

Introduction to work by women as cultural producers from antiquity to contemporary times. Various media including sculpture, architecture, embroidery, quilting, painting, and cut paper will be explored.

Prerequisite: None

Corequisite: None

Cross-Listed as: Cross-listed with ART 266

**WGSS 288 - Topics in Women, Gender, Sexuality Studies (3)**

Topics in an area germane to women's studies on an interdisciplinary, per semester, basis. No credit will be given to students with credit for WS 288.

Prerequisite: None

**WGSS 306 - Social Construction of Sexuality (3)**

Explores how sexuality is constructed in American culture in the 21st century. Criticizes common assumptions that naturalize sex and sexuality to investigate complex and changing social contexts of sexualities. Cross-listed with SOC 306. No credit received by students who have received credit for SOC 306.

Prerequisite: SOC 110 or SOC 111 or WGSS 200

Cross-Listed as: Cross-listed with SOC 306

**WGSS 316 - Gender and Communication (3)**

Examines different theoretical approaches to gender and the implications these have for our understanding of communication theories and practices.

Prerequisite: Junior standing or higher or permission of instructor.

Cross-Listed as: Cross-listed with COMM 316. No credit may be received by students who have received credit for COMM 316.

**WGSS 330 - History of Women in the US, 1620-1865 (3)**

Prerequisite: None

Cross-Listed as: Cross listed with HIST 330. See HIST 330 for detailed description. No credit given to students with credit for HIST 330.

**WGSS 331 - History of Women in the United States, 1865-present. (3)**

Reconstruction to the present with special emphasis on how race, class, and ethnicity shaped women's experiences.

Prerequisite: None

Cross-Listed as: Cross listed with HIST 331. No credit will be given to students with credit for WS 331 or HIST 331.

**WGSS 334 - Women of Medieval Europe (3)**

Prerequisite: None

Cross-Listed as: Cross listed with HIST 334. See HIST 334 for detailed description. No credit given to students with credit for HIST 334.

**WGSS 335 - Women, Marriage, and Family in Early Modern Europe (3)**

Impact of social, economic, and ideological changes on gender roles and family structure in European society during the Renaissance, Reformation, and post-Reformation period 1400-1700.

Prerequisite: None

Cross-Listed as: Cross listed with HIST 335 No credit will be given to students with credit WS 335 or HIST 335.

**WGSS 350 - Men and Women in Different Cultures (3)**

Cross-cultural, historical overview of gender differences. Consideration of gender biases in social science research. Students will examine relations between men and women in different societies to better understand such relationships in their own lives.

Prerequisite: None

Cross-Listed as: Cross listed with ANTH 350. No credit will be given to students with credit for ANTH 350, WGSS 350, or WS 350.

**WGSS 380 - Women and Film (4)**

Examines selected films with regard to the representation of women on screen, women's filmmaking as a critical practice, and issues in feminist film theory and criticism. Includes perspectives on Hollywood and independent American and international cinema. Cross-listed with CINE 380 and COMM 380. No credit may be received by

students who have received credit for CINE 380 and COMM 380.

Prerequisite: None

Cross-Listed as: Cross-listed with COMM 380. No credit may be received by students who have received credit for COMM 380.

### **WGSS 390 - Topics in Women, Gender, and Sexuality Studies (3)**

Intermediate course exploring specific areas of inquiry and research in women, gender and sexuality studies.

Prerequisite: WGSS 200.

### **WGSS 391 - Human Sexuality (3)**

Survey of social scientific theories and studies relevant to understanding human sexuality. Topics include reproductive technology, attraction, sexual response cycle, therapeutic interventions, sexually-transmitted diseases, and human development.

Prerequisite: PSY 112 and one other course in psychology.

Cross-Listed as: Cross-listed with PSY 390. No credit may be received by students who have received credit for PSY 390.

### **WGSS 398 - Special Topics in Women, Gender, and Sexuality Studies (1)**

Course exploring specific areas of inquiry and research in women, gender, and sexuality studies. Credit hours will align with the University's established guidelines for course credits and work load. When cross-listed with courses from other programs, the credit hours and work load will align with those of the host program or department.

Prerequisite: Prerequisite WGSS 200 or permission of instructor.

### **WGSS 435 - Images of Gender in the Media (4)**

Examines media constructions and representations of femininity and masculinity, Focus on popular forms of media including television, film, and advertising. Cross-listed with COMM 435. No credit may be received by students who have received credit for COMM 435.

Prerequisite: None

Cross-Listed as: Cross listed with COMM 435. No credit given to students with credit for WS 435 or COMM 435.

### **WGSS 448 - Psychology of Women (3)**

Review of research and theories pertaining to the psychology of being female in the development of cognitive, emotional, motivational, and social behavior is emphasized. Psycho-social implications and consequences of changing sex roles will be examined.

Prerequisite: None

Cross-Listed as: Cross listed with PSY 448. No credit will be given to students with credit for WS 448 or PSY 448.

### **WGSS 461 - Intimacy and Aging (1)**

No credit will be given to students with credit in SOC 461. This course examines the variety of intimate and sexual relationships of older adults as well as a broad range of issues related to sexuality and aging in a social, historical and political context. Emphasis is placed on understanding the type, nature, content, and meaning of relationships, as well as on identifying contextual factors including gender, race, ethnicity, class, sexual orientation, and health status that structure these relationships.

Prerequisite: SOC 110 or SOC 111 or GERO 101 or permission of instructor

Cross-Listed as: No credit given to students with credit in WGSS 461.

### **WGSS 462 - Worlds in Motion: Gender, Race and Global Migration (4)**

Examines the debates surrounding contemporary global migration, using race and gender as analytical tools to understand the lived experiences of migrants. Topics include labor migration, refugees, women workers in the global economy, human trafficking, the global market in reproductive technologies and sex tourism.

Prerequisite: SOC 110 or WGSS 200

Cross-Listed as: SOC 462

### **WGSS 469 - Readings in Women, Gender, and Sexuality Studies (3)**

Graduate students must have permission of instructor. Independent study in women, gender, and sexuality studies of special interest to students under the supervision of one or more affiliated woman, gender and sexuality studies faculty members. No credit will be given to students with credit for WS 469.

Prerequisite: WGSS 200 (formerly WS 200) and permission of instructor.

**WGSS 498 - Special Topics in Women Gender and Sexuality Studies ( )**

Course exploring specific areas of inquiry and research in women, gender, and sexuality studies. Credit hours will align with the University's established guidelines for course credits and work load. When cross-listed with courses from other programs, the credit hours and work load will align with those of the host program or department.

Prerequisite: WGSS 200 or permission of instructor

**WL - World Languages****WL 111 - Elementary Modern Language I (3)**

Open to students with one year or less of high school study to the target language. Not open to native speakers. Through a direct conversational approach, foundations of the target language grammar and structure are established. May be repeated in a different language.

Prerequisite: None

**WL 112 - Elementary Modern Language II (3)**

Study of the spoken and written target language is continued with analysis of the target language's structure. May be repeated in a different language.

Prerequisite: ML 111 (same language) or high school equivalent (normally two years of high school study).

**WL 125 - Intermediate Modern Language I (3)**

Principles of the target language structure are reviewed. Short stories and plays are read and discussed. Conversational and composition on topics of general interest. No credit given to students with credit for more advanced coursework in the target language. May be repeated in a different language.

Prerequisite: One year of college instruction in the target language, or equivalent.

**ML 126 - Intermediate Modern Language II (3)**

Continuation of WL 125 including the study of grammatical structures of the target language. No credit given to students with credit for more advanced coursework in the target language. May be repeated in different language.

Prerequisite: ML 125 in the target language or equivalent.

**WL 200 - Topics in World Language Studies (0.5-3)**

Further development of particular skills, structures, and uses of language studied at the intermediate level. Taught

in the target language. May be repeated with different topics and in different languages. May be counted as an elective for a major or minor in a modern language.

Prerequisite: Permission of instructor.

**WL 300 - Topics in World Language Cultural Study (0.5-3)**

Study of cultural, social, economic, geographical, and historical aspects of the countries where the target language is spoken. Taught in the target language. May be repeated with different topics and in different languages. May be counted as an elective for a major or minor in a modern language.

Prerequisite: Permission of instructor.

**WL 400 - Topics in Advanced Modern Language Studies (3)**

Literary and advanced language topics taught in the target language. May be repeated with different topics and in different languages. May be counted as an elective for a major or minor in a modern language.

Prerequisite: Permission of instructor.

**WL 420 - Internship in Foreign Languages (1-3)**

Practical field experience using the target language. One credit per eight-week unit. May be repeated to a total of 3 credits.

Prerequisite: Appropriate 226 course or equivalent in target language.

**WL 425 - Field Work in World Language Education (1)**

Thirty hours of supervised field experience in a secondary setting assigned by the instructor. Must be taken concurrently with WL 429.

**WL 428 - Methods and Materials for Teaching World Languages at Elementary School Level (3)**

Participants will link the rationale, history, and theoretical foundations of elementary world language instruction to teaching and learning, and construct and adapt models for curriculum planning, program implementation articulation, and assessment. Participants will explore contemporary methodologies, lessons, activities resources, and address issues and concerns that apply to the elementary school level.

Prerequisite: ML 490 (may be taken concurrently) or LING 300 (may be taken concurrently) or permission of instructor, and admission to Professional Program or Accelerated Teacher Program in Spanish or admission to

graduate program in modern language or permission of instructor for currently certified teachers.

Notes:

Instructors may not override professional program admission requirement. CT law requires fingerprinting and a criminal background check for the field experiences in this class. Fingerprinting must be completed prior to the beginning of class.

### **WL 429 - Seminar in Modern Language Teaching Methods (3)**

Discussion and practice of the historical, theoretical and contemporary issues, and selected topics related to the teaching of modern languages at the secondary level. Not for credit toward any master's degree. In accordance with CT law, districts may require criminal background and/or DCF child abuse and neglect registry checks to participate in the field experiences in this class. Students are required to follow the background check policies of the district in which they are placed and are responsible for all associated fees. CCSU is not responsible for district policies. Must be taken concurrently with WL 425.

Prerequisite: Admission to the Professional Program or State language certification.

Corequisite: WL 425

### **WL 440 - Student Teaching Seminar in Modern Languages (1)**

Discussion, critical thinking and problem solving techniques with applications in the foreign language classroom. Taken concurrently with EDSC 435.

Prerequisite: Admission to the Professional Program in teacher education.

### **WL 490 - Teaching World Languages II: Acquisition in Young Children for Teachers of World Languages (3)**

Participants will learn about research in the first and second language acquisition of world languages and discuss and apply implications of research findings (including brain research theory) for teaching and learning of world languages. Not open to TESOL students.

Prerequisite: Admission to Professional Program or Accelerated Teacher Program in Spanish or admission to graduate program in modern language or permission of instructor for currently certified teachers.

Notes:

Instructor may not override professional program admission requirement.

### **WL 492 - Topics in Language Teaching (1-3)**

Special aspects of language teaching, such as creative uses of the language laboratory and other special aids, individualizing language instruction, teaching of literature and culture in the schools, will be emphasized. Topics may vary from section to section. Course may be repeated, with different topics, for up to 6 credits.

Prerequisite: ML 429.

### **WL 496 - Independent Study in World Languages (0.5-3)**

Independent work in language, culture, and literature, to meet individual interest in topics not covered in the regular curriculum. Work done under the supervision of a faculty member.

Prerequisite: Permission of instructor.

### **WL 500 - Studies in Modern Languages (3)**

Study of selected language, cultural and literary topics taught in the target language. May be repeated with different topics for up to 6 credits.

Prerequisite: Permission of instructor.

### **WL 519 - Advanced Teaching of World Languages: Acquisition in Young Children for Teachers of World Languages (3)**

Participants will learn about research in first and second language acquisition and will discuss both the theoretical and practical implications of research for teaching and learning of World Languages in elementary school settings. Not open to TESOL students. No credit given for those with credit in WL 490.

Prerequisite: None

Cross-Listed as: WL 490

### **WL 529 - Methods of Teaching World Languages in Elementary Schools (3)**

Participants will learn about the theoretical and pedagogical foundations of elementary World Language instruction and will explore contemporary methodologies that apply to the elementary school level. No credit given for those with credit in WL 428.

Cross-Listed as: WL 428

### **WL 539 - Advanced Methods of Teaching World Languages in Secondary Schools (3)**

Participants will learn about the theoretical and pedagogical foundations and teaching methodologies

related to the teaching of World Languages at the secondary school level.

### **WL 550 - Intensive Studies in Modern Languages (3)**

Intensive study of the language, culture, and society of specific areas where the target language is spoken. Designated for current teachers and other graduate students of the target language, it includes a technology component. May be repeated with different topics for up to 9 credits per graduate program.

Prerequisite: Admission to the Summer Institute of the target language.

### **WL 595 - Special Project in Modern Languages (3)**

Preparation of Special Project in Modern Languages under the supervision of a faculty member.

Prerequisite: Completion of 18 credits of approved graduate studies program, approval of advisor, and 3.00 overall GPA.

### **WL 598 - Research in Modern Languages (3)**

Introduction to techniques and resources of literary research through examination of the theory, history, and practice of literary criticism. Course should be taken during first 15 credits of graduate study.

Prerequisite: Admission to the graduate program.

## **WRT - Writing**

### **WRT 100 - Fundamentals of Composition (3)**

To prepare students for WRT 110, this course focuses on the fundamental skills of academic writing (developing and presenting a controlling idea; responding to reading; awareness of audience; writing conventions such as tone, mechanics, and citations), and the steps necessary to write successfully in college (crafting sound arguments; developing and organizing essays; prioritizing different writing tasks; reflecting on one's own writing). Students who are required to take WRT 100 must pass the course with a C- or better before successfully completing 30 credits. For students with a WRT 100 placement, this course is a pre-requisite for WRT 105/WRT 105P and WRT 110. No credit given for students with prior credit for ENG 099, WRT 105 and or WRT 110.

Prerequisite: Placement by CCSU Writing Placement Test or permission of Department Chair or Director of Composition.

### **WRT 105 - Enhanced Introduction to College Writing (3)**

Introductory course in college-level academic writing for students who would benefit from additional individual and small-group writing instruction. Shares WRT 110's focus on reading and responding to complex sources; critical thinking; writing as a social act; use of evidence; academic conventions; and writing process.

Supplemented by required two additional hours of basic writing instruction and tutorial assistance in WRT 105P. Satisfies first-year writing requirement. Students enrolling in a section of WRT 105 must enroll in the associated section of WRT 105P. Students with credit for ENG 105 cannot get credit for WRT 105.

Prerequisite: Placement by Writing Placement Test, or permission of English Department Chair or Director of Composition, co-requisite with WRT 105P.

### **WRT 105P - Enhanced Introduction to College Writing Workshop (2)**

Required 2-hour workshop accompanying WRT 105, offering basic writing instruction and tutorial assistance to support and supplement work in WRT 105. Students enrolling in a section of WRT 105P must enroll in the associated section of WRT 105. Students with credit for ENG 105P cannot get credit for WRT 105P.

Prerequisite: Placement by Writing Placement Test, or permission of English Department Chair or Director of Composition; required co-requisite with WRT 105.

### **WRT 110 - Introduction to College Writing (3)**

Introductory course in college-level academic writing focusing on reading complex sources and writing about them. Emphasis on critical thinking and inquiry; writing as a reflective, social act; locating, evaluating, and using evidence; and applying conventions of the academic community. Substantial guided practice with and discussion of writing as a process. [WRT 110](#) or an acceptable equivalent is required of all students at CCSU. No credit for students who have passed [WRT 105](#).

Enrollment Policies: A score of 31 or higher on the SAT Writing & Language Test (or 23 or higher on the English portion of the ACT) is needed to enroll in [WRT 110](#). Students with scores below these must take the Writing Placement Test to determine their writing course placement. Newly matriculated students who need to take the Placement Test normally receive notice from the English Department; those who do not should contact the department. Students do not need to take WRT 110 if they have transferred in WRT 110-specific credit to CCSU from a previous institution; if they earned a 3 or higher on

the AP English Language & Composition Exam; or if they have been admitted to the Honors Program. Students who have transferred in WRT 100 credit can enroll in WRT 110 without taking the Writing Placement Test. Students with credit for ENG 110 cannot get credit for [WRT 110](#).

Prerequisite: Per placement and enrollment policy.

### **WRT 202 - Intermediate Composition (3)**

Intermediate course in expository writing designed to expand the student's writing skills. Emphasis on academic and career-oriented writing in the student's major field or area of interest, including research skills and papers, professional reports, and resumes. Students with credit for ENG 202 will not get credit for WRT 202.

Prerequisite: WRT 110 or WRT 105 or permission of department chair.

### **WRT 265 - Introduction to Creative Writing: A Survey of Forms (3)**

Introduction to basic writing techniques used in poetry, fiction and nonfiction. Students with credit for ENG 265 will not get credit for WRT 265.

Prerequisite: WRT 105 or WRT 110.

### **WRT 275 - Digital Rhetorics ()**

Introduction to theory and design principles for creating digital media texts for various audiences, both academic and public.

Prerequisite: WRT 105 or WRT 110

### **WRT 280 - Tutoring Writing (3)**

Introduction to theories of teaching and tutoring writing as well as to the history of writing centers. Application of scholarship to develop tutoring skills and strategies. Students with credit for ENG 280 will not get credit for WRT 280.

Prerequisite: WRT 105 or WRT 110 or equivalent

### **WRT 370 - Creative Nonfiction I (3)**

Introduction to various creative nonfiction writing techniques, including how to develop a literary voice, conduct creative research, play with conventional structures, and match a writing style to a specific form, such as personal essay. Students with credit for ENG 370 will not get credit for WRT 370.

Prerequisite: WRT 110.

### **WRT 371 - Creative Writing: Fiction I (3)**

Introduction to the art and craft of literary fiction with emphasis on developing fiction writing ability and critical reading skills. Students will actively participate in workshop sessions. Students with credit for ENG 371 cannot get credit for WRT 371.

Prerequisite: None

### **WRT 372 - Creative Writing: Fiction II (3)**

Presupposes proficiency in vocabulary, basic techniques, and workshop method of short fiction writing. Students are expected to have already written a considerable body of work and to be prepared to submit stories at the semester's start. Students with credit for ENG 372 cannot get credit for WRT 372.

Prerequisite: WRT 371 or permission of instructor.

### **WRT 373 - Creative Writing: Poetry I (3)**

Introduction to the art and craft of writing poetry, emphasizing both poetry writing ability and critical reading. Students are expected to participate fully in the workshop method of critique and revision in class. Students with credit for ENG 373 cannot get credit for WRT 373.

Prerequisite: None

### **WRT 374 - Creative Writing: Poetry II (3)**

Presupposes proficiency in vocabulary, poetry writing techniques, workshop methods. Students must already have a considerable body of work, and generate new work. Students with credit for ENG 374 will not get credit for WRT 374.

Prerequisite: WRT 373 or permission of instructor.

### **WRT 375 - Creative Nonfiction II (3)**

Presupposes an understanding of the basic techniques used in short nonfiction. Students will experiment with various creative nonfiction forms, with special emphasis on shorter articles, including personal essay, humor writing, and literary travel pieces. Students with credit for ENG 375 cannot get credit for WRT 375.

Prerequisite: WRT 370.

### **WRT 376 - Creative Writing: Essay (3)**

Write the familiar and formal personal essay. Primarily a writing course, but also an overview of the form. Readings may begin with Montaigne and Thoreau, but quickly move to more contemporary authors. Students with credit for ENG 376 cannot get credit for WRT 376.

Prerequisite: None

**WRT 377 - Creative Writing: Playwriting (3)**

Introduction to the art and craft of playwriting, emphasizing writing ability and critical reading skills. Students are expected to participate actively in workshop sessions. Students with credit for ENG 377 cannot get credit for WRT 377.

Prerequisite: None

**WRT 378 - Creative Writing: Special Topics (3)**

Specific creative writing genres taught on a rotating basis. May be repeated with different topics for a maximum of 6 credits. Students with credit for ENG 378 cannot get credit for WRT 378.

Prerequisite: One 300 level creative writing course or permission of instructor.

**WRT 382 - Travel Writing (3)**

Introduction to the art and craft of travel writing beginning with an overview of the genre and exploration of contemporary works. Students will write essays and articles. Students with credit for ENG 382 cannot get credit for WRT 382.

Prerequisite: JRN 200 or WRT 370 or permission of instructor.

**WRT 383 - Writing for Digital Platforms (3)**

Students will learn to write and present narratives across digital platforms, with a special focus on the text portion of online publishing. How has digital media, including Twitter, Reddit and Facebook, impacted writing techniques? How have the shifting expectations of online reading impacted the writer's role as storyteller? Students with credit for ENG 383 will not get credit for WRT 383.

Prerequisite: WRT 110; or WRT 105 and WRT 105P

**WRT 384 - Publishing (4)**

This course will use a web-based literary publication as a framework for a basic introduction to various editorial jobs (copy editor, assistant editor, managing editor) and compare production requirements for both print and online publications. Students will study links, headline writing, tag writing, and web optimization, as well as writing for precise lengths under firm deadlines. They will edit submissions and work with authors. Includes one-hour "lab" for hands-on production work. Students with credit for ENG 384 will not get credit for WRT 384.

Prerequisite: WRT 110 or WRT 105 and WRT 105P

**WRT 385 - Topic: Writing About... (3)**

Each "Writing About" class will focus on a primary theme, such as Health, Politics, Business, or Social and Cultural Issues. Students will learn specialized skills for researching and writing about a topic relevant to their career or other interests. Students with credit for ENG 385 cannot get credit for WRT 385.

Prerequisite: WRT 110 or WRT 105 and WRT 105P

**WRT 401 - Advanced Composition (3)**

Advanced course in expository writing designed for competent writers who wish to refine their skills. Emphasis on vividness, precision, and impact, with attention to audience and style. Not applicable to M.A. in English program. Students with credit for ENG 401 cannot get credit for WRT 401.

Prerequisite: None

**WRT 403 - Technical Writing (3)**

A course designed to assist students in planning, researching, structuring, writing, revising, and editing technical materials. Emphasis on various types of writing drawn from an industrial/professional context: reports, correspondence, directories, manuals, technical articles. Not applicable to M.A. in English program. Students with credit for ENG 403 cannot get credit for WRT 403.

Prerequisite: None

**WRT 483 - Advanced Creative Nonfiction (3)**

Presupposes some experience writing creative nonfiction. Students will explore various techniques required to write longer articles, such as features, extended profiles, and longer personal essays. Students will be expected to produce at least one lengthy paper and workshop all of their work in class. Cannot be used for credit in English MA program. Students with credit for ENG 483 cannot get credit for WRT 483.

Prerequisite: WRT 375 or permission of instructor for graduate students

**WRT 484 - Advanced Fiction Workshop (3)**

Presupposes mastery of the vocabulary and basic techniques of writing literary fiction and the workshop method. Students are expected to have a considerable body of work, and generate new work. Addresses creative process, preparation of manuscripts, publishing, and academic and career options. Students with credit for ENG 484 cannot get credit for WRT 484.



Prerequisite: WRT 372 or permission of instructor.

**WRT 485 - Advanced Poetry Workshop (3)**

Presupposes mastery of the vocabulary and basic techniques of writing poetry, and the workshop method. Students are expected to have a considerable body of work, and generate new work. Addresses creative process, preparing poetry manuscripts, publishing, and academic and career options in creative writing. Students with credit for ENG 485 cannot get credit for WRT 485.

Prerequisite: WRT 374 or permission of instructor.

**WRT 486 - Creative Writing Capstone Seminar ()**

Required of all creative writing minors. Students will substantially revise a significant amount of selected work from prior writing courses, explore the role and function of an editor in the editorial process, and learn to identify markets for creative work. The course will also focus on the art of the public reading, and what it means to be a literary citizen. Students will organize, promote and run a public reading.

Prerequisite: WRT 372, WRT 374, or WRT 375

**WRT 486 - Creative Writing Capstone Seminar ()**

Required of all creative writing minors. Students will substantially revise a significant amount of selected work from prior writing courses, explore the role and function of an editor in the editorial process, and learn to identify markets for creative work. The course will also focus on the art of the public reading, and what it means to be a literary citizen. Students will organize, promote and run a public reading.

Prerequisite: WRT 372, WRT 374, or WRT 375

**WRT 494 - Creative Writing: Independent Study (3)**

A senior conference course for students wishing to follow a planned program of writing/study. Typically, this course is for students wishing to prepare a publishing manuscript or a portfolio of their work for application to graduate programs in creative writing. Students with credit for ENG 494 cannot get credit for WRT 494.

Prerequisite: Permission of department chair.

## UNDERGRADUATE ACADEMIC POLICIES AND REQUIREMENTS

### Student Status Definitions and Policies

#### Full-time Matriculation (FT) Course Load and Credits

A typical study program for a full-time matriculated (acceptance into a planned program of study) Central Connecticut State University student in good standing is traditionally 15 to 17 credits of academic work per semester, depending on classification and major. A full-time student must carry a minimum of 12 credits per semester.

#### Part-time Matriculation (PT) Course Load and Credits

Application for undergraduate part-time degree matriculation (acceptance into a planned program of study) is made through the Office of Recruitment and Admissions. Students who choose to pursue an undergraduate degree program on a part-time basis should register for courses through the Office of the Registrar. Part-time students may enroll in day or evening classes. Saturday morning classes are also available. The course offerings and registration information may be found on the **Registrar's Website**. Individuals with a high school diploma or an equivalency diploma may earn college credit by registering in university courses with the Office of the Registrar. Others may enroll, for no credit, as auditors.

Part-time undergraduate students may register for up to a maximum of 11 credits. To maintain their status, part-time students must register for classes in at least one of the regular academic semesters each year.

#### Change of Status from Full-time to Part-time

Change of status from full-time to part-time may be requested at any time through the third week of a semester. No change of status is permitted after the third week. Refer to the **Registrar's Website** for further details.

### Non-Matriculation

Non-matriculated students may only enroll part-time and may register for a maximum of 11.99 credits in a semester. Non-matriculated undergraduate students must apply for matriculation (acceptance into a planned program of study) before 30 credits are completed. Students will not be allowed to matriculate after completion of 30 credits without specific recommendation of an academic dean of the University. Non-matriculated students are not eligible for Financial Aid.

### Classification of Students

Membership in a class is determined by total earned credits as follows:

First-year	0-25 credits
Sophomore	26-53 credits
Junior	54-85 credits
Senior	86+ credits

### Time Expectations for Student Course Equivalent Work

Undergraduate students are expected to invest a minimum of four hours per week per credit hour, including class time, for courses that meet for a full semester. For courses that meet for a shorter duration, a corresponding increase in the time invested is expected.

### Major and Degree Policies

#### Declaration of Major

First time college students and transfer students to Central may declare a major at the time of application to the university or may choose the option to be Exploratory. Transfer students entering with an Associate Degree must declare a major at the time of application. All students are required to declare a major once 45 credits (including AP and other college credit) have been completed. It is strongly recommended that students declare a major by the end of the first year. Students who declare or change a major after the first year may require more than four years to complete all degree requirements, depending on the program of study.

Exploratory students are assigned an academic advisor in Explore Central. Explore Central advisors assist Exploratory students with directed academic and career exploration activities and guide them through the process of initiating the Change of Major Form to declare a major. Change of major requests may be subject to specific departmental or professional school requirements for acceptance.

Students who reach the 45 credit threshold without a major will be able to register only after meeting with an advisor and officially declaring a major. Transfer students and re-entering students with more than 45 credits must declare a major by the end of first academic semester of attendance.

Students who have been denied admission to a professional school or those who have been administratively changed to Exploratory are referred to Explore Central for academic and career advising. These students have one semester to declare a new major.

### Minors

A minor, a secondary field of study, is required for certain majors. Students who complete an associate degree from a regionally accredited institution of higher education may be eligible to have the minor requirement waived if the associate degree is in a major different than their current major, is not in general or liberal studies, and contains at least 18 credits of appropriately related coursework that are not being applied toward the CCSU major. Students who meet these conditions may apply to the Dean of their school for a waiver of the minor requirement.

No minor is required for students completing a double major. Up to four (4.0) credits may apply simultaneously to both the major and the minor where curricular requirements overlap or where a course substitution has been approved, unless prohibited by the department or program. For minors larger than 18 credits or for second minors, additional simultaneous application of credits may be permitted by the department or program provided there are fourteen (14) unique credits for the minor. Although minor requirements and exceptions to that requirement are specifically noted in the individual program listing, students should consult with their advisors regarding the requirement of a minor.

### Change of Major, Minor, or Degree

To change or declare a degree program, major or minor, a student must obtain a "Change of Major, Degree or Advisor" form on the [Registrar's Website](#) or in the Office of the Registrar, obtain the necessary signatures and return it to the Office of Registrar. For admission requirements to specific degree programs, refer to the website of the school in which the program is located.

### Declaring a Second Undergraduate Major

As part of their undergraduate degree programs, students may complete a second major. To have a second major notation on the official transcript, students must complete a "Second Major Request Form", available on the [Registrar's Website](#) or in the Office of the Registrar. This form requires the declaration of the student's degree, the primary major, the requested second major, and signatures from the department chairperson and dean of the primary major, as well as the department chairperson and dean of the secondary major. If applicable, the degree and major associated with a BSN, BFA or BS teacher education program must be listed a student's degree and primary major. No minor will be required for students completing a double major. Up to twelve (12.0) credits may apply simultaneously to both majors where curricular requirements overlap or where a course substitution has been approved. This limit does not apply to the Common Business Core courses in the School of Business.

### Second Undergraduate Major and Second Degree Policy

A student who has already completed a bachelor's degree may be admitted to Central Connecticut State University for a second undergraduate degree or a second undergraduate major within the student's original degree program. A transfer student (whose earlier degree is not from CCSU) must satisfy all degree, major, minor, general education and residency requirements. Transfer students are required to have a minimum of 30 credits at CCSU in order to receive a bachelor's degree. A student, who already holds a bachelor's degree from CCSU and wishes to complete a second degree, may do so by completing all curriculum requirements in effect at the time of re-admission, with a minimum of 30 new credits. If all curriculum requirements are met, and the 30-credit minimum has not been attained, the remaining credits shall consist of additional directed electives chosen by the department. When these new degree requirements are met, the student will be issued another diploma and will be entitled to participate in commencement ceremonies.

A student who already holds a bachelor's degree from CCSU may complete a second major within the original degree program. Although there is no minimum credit hour requirement for a second major, all curriculum requirements in effect at the time of re-admission must be completed. Upon completion the student will receive only an additional notation on the transcript; additional diplomas will not be printed, and students will not participate in commencement ceremonies. Students in this category should inform the Office of Registrar of their intentions soon after re-admission.

### **Undergraduate Certificates**

An undergraduate certificate is a credential that is conferred upon the satisfactory completion of a postsecondary education program of study. An undergraduate certificate program may be completed as a stand-alone program or concurrently with a bachelor's degree program. Unless otherwise specified, all undergraduate academic policies and procedures apply to undergraduate certificate students

#### ***Curriculum Requirements and Policies for Undergraduate Certificates***

Any course credit obtained as part of a certificate may be applied to either a major or minor within a degree program. There is no limit on the number of courses that can apply both to a certificate and a degree. Certificates are intended to be "stackable," such that a course taken may apply to more than one certificate simultaneously, and multiple certificates may be obtained on the way to an undergraduate degree. However, in the case of certificates embedded in a major, courses required for the certificate may not all count toward the specific curricular requirements of the major.

#### ***Admissions and Registration***

Undergraduate certificates are available both to students seeking degrees and to non-degree seeking students. Students already matriculated to CCSU and pursuing a degree may add a certificate program by meeting any additional admission requirements established by the program, completing any application materials specific to the program, and by submitting the Registrar's Change of Major Form. Students taking courses within a program who wish to declare for the certificate must do so before completing the final course in the program.

Students not currently matriculated to CCSU can apply to a certificate program by completing the online application

through the University Office of Admissions. Applicants must submit the following:

- Highschool transcript(s)
- College transcripts (if any)
- Non-refundable application fee

Applicants may also be required to complete any application materials required by a particular certificate program and/or meet additional requirements set by the program. Students who complete a certificate and wish to pursue a degree can use the CCSU Reactivation Form.

Non-matriculated students interested in pursuing individual courses within a certificate program may register through CCSU's Registrar's Office. Prospective students will need to meet any prerequisites or permissions required to enroll in a course

#### ***Transfer Credit***

Whether in a degree seeking program or not, students pursuing a certificate may request the application of transferred credit. The determination of whether a transferred course meets the specific certificate requirements will be made by the program. Students may transfer no more than 50% of the credits required to complete a certificate into the program. Students requesting transferred credit for experiential or other non-traditional forms of learning may do so through CCSU's existing policy for Acceptance of Non-Traditional Credit.

#### ***Program Completion***

Certificate seeking students must maintain a minimum cumulative grade-point average of 2.00 and receive grades of C- or better in all courses required for the certificate unless otherwise specified. At least 50% of courses must have been completed at CCSU. Certificates will be conferred at the 4 times during the academic year that degrees are conferred: May, August, December, and January.

As in the case of undergraduate degrees, the Office of the Registrar reviews a student's graduation evaluation and notifies them of any remaining program requirements. After a student has completed all requirements the certificate will be conferred in the term associated with the completion of their last program requirement(s). The certificate will appear on the academic transcript.

Certificate requirements must be completed in full for a student to participate in commencement exercises.

Students who complete a certificate but who have not obtained a degree are not eligible for graduation honors

### **Accelerate Central Programs**

*Accelerate Central* is a program that offers highly motivated and well-qualified Central Connecticut State University undergraduate students the opportunity to complete both a bachelor's and a master's degree in as few as 5 years of full-time study. *Accelerate Central* allows CCSU students to get a jump-start on a graduate degree by taking up to four (4) graduate level courses, for graduate credit, while remaining a matriculated undergraduate student. Depending on the program, two to four courses may count at both the undergraduate and graduate level. Please see the undergraduate program page to determine how many courses may be counted at both levels.

All CCSU undergraduate students are eligible to apply to *Accelerate Central* after successful completion of 60 or more credit hours; of which, at least 12 credit hours must be completed at CCSU. Some programs may require more credits to be completed at CCSU before a student is eligible to apply to an *Accelerate Central* program.

For acceptance into *Accelerate Central*, the standard undergraduate student will need a GPA of 3.3 or higher (for the most recent 60 credit hours of completed study) and meet program-specific admission criteria.

Students who are accepted into *Accelerate Central* will officially matriculate into the School of Graduate Studies the semester immediately following conferral of their bachelor's degree, provided the minimum 3.0 GPA is maintained.

Students wishing to defer their graduate studies must notify graduate admissions of this decision prior to the start of the term following the conferral of their bachelor's degree.

### **Registration Related Policies**

#### **Alternate Pins for Registration**

Students are assigned a unique alternate personal identification number (PIN) each semester for the purpose of registering for classes. Alternate pin numbers are available at the start of the advising period. Students should meet with their academic advisor for advising and to obtain their pin number.

### **Medical Leaves of Absence**

The University is committed to supporting the health and well-being of their students. The University provides a wide range of counseling services to address the mental and physical health needs of their students, including counseling, psychiatric services, consultation, and referral assistance. The goal of the university is to enable each and every student to function fully as a member of the academic community. Students are permitted to take voluntary leaves of absence for physical or mental health reasons. If a student so requests, the Student Health Service or Counseling Center will assist a student in determining whether to take a voluntary medical leave of absence and in arranging that leave. A student on a voluntary medical leave of absence may maintain contact with, and may visit, campus friends and teaching, residence, counseling and administrative staff.

### **Course Numbering System**

The following numbering system is used by Central Connecticut State University for Undergraduate and Graduate Courses

- 001-099 Non-credit courses and developmental courses
- 100 Search courses (undergraduate credit)
- 101-199 Courses open to first-year students, and in general to all undergraduate students
- 200-299 Courses open to sophomores, and in general to all undergraduate students
- 300-399 Courses open to juniors, and in general to sophomores, juniors, and seniors
- 400-499 Courses open to seniors, and in general to juniors, seniors, and graduate students, when included in the graduate catalog. Additional work is required for graduate students to earn graduate credit.

\*Courses numbered under 400 may be applied toward teacher certification and official certificate programs when recommended by the advisor, but will not be approved for inclusion in a degree program.

\*Courses numbered 400 and above may be included in a planned program of graduate study only when they are listed in the graduate catalog and the course description so allows and when approved by the advisor and the School of Graduate Studies Dean. Students may have a maximum of nine credits (and in some cases zero to six, depending on the program) at the 400 level as approved by the program advisor.

**"Bridge" Course**

A "bridge" course is an entry-level graduate course which may share lectures with a specific advanced undergraduate (400-level) capstone course that is integral to each program (undergraduate and graduate). Each of these courses will have different numbers, titles, syllabi, and requirements. Undergraduate bridge courses must not have graduate credit.

**"Link" Course**

A "link" course is a graduate course which may share lectures with a specific advanced undergraduate (400-level) course on the same topic. These courses may be electives. Each of these courses will have different numbers, titles, syllabi, and requirements. Undergraduate link courses must not have graduate credit.

500-599 Graduate courses; prior to enrollment, undergraduates who possess a 3.00 GPA or better and have completed 90 credits of study, may request registration by using the Enrollment in 500-level graduate course form which requires approval from the undergraduate advisor, course instructor, chair of the department offering the course and the dean of the School of Graduate Studies. Preferential admissions will be granted to graduate students.

600-699 Graduate courses open only to master's, sixth-year, and doctoral students.

700-799 Graduate courses open only to doctoral students

**Cross-Listed Courses**

Cross-listed courses may be offered under different identifiers (e.g. COMM and CINE), but they have the same description and syllabus. These courses are listed in the catalog as "cross-listed", and no student may receive credit for the course under one identifier if they have already received credit for the course on the same topic under the other identifier. These courses are treated as equivalent for all purposes including graduation requirements, G.P.A. calculations, and earned credits.

**Math Requirement and Placement Testing**

There are different mathematics course requirements for each major and all students are required to take two courses in the area of mathematics, statistics, or computer science as part of the general education requirement. (MATH 099 and MATH 101 do not satisfy this requirement.)

The SAT or ACT Math score is initially used to determine eligibility for the first math course for entering first-time students. Students are encouraged to take a mathematics placement exam (Accuplacer) if, after reading the course descriptions, they think they are prepared to succeed in a higher-level course than the one they are eligible to take based on the SAT or ACT score.

**Mathematics and statistics course descriptions** are found online at [www.ccsu.edu](http://www.ccsu.edu).

Placement exams are administered through The Learning Center on a regular schedule.

Transfer students do NOT need a placement exam if they have transfer credits at CCSU for MATH 99, MATH 101, MATH 115, MATH 119, MATH 121, MATH 123, MATH 135, MATH 152, or MATH 221. These courses are used as the prerequisite to your next level mathematics course. However, transfer students who have transfer credit for MATH 105, MATH 110, MATH 113, MATH 124, MATH 125, MATH 213, STAT 104, STAT 200, OR STAT 215, do need a placement exam if their plan of study requires MATH 135 OR MATH 152. If a student has transfer credit for a math higher than MATH 101 at CCSU that is not listed above, they should consult an advisor or the Department of Mathematical Sciences to see if a placement test is needed.

If a student has taken Accuplacer at CCSU or elsewhere within the last two years, the score may be used for placement in a CCSU mathematics course.

**Writing Requirement and Placement Testing**

All entering students are required to take WRT 105 (Enhanced Introduction to College Writing) or WRT 110 (Introduction to College Writing), which are introductory courses in academic writing, unless exempt due to previous coursework. A score of 31 or higher on the Writing and Language portion of the SAT or 23 or higher on the English composite portion of the ACT is needed to enroll in WRT 110. Students with SAT Writing and Language scores below 31 or ACT English composite scores below 23 are required to take CCSU's Writing Placement Test, which will place them in WRT 110, WRT 105, or WRT 100 (Fundamentals of Composition).

**ENG 099 and MATH 099**

ENG 099 and MATH 099 are three-credit courses. The grade awarded will be computed into a student's GPA, but the credits will not count towards the number of credits required for graduation. Students needing to demonstrate college-level proficiency in either or both English and

math are required to successfully complete the appropriate courses within their first 24 academic credits. Students will have five opportunities to complete the courses by attending the Summer Sessions prior to and following their freshman year or the Fall, Winter, or Spring semesters of their freshman year. Students who are unable to complete the proficiency requirements within the first 24 credits will not be allowed to register for credit courses within the Connecticut State University System until they have completed the courses elsewhere.

### Prerequisites

It is the students' responsibility to determine whether they have met prerequisites for a course. Students found to be lacking the prerequisites for a course may be administratively removed from a class at the request of the department or professor. Course prerequisites are defined in the course description section of this catalog.

### Adding a Course

Students may add courses, on a space-available basis, prior to the scheduled beginning and through the first seven days of each Fall or Spring Semester. Summer and winter courses must be added prior to the second class meeting. All students add courses online through their pipeline accounts or through the Registrar's Office. Capstone and independent study courses also may be added within this same period; however specific forms are used that require signatures including that of the dean. Registration after a semester's scheduled beginning, but within the add period is dependent on course enrollment and/or the willingness of the instructor and department chair to approve an additional student. To register for a course after the semester's add period, a student must complete a Late Course Registration Form from the [Registrar's Website](#) or in the Office of the Registrar, obtain the necessary signatures and return it to the Office of Registrar.

### Dropping a Course

Dropping courses will be allowed up to the last day of the third week of classes during a regular semester. If a full-time undergraduate student drops below twelve credits, the student must change their status from full-time to part-time. Requests for dropping a course must be in writing or through WebCentral. Courses dropped by the deadline do not appear on the student's transcript. Forms are available in the Registrar's Office, Davidson Hall. The deadline for dropping all full-semester courses is included in the registration information booklet found on the Registrar's Office website and on the registration

calendar. If a full-time student drops all courses between the first day of classes and the last day of the third week of classes, the student will be withdrawn in good standing from the University and a "W" will appear on the transcript for each course dropped. **Warning Failure to carry a minimum of 12 credits may affect Satisfactory Academic Progress (SAP) and receipt of certain federal, state, and other benefits, including but not limited to various financial aid programs, Veterans benefits, and Social Security benefits. Students dropping below 12 credits are ineligible for participation in intercollegiate athletics.**

### Withdrawing from a Courses

Students may withdraw from a full semester course from the beginning of the 4th week of the semester until the end of the 12th week of classes by completing and submitting the Course Drop/Withdrawal Form available on the Registrar's Website or at the Registrar's Office. No permission is required. A student seeking to withdraw after the 12th week of class and until the last day of classes must present documentation of extenuating circumstances for his or her request and submit a **Late Course Withdrawal Form** (available on the [Registrar's Website](#) or at the Registrar's Office) with signatures of from the instructor of the course and the chair of the department in which the course is taught. Poor academic performance is not considered an extenuating circumstance. If the request is approved, a "W" will be recorded on the student's transcript. If a student stops attending and fails to withdraw officially from a course, a grade of "F" will be recorded on the student's transcript. In all cases of withdrawal, a "W" does not affect the student's grade-point average

### Pass-Fail Option

A limited pass-fail option in courses not required for the major, minor or general education program is available at the University. To be eligible for the pass/fail option, the student must have completed at least 34 earned hours (including transfer hours) and must be a matriculated undergraduate in good standing. Up to two (2) pass/fail courses may be selected in one semester, but no more than four (4) pass/fail courses may be selected throughout the entire undergraduate career. If a student changes majors to a discipline in which pass/fail credit has been earned, the grade(s) earned in such a pass/fail course(s) shall be retrieved and recorded on the permanent record in place of the pass/fail grade. Intent to take a course pass/fail must be filed in the Office of Registrar within the first three weeks of the semester. NOTE: courses earning a

PASS are not calculated into the GPA, but courses with a FAIL are calculated into the GPA. Refer to the [Registrar's Website](#) for further information.

### Auditing a Course

Full-time undergraduate students are permitted to audit courses, provided they are taking a minimum of 12 credits in addition to the courses audited. Part-time students need not meet this minimum requirement. Intent to audit a course requires the written approval of the instructor and must be filed in the Office of Registrar during the first three weeks of the semester. Failure to meet the instructor's requirements for auditing may result in the student being withdrawn from the course. Courses taken on an audit basis do not affect grade point average and do not apply toward any graduation requirement. Standard tuition charges apply when auditing a course.

### Maximum Course Load

Students who register as part-time students may enroll for a maximum of 11.99 credits. Students who register as full-time students enroll for no fewer than 12 credits, and up to a maximum of 18 credits. Both part-time and full-time students may register online through their Pipeline accounts or through the Registrar's Office.

### Eligibility for Extra Credits or Course Overloads

A full-time student may take 12 to 18 semester credits without special permission. A student who wishes to register for more than the customary semester program of academic work should apply in writing to the appropriate academic dean at least one week prior to registration for the semester in which the additional course is to be taken. Credit overload forms are available on the [Registrar's Website](#) or by visiting the Office of the Registrar.

In addition to the applicable tuition/required fees, full-time undergraduate students registering for more than 18 credits will be assessed excess credit fees for each credit beyond 18. These fees are non-refundable and will not be deleted if at a later time the total credits number less than 18. The current excess credit fee is available on the Bursar's Website. In general, the only applications approved are from students whose cumulative grade-point average is 2.50 or above, or whose average for the preceding semester is at least 3.00. No student will be permitted to take more than the normal program of study in their first semester.

### Taking Summer and Winter Courses

Summer and winter session registration is conducted by the Registrar's Office. Summer session offerings and the winter session offerings are available online. Registered students are assessed part-time tuition and fees for summer and winter sessions.

The University permits a maximum registration of seven credits during the first five-week and eight-week Summer Sessions; seven credits during the second five-week Summer Session; and four credits during the three-week post Summer Session. No more than fourteen total credits may be taken during the Summer Sessions. During Winter Session, students may enroll in up to four credits of academic course work.

### 500 Level Graduate Courses Taken by Undergraduates

Undergraduate students who have a cumulative average (GPA) of 3.00 or above and who have completed more than 90 semester hours of coursework may request permission to enroll in a 500-level course for which they have met all course prerequisites. Students are required to obtain written permission on the 500 level from their advisor, the course instructor, the chair of the department offering the course, and the Dean of the School of Graduate Studies prior to registration. Priority is given to graduate students; undergraduates who meet criteria are enrolled on a space-available basis. Forms are available in the office of the School of Graduate Studies on the [Graduate Studies website](#) and on the Registrar's Office website.

### Refund Policy

This information is subject to change. For a complete list of the Refund Policy, please visit the [Bursar's Office](#) website. Refer to the Registration Calendar for specific semester dates. Please remember that you need to maintain a minimum of 12 credits for Undergraduate students or 9 credits for Graduate students per semester to be considered a full-time student and to retain eligibility for financial aid, University-billed Sickness Insurance, Veterans Benefits, and student athletics. Part-time students dropping below 6 credit hours may affect their financial aid award. Note: Some fees are non-refundable.

All refunds will be made automatically upon formal withdrawal from an institution.



Application Fee	Upon Submission of Application	Non-refundable	Housing Deposit \$250	On or before April 1 for returning students and on or before May 1 for new students, with specific date to be established annually. Dates will be no less than 30 days prior to the dates shown above (April 1 and May 1).	fourth week of the term. Non-refundable
Confirmation Deposit (UG/G) \$200 (applied to Tuition/Fees)	May 1 or within 15 days of invoicing thereafter	Non-refundable			
Re-registration Fee	Upon re-registration	Non-refundable			
Full-time Tuition and Fees	Fall Semester: not later than July 15 Spring Semester: not later than December 15	<ul style="list-style-type: none"> <li>• Upon withdrawal from the University up to, but not including, the first day of the term, as defined by the published university calendar, 100% of the term charges will be cancelled</li> <li>• 90% of the term charges will be cancelled during the first week of the term</li> <li>• 60% of the term charges will be cancelled during the second week of the term</li> <li>• 40% of the term charges will be cancelled during the third and the fourth weeks of the term</li> <li>• No cancellation of charges after the</li> </ul>	Housing Fee (applies to students who withdraw from university)	Academic year contract to be paid in two installments: Fall Semester: not later than July 15 Spring Semester: not later than December 15	<ul style="list-style-type: none"> <li>• Upon withdrawal from the University, the housing refund will mirror the University refund policy for tuition and fees</li> <li>• 100% of the term charges will be cancelled upon withdrawal from the University up to, but not including, the first day of the term as defined by the published university calendar,</li> <li>• 90% of the term charges, will be cancelled during the first week of the term,</li> <li>• 60% of the term</li> </ul>

charges, will be cancelled during the second week of the term,

- 40% of the term charges, will be cancelled during the third and fourth weeks of the term,

- No cancellation of charges after the fourth week of the term.

Housing Fee (applies to students who remain enrolled but withdraw from university housing)

- Upon withdrawal from University housing up to and including June 30, 100% of the housing charges will be removed from the student's account.

- No cancellation of charges for students who withdraw from housing on or after July 1 (academic year) or December 1 (spring term – for those students who plan to enter housing for the first time in spring), unless otherwise approved by Residence Life through an appeal process.

Housing Contract Cancellation

1. Students who wish to cancel their Housing Contract/Assignment must do so in writing by adhering to the Housing Withdrawal process for their respective University.
2. Students who request to cancel their Housing Contract/Assignment will be released for the following reasons:

- The student is participating in an internship, co-op, study abroad, student teaching, or other academic obligation that reduces or eliminates the need for on-campus housing.
  - The student has medical reasons for cancellation that are verified by the appropriate university department.
  - The student has graduated from the University before the end of the contract period.
  - The student is academically suspended before the end of the contract period.
  - The student has officially withdrawn, or taken an official leave of absence, from the University.
3. Students who request a Housing Contract Cancellation for reasons other than those noted in section 2 will have their Housing Cancellation request reviewed through a process to be established by each University.
  4. Students who are approved to have their Housing Contract cancelled for reasons other than those noted in section 2, will forfeit the Housing Deposit that they have paid if their cancellation is before or during their initial contracted term of occupancy.
  5. Students who are not approved to have their Housing Contract cancelled shall remain responsible for the fees associated with the duration of their Housing Contract and retain the right to occupy their assigned room.
  6. Students who have their Housing Contract cancelled for

the convenience of the university will not be required to pay any housing fee associated with the contract period. Students who have their Housing Contract cancelled for judicial/disciplinary reasons will be responsible for paying for the duration of the semester in which their contract was cancelled and are not entitled to a refund.

Housing Contract Cancellation Review Process

1. The Vice President for Student Affairs (or Vice President to whom Residence Life reports) at each university will establish a process to review and decide upon student requests to cancel their housing contract when the student does not meet any of the conditions identified in section 2 above and the student requests relief from their obligation to pay the full academic-year housing fee.

2. Under the process, each university may define conditions under which it will waive or refund any portion of the housing fee, with the exception of the housing deposit. In cases where the Committee agrees to cancel the housing contract during the fall term (or first term of occupancy), the student forfeits their housing deposit.

Food Service Fee

Fall Semester: not later than July 15  
Spring Semester: not later than December 15

Meal portion of fee refundable, on a prorated basis, upon withdrawal from the University; or upon withdrawal from

University housing at the request of the student and contingent upon the concurrence of the University. The discretionary cash component of the food service fee, if any, will be refunded according to procedures established at each University.

Part Time Registration Fee

Part-time Tuition, General University Fee, and Course Fees

All Terms

All Terms, Courses eight weeks or greater in length

Courses three weeks to seven weeks in length

Non Refundable

- 100% of the term charges will be cancelled during the first week of the term,

- 60% of the term charges will be cancelled during the second week of the term,

- 40% of the term charges will be cancelled during the third and the fourth weeks of the term,

- No refund after the fourth week of the term.

- 100% of the term charges will be cancelled during the first 3 calendar days of the term,

- 60% of the term charges will be cancelled during the fourth, fifth, and sixth calendar day of the term,

- 40% of the term charges will be cancelled during the seventh, eighth, and ninth calendar day of

the term,

Courses less than three weeks in length

- No cancellation of charges after the ninth calendar day of the term.

- 100% of the term charges will be cancelled during the first 2 calendar days of the term,

- 60% of the term charges will be cancelled during the third and fourth calendar day of the term,

- No cancellation of charges after the fourth calendar day of the term.

- 75% of the term charges will be cancelled within the first 2 calendar days of the term,

- No cancellation of charges thereafter

Non Refundable

Included within Full-time and Part-time Refund Schedules Above

This refund policy excludes the effect of the return of Title IV funds. Students receiving Federal aid should consult with their University or College Financial Aid office prior to withdrawal in order to determine the financial impact that the return of Title IV funds will have upon the student.

In accordance with the Higher Education Amendments of 1998 (Public Law 105-244), the Federal government mandates that students receiving Title IV assistance who withdraw from all classes may only keep the financial aid they have "earned" up to the time of withdrawal. Title IV funds that were disbursed in excess of the earned amount must be returned by the University or College and/or the student to the Federal government. This could result in the student owing funds to the University or College, the government, or both. The amount of unearned aid to be returned is based on the percentage of enrollment period completed.

Federal regulations require that all refunds be restored to Federal programs in the following priority sequence:

1. Unsubsidized Federal Stafford Loans
2. Subsidized Federal Stafford Loans
3. Unsubsidized Federal Direct Stafford Loans
4. Subsidized Federal Direct Stafford Loans
5. Federal Perkins Loans
6. Federal PLUS Loans received on behalf of the student
7. Federal Direct PLUS received on behalf of the student
8. Federal Pell Grants
9. Federal SEOG Program Aid
10. Other grant or loan assistance authorized by title IV of the HEA  
After obligations to the above are satisfied, funds will then be returned to:
11. Other State, Private, or Institutional Assistance
12. Student

**Refunds of Tuition and Fees Under Unusual Circumstances**

Ed.D. Professional Seminar

Summer – four full days, not meeting consecutively

E-Learning On-Line Fee

Upon Registration

E-Learning Course Fees

**Refund of Federal Funds**

Under circumstances beyond the control of the student or in cases where attendance has been denied by the institution, the University or College President may authorize the deferment or waive the collection of the admissions and/or housing deposit, as well as the refunding of tuition and fees otherwise designated as non-refundable.

### **Waiver for Students Over Age 62**

#### Full-Time Matriculated Students:

The payment of Tuition and State University Fee is waived for any Connecticut resident presenting evidence of being 62 years of age or older as of the first day of the semester, who has been accepted for full-time admission, and is enrolled in a degree-granting program. Other fees, including the General Fee, SA/Media Fee, Accidental Insurance Fee, (and for online courses an Online Fee per online course), are still due.

#### Part-Time Matriculated Students:

The Course Fee is waived for any Connecticut resident presenting evidence of being 62 years of age or older as of the first day of the semester. The Registration Fee and, for online courses, an Online Fee per online course, are still due.

#### Non-Matriculated Students:

The Course Fee is waived for any Connecticut resident presenting evidence of being 62 years of age or older as of the first day of the semester. The Registration Fee is still due. Registration is on a space-available basis and special registration dates apply. Check with the Registrar's Office for session/term registration dates.

For more information, visit the Bursar's Office webpage for Tuition/Fee information and Policy/Waiver Authorization information.

## **Leaving the University and Reenrolling**

### **Withdrawing from the University**

A full-time student wishing to withdraw from the University must confer with the Office of the Registrar and

have the appropriate forms completed and approved by that office no later than four weeks before the last day of the final examination period. The Registrar's Office will assist in filing the form necessary for withdrawal. Withdrawals after this date will be permitted only under extenuating circumstances and will require consultation and approval of the Academic Dean and the Registrar. Readmission is contingent upon the student's academic standing at the time of re-entry. The student must complete a reactivation form with the Office of Admissions to initiate readmission.

### **Undergraduate Student Leave of Absence Policy**

A Leave of Absence is a period of separation from CCSU for up to two consecutive semesters. During this time a student maintains his or her matriculation and is entitled to return to CCSU. The Undergraduate Student Leave of Absence enables students to return after a maximum two-semester absence from campus. Students with this status need not apply for readmission. Students may register for classes during the normal registration period based on cumulative credits earned both in transfer and at CCSU. This policy does not supersede any existing University withdrawal policy. Please note, a University Leave of Absence is not a federally approved Leave of Absence and could impact the grace period for student loan repayment.

Students desiring a Leave of Absence must:

- Be matriculated and enrolled in the semester immediately preceding the Leave of Absence;
- Address any outstanding financial obligations with the Bursar;
- Have no disciplinary action pending.

Leave of Absence Process:

- Forms are available on the Registrar's Website
- Complete the Leave of Absence Application and return it to the Office of the Registrar.

As required on the Leave of Absence request form, students must complete the following before the Leave of Absence goes into effect:

- Students living on campus must contact the Office of Residence Life.
- International students must contact the Center for International Education to ensure that all legal documents are in order.

Status while on a Leave of Absence:

- Each semester an email of related materials will be sent to all students on a leave of absence.
- The student is eligible to enroll without question upon completion of the leave of absence.
- The student will be reported to all outside agencies as not currently enrolled.
- The student will not be entitled to access or privileges held by enrolled students.

Upon returning to CCSU, the student will comply with the requirements toward his or her degree as identified in the catalog at the time the student originally matriculated, unless other exceptions had been previously authorized.

#### Requirements to Return:

- The student need only register for the upcoming semester.
- Failure to return to active status during the semester designated on the Leave of Absence application will necessitate that the student apply for reactivation and pay the appropriate fees to Admissions at a later date when he/she chooses to return to CCSU.

### Fresh Start Policy

At the discretion of the Associate Vice President for Academic Affairs, an undergraduate student whose enrollment at CCSU has been interrupted for 2 or more years and whose GPA is below a 2.0 may be considered for admission under the Fresh Start Policy. Under this option, the Office of the Registrar initiates a new GPA for the returning student at the time of re-entry and uses this new figure for graduation purposes. The Fresh Start admission option is available to undergraduate students who were formerly matriculated at the university and who attempted no more than 60 credits. It is also available to non-matriculated undergraduate students who attempted no more than 30 credits at CCSU. Each case is decided on its own merits, and each decision has advantages and disadvantages. Students returning to the University for full or part-time study after a long interval should consult the Office of Admissions. (see admissions web page for more information and to download the form)

### Financial Aid Policies

#### Satisfactory Academic Progress for Financial Aid Recipients

CCSU is required by federal law to establish, publish and apply reasonable standards for measuring whether a

matriculated student is maintaining satisfactory academic progress toward a degree objective, and to ensure progress toward the degree for all periods of enrollment, whether or not the student has received financial aid. These standards are applicable to all financial aid recipients at CCSU and affect eligibility for all federal and state aid, including grants, student loans, and work-study. Non-matriculated students are not eligible for Financial Aid.

#### Degree Objective-Specific Minimum CCSU GPA

- Doctoral, Masters:3.0
- Credential/certification: 2.5
- Undergraduates: Junior/Senior (54+ credits): 2.0  
Sophomore (26-53 credits): 2.0 Freshmen (0-25 credits): 2.0

#### Completion of 67.5% of Attempted Units with Passing Grades

Students must complete at least 67.5% of the credits attempted with a passing grade of A, B, C, D, P. For example, a student who enrolls in 30 credits for an academic year must complete at least 20 credits ( $30 \times .675 = 20$ ). Non-passing grades of F, INC, NC, U, W, and AU will lower a student's completion rate. All attempted credits resulting in either an academic grade or administrative transcript notation will be included in the quantitative calculation. Incomplete courses, course withdrawals, course repeats and non credit remedial courses will be included in this assessment. Transfer credits will be counted as attempted and earned credits in the calculation for determining satisfactory academic progress.

#### Eligibility Limit - Unit Cap

Students must complete their program within 150% of their program's required units. For example, a student in a 120 unit program must receive his/her degree within 180 credits. All graded coursework will be counted, including transfer units, repeats, and withdrawals. Up to 30 remedial credits may be excluded. Courses with grades of RD (report delayed) or RP (report in progress) will be considered as completed credits until a final grade is determined.

#### Financial Aid Probation

Students will be placed on probation status (can receive aid) at the end of the academic semester if any of the following applies:



- CCSU GPA falls below their objective-specific GPA
- Completion rate of attempted units with passing grades falls between 50% and 67.5%.

Federal Regulations require students who have reached Junior or Senior status to maintain at least a 2.0 CCSU Grade Point Average.

### Financial Aid Disqualification

Students will become disqualified from receiving financial aid if any of the following applies:

- Student is in a Financial Aid Probation status for two consecutive academic semesters;
- Student completes fewer than 50% of their attempted units with passing grades in any academic year;
- Student fails to complete their program within 150% of their degree program required units.

### Financial Aid Appeal

Students who become disqualified from receiving financial aid will be notified on their CCSU e-mail account and will be provided instructions on the financial aid appeal process. Appeals will be evaluated based on the student's extenuating circumstances.

### Regaining Eligibility

Students who are disqualified due to low GPA or low unit completion will regain financial aid eligibility once they achieve the required GPA or credit completion as long as they have not completed more than 150% of their program requirements. Undergraduate students who are disqualified due to exceeding the 150% of the required units for their program will regain eligibility after they become a master's or credential student after their bachelor's degree is posted. Students who meet this condition before the spring semester may submit a SAP Appeal Form to request their eligibility be reinstated; otherwise progress will be reviewed after spring grades have posted.

## Grades and Grading Policies

### The Grading System

Central Connecticut State University uses the letter grading system as follows:

- A, superior
- B, above average

- C, average
- D, passing but below average
- F, failure

A grade of incomplete (INC) may be recorded, at the discretion of the instructor, for a course in which a student, because of circumstances beyond his or her control, has not completed certain work or has been absent from the final examination.

A grade of NR (not recorded by instructor) will be entered if grades are not submitted in a timely manner.

For undergraduate students, an INC or an NR not changed to another grade by the instructor within the first eight weeks of the subsequent major semester will be changed to an F. Responsibility for removing an INC or an NR within this time limit rests with the student.

Additional grades used at CCSU include: AU Audit (no credit) INC Incomplete IP In Progress (Doctoral) NC Satisfactory completion of a non-credit course S Satisfactory performance in a non-credit course TR Transfer credit U Unsatisfactory performance in a non-credit course W Withdrawal.

An FN is a failing grade given to students who have no record of attendance and no record of academic participation for a course. It is treated as an F for GPA calculations.

### Mid-Semester Grades

Mid-semester grades may be recorded online by faculty for full-length Fall and Spring Semester courses. Mid-semester grades are considered an approximate grade of student's performance to date. Mid-semester grades are not recorded on transcripts and are not used in the calculation of grade point averages.

### Grade-Point Calculation

For computing grade-point average, grades are evaluated as follows for each semester hour of credit:

Grade Quality	Points	Grade Quality	Points
A	4.0	C	2.0
A-	3.7	C-	1.7
B+	3.3	D+	1.3
B	3.0	D	1.0
B-	2.7	D-	0.7
C+	2.3	F	0.0

For example, a student receives an A in two courses, one carrying 3 credits and one carrying 1 credit; a B in a 3-credit course; a B- in a 3-credit course; a C- in a 2-credit course; a D in a 3-credit course; and an F in a 2-credit course. The grade-point average is computed as follows. A or 4 quality points per hour x 4 credits = 16 quality points- B or 3 quality points per hour x 3 credits = 9 quality points- B- or 2.7 quality points per hour x 3 credits = 8.1 quality points-C- or 1.7 quality points per hour x 2 credits = 3.4 quality points-D or 1 quality point per hour x 3 credits = 3 quality points-F or 0 quality points per hour x 2 credits = 0 quality points- 17 credits for a total of 39.5 quality points To calculate this student's semester grade-point average, the quality point total is divided by the total number of credits taken:  $39.5 \div 17 = 2.32$ . The cumulative grade-point average (CGPA) for a student's record is determined by adding the credits attempted and dividing this total into the total number of quality points. The cumulative grade-point average indicates the academic record of the student for the time enrolled at the University and does not include transfer credit.

### Dean's List & President's List

Full-time students: Dean's List recognition for a semester is granted to students who carried at least 12 academic credits, earned a 3.50 GPA and did not have any "incompletes" for the semester at the time grades were processed.

Part-time matriculated students who have earned a minimum of 12 credits for the academic year, who have achieved a 3.50 cumulative average for Fall and Spring Semesters of that school year and who have no "incompletes" listed on their record are eligible for Spring Semester Dean's List honors.

President's List recognition will be granted to students who earned a 4.00 GPA and meet the same eligibility requirements for Dean's List noted above.

### Graduation Honors for Baccalaureate Degree

Graduation honors for the baccalaureate degree recognize high academic achievement at Central Connecticut State University as demonstrated by the following cumulative grade-point averages:

- Cum laude (honors) 3.50-3.69
- Magna cum laude (high honors) 3.70-3.89
- Summa cum laude (highest honors) 3.90-4.00

Graduation honors, which appear on both the diploma and the transcript, will be awarded only to full-time and

part-time students who complete their graduation requirements with a minimum of 60 credits in residence at Central Connecticut State University and a cumulative earned grade-point average of at least 3.50. The residency requirement for honors may not be waived.

Candidates for Graduation Honors will be recognized at the Commencement ceremony.

Candidacy for Graduation Honors shall be determined by using the student's GPA and earned credit count, plus any in-progress courses, as of the commencement booklet printing deadline. Candidacy for Graduation Honors does not guarantee the award of Graduation Honors upon completion of degree requirements.

### Course Repeat Grading Policy

Students may repeat any course during their tenure at CCSU. The total number of credits that students may repeat, however, is limited to 17 credits. The chairperson of the department offering the course may prohibit a student from repeating a course more than once. The highest of the grades earned will be applied to the GPA and degree requirements and credits will only be earned once. All grades will appear on the student's transcript. This policy applies to undergraduate students for courses repeated at CCSU beginning with the Fall 2023 semester. Some academic departments may require students to retake certain prerequisite courses if there is an extended time lapse between the completion of that prerequisite course and enrollment in subsequent courses. Students should check with the individual departments for time limits on prerequisite courses. Students who must retake prerequisite courses have two options:

1. Students may retake the course and replace their previous grade. Credits for the retake will be applied against the limit of 17 authorized repeat credits.
2. Students may audit the course and retain the existing grade. The 17 authorized repeat credits will not be affected. Students taking this option should be aware that individual academic departments might place special requirements on the auditing of courses. Students must complete an audit request form within

the required time frame at the beginning of the semester in which a course is audited.

**Note:** *Repeating courses taken in a previous semester may affect certain federal and state benefits, various financial aid programs, loans, scholarships, and social security benefits, in addition to athletic eligibility and veteran's benefits. Satisfactory Academic Progress requirements must be met for continued financial aid eligibility. See **Satisfactory Academic Progress Policy**.*

**Note:** *Education majors and post baccalaureate certification students should refer to the course repeat policy listed in the **School of Education and Professional Studies**.*

### Grade Appeals Policy

Academic grading reflects careful and deliberate judgment by a faculty member instructing a course. Academic evaluation of student performance requires expert consideration of cumulative information. Such decision-making, by its nature, is judgmental and evaluative. The evaluative process is not and should not be likened to the adversarial process involved in disciplinary matters, for academic grade determination is not adaptable to the methods of judicial or administrative decision-making. The education process, moreover, is not by nature adversarial, but rather centers upon a continuing relationship between faculty and student. Administrative interposition, except in the most extreme instances, is to be avoided. The University recognizes that in rare instances there may be errors, or "palpable injustice(s)" in determination of a final grade. A student alleging such error or palpable injustice, i.e. a clear showing of arbitrary or capricious action, may appeal as provided below:

For the appeal to be considered, the following procedure must be followed and the following deadlines must be met:

**1) First step: meeting with the instructor.** First, the student must meet with the instructor by the end of the second week of classes of the full semester following the semester in which the grade was awarded. Either the student or the faculty member may request that the initial meeting occur in the presence of the Department Chairperson. If no meeting with the instructor occurred within the two-week time limit, the student should provide a statement as to

why such a meeting did not occur within that two-week time limit (along with documentation).

**Special cases: The student cannot meet with the instructor because the instructor is deceased or has left the University and cannot be contacted.** In the event that the instructor is deceased or has left the University and cannot be contacted, the student should meet directly with the Department Chairperson by the end of the third week of classes of the full semester following the semester in which the disputed grade was given. Upon evidence of error, the Department Chairperson may make the appropriate grade change after consultation with and approval of the Dean of the School. The instructor shall be notified of the change if notice subsequently can be delivered. The Department Chairperson shall make a determination and provide written notification to the student within two weeks of receiving the appeal. Upon evidence of palpable injustice, the Department Chairperson may make the appropriate grade change after consultation with and approval of the Dean of the School. Written notification of the decision shall be made to the student within two weeks of receiving the appeal.

### 2) Second step: submit the appeal in writing to the Department Chairperson.

a) If no resolution is achieved between the student and the instructor, the student must submit an Appeal for Grade Change Packet ("the Packet") to the Department Chairperson before the end of the fourth week of classes of the full semester following the semester in which the grade was awarded.

b) The student's Appeal for Grade Change Packet must be in hard copy, and must include:

- An inventory list of materials provided or Table of Contents;
- A completed Appeal for Grade Change form;
- A course syllabus (preferably the one provided to the student at the beginning of the course);

- A detailed statement explaining why the student believes his/her grade should be changed; the statement must include, at a minimum:
  - o a list of the student's grades in the course;
  - o a list of changes that should be made to those grades, with explanations;
  - o an explanation of why those changes would necessitate a change in the course grade;
- All documents that are necessary to support the student's position (graded homework assignments, graded examinations, medical documentation, statements from other students or faculty, etc.); if some of the student's work has not been returned to the student by the instructor, the student should include a list of documents that have not been returned to him/her.

In the event that statements are provided by other persons than the student seeking the appeal and the faculty member providing the grade, the contact information for each person should be provided so the Grade Appeals Review Board may verify, if it wishes, the statements included.

**The burden of proof is upon the student** to make the case that a palpable injustice or error has occurred. The student must therefore make as strong a case as possible by **including all the required documents, and by including supporting documents for the claims made.** In particular, the student should be aware that:

- If the student submits a Packet to the Department Chairperson, and the Department

Chairperson deems the Packet to be incomplete, then the Department Chairperson WILL

NOT make a recommendation and WILL NOT forward the Packet to the Dean. Instead, the

Department Chairperson will contact the student to inform him/her that the Packet is

incomplete. In that case, the student will have to pick up the incomplete Packet from the

Department Chairperson and submit a complete Packet within one week of receiving the

Department Chairperson's notification.

- If the student submits a Packet to the Department Chairperson, and the Department

Chairperson deems the Packet to be complete, then the student WILL NOT have the

opportunity to supplement the Packet, except to respond to a request from the Grade

Appeals Review Board.

- **It is the student's responsibility to submit a complete Packet.** The Grade Appeals Review

Board (not the Department Chairperson) is the final arbiter of whether or not a Packet is

complete. The Grade Appeals Review Board reserves the right to ask the student for

additional documents. In that case, the student will have two weeks to submit the

documents; if the student fails to do so, the Grade Appeals Review Board has the right to

deny the appeal as "incomplete".

**Also, the student should be aware that materials submitted will not be returned to him/her; therefore, he/she should keep copies of all materials.**

c) The Department Chairperson must provide the student and instructor with a written recommendation within two weeks of receiving an Appeal for Grade Change Packet. A grade change shall be made only with the written consent of the instructor and the Department

Chairperson, except as noted above in the case of an instructor who has died or has left University employment and cannot be contacted.

d) If the Department Chairperson finds that the appeal has merit, but the instructor disagrees, then the Department Chairperson shall automatically forward the Appeal for Grade Change Packet (including all supporting documentation and a copy of the Department Chairperson's form and recommendation) to the Dean, within three business days.

e) Under no circumstances shall the Department Chairperson return the original Packet to the student after the Packet has been accepted as "complete" and a recommendation has been made.

**3) Third step: appeal to the Dean.**

a) If the Department Chairperson upholds the instructor's grade, and the student wishes to further pursue the appeal, the student must inform the Department Chairperson of his/her intention to pursue the appeal within one week of receiving the Department Chairperson's written recommendation. In that case, the Department Chairperson shall forward the Appeal for Grade Change Packet (including all supporting documentation and a copy of the Department Chairperson's form and recommendation) to the Dean, within three business days.

b) The Dean should provide the student, instructor, and Department Chairperson with a written recommendation within two weeks of receiving an appeal. A grade change shall be made only with the written consent of the instructor, Department Chairperson, and Dean, except as noted above in the case of an instructor who has died or has left University employment and cannot be contacted.

c) If the Dean finds that the appeal has merit, but the instructor or Department Chairperson disagrees, then the Dean shall automatically forward five copies of the Appeal for Grade Change Packet (including all supporting documentation and a copy of the Department Chairperson's and Dean's forms and recommendations) to the chair of the Grade Appeals Review Board, within three business days.

**4) Fourth step: appeal to the Grade Appeals Review**

**Board**

a) If the Dean upholds the instructor's grade, and the student wishes to further pursue the appeal, the student must inform the Dean of his/her intention to pursue the appeal within one week of receiving the Dean's written recommendation.

b) If the student chooses to pursue the appeal, the Dean shall forward five copies of the Appeal for Grade Change Packet, (including all supporting documentation and a copy of the Department Chairperson's and Dean's forms and recommendations) to the chair of the Grade Appeals Review Board, within three business days.

**5) Final step: consideration of the appeal by the Grade Appeals Review Board**

a) Any appeal after the completion of the steps above shall be made to the Grade Appeals Review Board, which functions under the aegis of the Academic Standards Committee. After receiving an appeal, the Grade Appeals Review Board will take one of the following actions after an investigation:

i) Deny the appeal, in which case the matter shall be closed.

ii) Remand the appeal to the instructor and Dean of the instructor's school. If the Grade

Appeals Review Board makes a finding that the grading involved a palpable injustice or

error, the case shall be remanded to the instructor and the Dean of the instructor's school

for reconsideration. The instructor may make the appropriate change in the grade with the

written agreement of the Dean. The Dean will notify the Grade Appeals Review Board of

the response taken. If the instructor disagrees or if the instructor's whereabouts are

unknown, the Grade Appeals Review Board may recommend a grade change to the

Provost. The Provost may make the recommended grade change, or issue a “W” (withdrawal). The instructor, the Department Chairperson, and the Dean shall be notified in writing of the Grade Appeals Review Board’s recommendation and of the Provost’s decision. The Dean shall notify the student of the final decision.

- b) The Grade Appeals Review Board will endeavor to resolve all cases within the semester in which they are filed. When this is not possible, the chair of the Grade Appeals Review Board shall provide the Provost, as well as the student, with written notification.
- c) In no case shall a grade be lowered as a result of the appeal to the Grade Appeals Review Board.

**6) Student Rights and Responsibilities:**

- a) Students shall receive timely notification during all steps of the appeals process.
- b) The burden of proof is upon the student to make the case that a palpable injustice or error has occurred. The student must therefore make as strong a case as possible by including all the required documents, and by including supporting documents for the claims made. It is the student’s responsibility to submit a complete Packet. For more details about the consequences of this, please see item 2.

**7) Faculty and Administration's Rights and Responsibilities:**

- a) The Grade Appeals Review Board shall notify the instructor, Department Chairperson, and Dean in writing of any Grade Appeals Review Board actions and requests.
- b) (i) Instructors shall retain all graded student work that has not been returned to the student, until the end of the following regular academic semester. In no case shall an instructor discard the graded work of a student who has filed an appeal.

- (ii) Instructors shall provide the Department Chairperson, Dean and/or Grade Appeals Review Board with graded student work, a syllabus, or any other documents that may be needed to evaluate the merits of the appeal.
- (iii) Instructors should endeavor to meet with a student who has questions about his/her grade as early as possible in the next semester; preferably, before the add/drop deadline.
- c) Department Chairpersons and Deans must endeavor to meet required deadlines as outlined in the Appeals for Grade Change Policy.
- d) Deans will notify the Grade Appeals Review Board when a recommended grade change has taken place or has been rejected by the instructor.

**8) The Grade Appeals Review Board Policies:**

- a) The Grade Appeals Review Board will not accept evidence provided in person to the Grade Appeals Review Board and so does not allow students, non-Board faculty, administrators, or any other people to attend Review Board meetings.
- b) At the conclusion of a grade appeals case, copies of materials provided to Grade Appeals Review Board members will be destroyed by the chair of the Grade Appeals Review Board. Original case documents will be turned over to the Provost to be stored until such time as the state code determines the documents may be destroyed under state guidelines. Students appealing cases are advised to keep copies of all documentation provided in the Packet as the originals provided will be held by the University following the decision of the Grade Appeals Review Board.
- c) The Grade Appeals Review Board reserves the right to request grade and attendance information from the instructor, a copy of the course syllabus, a clear grading policy or written explanation of how the course grade was calculated (if a clear grading policy is not in the syllabus), and any other related materials from the instructor and/or the appellant when the Grade Appeals Review Board believes that it cannot make a fair decision without such information.
- d) The Grade Appeals Review Board reserves the right to request from the student any document that it needs to make a decision on a case. The student

shall have two weeks to provide the document to the Dean, who shall immediately forward five copies of the document to the Grade Appeals Review Board. If the student fails to provide (within two weeks) a document that the Grade Appeals Review Board believes is essential, the Grade Appeals Review Board reserves the right to deny the appeal as "incomplete".

e) Students should also understand that the Grade Appeals Review Board does not have any predisposition to support either the instructor or the student, but seeks as fair a resolution to the appeal as it can determine.

f) The Grade Appeals Review Board reserves the right to extend deadlines when extraordinary circumstances exist. Under no condition does extending a deadline in one case set precedent, as each case is a unique situation.

g) Should the appeal case suggest to the Grade Appeals Review Board that other students in the course likely had their grades impacted as well as the grades of the student making the appeal, the Grade Appeals Review Board shall contact in writing the Department Chairperson and Dean of the school where the original appeal originated and suggest a review of the course in question.

h) The Grade Appeals Review Board will follow the appeals process as detailed above. If the appeal is forwarded to the Grade Appeals Review Board between May graduation and June 15, the chair of the Grade Appeals Review Board will attempt to contact Grade Appeals Review Board members during the summer; however, there is no obligation for the Grade Appeals Review Board to meet, given various off-semester commitments of the Grade Appeals Review Board members.

i) Anyone other than the student making the appeal and related faculty and University administration who approaches the chair or other Grade Appeals Review Board members will be directed to the University Counsel (Special Assistant to the President) without any discussion whatsoever of a case.

j) A decision of the Grade Appeals Review Board to recommend a grade change is only a recommendation and does not guarantee that the action

recommended will be followed.

k) The Grade Appeal Review Board will state in writing its reasons for its recommendations to the instructor, Department Chairperson, and Dean in the case of a grade change recommendation, and to all parties in the case of an appeal denial.

l) The Grade Appeals Review Board will expect any appeals submitted in the fall semester to arrive no later than the last week in October and in the spring semester, no later than the last week in March. Appeals received after those dates may be held until the next semester. Appeals received before those dates will be expedited.

m) Department Chairs will not accept an Appeal for Grade Change for a case that includes an ongoing investigation for academic misconduct under the Academic Misconduct Policy. An Appeal for Grade Change cannot overturn a finding of academic misconduct under the Academic Misconduct Policy.

#### **Forms**

Appeal for Grade Change Form

Appeal for Grade Change - Department Chairperson's Form

Appeal for Grade Change - Dean's Form

Originally Adopted by the Faculty Senate April 16, 1979.

Revised by the Faculty Senate November 14, 2011.

#### **Continuing Education Non-Credit Courses**

Non-credit courses are offered through the Office of Continuing Education within its community service programs and are noted with a grade of NC. Other grades that may be used include the symbol "S" to indicate satisfactory completion of a non-credit academic course. The symbol "U" will indicate unsatisfactory performance or non-completion of an academic non-credit course. In addition, Continuing Education Units (CEUs) may be awarded for the successful completion of some non-credit courses. CEUs are not credits and are not applicable towards the requirements of a degree program.

### Good Academic Standing Policy

All students are expected to maintain a cumulative GPA of 2.00 or higher to be in Good Standing. All students who fall below a 2.00 will receive notification of either academic probation or academic dismissal from the dean of their schools.

### Academic Probation/Academic Dismissal

At the end of their first semester with less than a GPA of 2.00, all students (first-year/first-time, continuing, or transfer) will receive a probation letter informing them of the dismissal/probation policy and of an academic intervention. At the end of the next semester, all students on probation still having less than a 2.00 will receive notice of academic dismissal. Those students may petition for academic probation due to extenuating circumstances by contacting the office of their academic dean. Students who are denied probation will be dismissed. Following dismissal, a student must normally wait at least one semester before being considered for reinstatement.

Only courses taken at Central Connecticut State University, including summer session and winter session courses, are included in calculating the student's cumulative GPA. Courses taken at other institutions are not included in the student's Central Connecticut State University GPA. However, transfer credits accepted at CCSU will count toward the total number of credits attempted for purposes of academic standing. An academically dismissed student may enroll through the Office of the Registrar as a non-matriculated student and seek to bring the cumulative grade-point average back to the good-standing level. Also, an academically dismissed student may petition the academic dean of their major for reinstatement. After re-attaining good standing, as a result of work as a non-matriculated student, a student may request readmission to Central Connecticut State University as a matriculated student. Consultation with the Office of Admissions concerning deadlines for reactivation is advised.

## Graduation Policies and Requirements

### Graduation Requirements

To be eligible for graduation, a degree seeking student must maintain a minimum cumulative grade-point average of 2.00 and receive grades of C- or better in all courses required for the major and minor, with a minimum cumulative grade-point average of 2.00 in the major and minor, and complete a minimum of 120 to 130 credits, depending on one's major. The School of

Education and Professional Studies and the School of Business may have different requirements.

Certificate seeking students must maintain a minimum cumulative grade-point average of 2.00 and receive grades of C- or better in all courses required for the certificate unless otherwise specified. Certificate seeking students must complete at least 50% of the credits required for the certificate in-residence at CCSU.

### Residency Requirements for Degree

A minimum of 30 credits "in residence" is required for a bachelor's degree. Students transferring from any college are required to take at least 15 credits in their major field (at least 12 of which must be at the 300 level or above) and 9 credits in their minor field at Central Connecticut State University. Major and minor minimums are included in the 30-credit residency requirement. "In residence" means attending classes conducted on campus or under supervision of Central Connecticut State University.

Effective for all students matriculating on or after Fall 2010 the residency requirements for earning a degree from CCSU are:

- A minimum of 30 credits taken at CCSU.
- A minimum of 15 credits in the major (at least 12 of which must be at the 300 level or above) and a minimum of 9 credits in the minor (except for School of Business: see below).
- For programs with no minor, the residency requirement is still 15 credits in the major.
- Programs in the School of Business require that at least 50% of the business credits needed for the business degree be earned and completed at Central Connecticut State University.
- Any student has the option of completing the program requirements in effect during the catalog year when s/he entered the program *or* electing to abide by any new set of program or university requirements in a subsequent catalog year while the student remains in the program.
- Courses that do not carry credits toward graduation: ENG 099 and MATH 099 are three-credit courses. The grade awarded will be computed into a student's GPA, but the credits will not count towards the number of credits required for graduation.



## Application for Graduation

Central Connecticut State University confers degrees and certificates four times during the academic year: May, August, December, and January.

A graduating student must file an Application for Graduation with the Office of the Registrar one year prior to graduation. The Undergraduate Application for Graduation may be obtained at the [Registrar's Website](#). Those expecting to complete degree requirements in May or August must file by May 1, and those completing in December or January must file by December 1 of the previous year.

The Office of the Registrar reviews a student's graduation evaluation and notifies them of any remaining program requirements. After a student has completed all requirements, their degree or certificate will be conferred in the term associated with the completion of their last program requirement(s).

Central Connecticut State University reserves the right to confer a student's degree or certificate upon completion of all program requirements if an application for graduation is not submitted. This is necessary to ensure institutional compliance with applicable federal regulations.

## Participation in Commencement Ceremonies

Central Connecticut State University holds a Commencement ceremony in May for students who will complete their graduation requirements in the spring or summer. A ceremony is held after the fall semester for students who will complete their graduation requirements in the fall or winter Intersession. Students must apply for graduation for the semester that they anticipate completing their final graduation requirements.

Any undergraduate student who has filed a graduation application for spring or summer, and whose spring degree evaluation confirms that the student is registered to complete all degree requirements by the end of the semester that they have filed for graduation or are within six (6) credit hours of degree completion, will be allowed to participate in the spring commencement ceremony. Certificate seeking students who will complete all program requirements in the spring or summer will be allowed to participate in the spring commencement ceremony.

Any undergraduate student who has filed a graduation application for fall or winter intersession, and whose fall degree evaluation confirms that the student is registered to complete all degree or certificate requirements by the end of the fall or winter intersession, will be allowed to participate in the winter commencement ceremony.

In the case of extraordinary circumstances, such as family or health emergencies, students may appeal this policy to the Vice President for Academic Affairs or designee. The student may be required to provide supporting documentation in making such an appeal. The decision of the Vice President for Academic Affairs or designee is final.

## Course Substitutions to Fulfill Graduation Requirements

Course substitutions of one course for another within the major or minor must be approved by the chairperson of the department offering the required course, the chairperson of the student's major department, and the dean of the student's degree program. The student should obtain the appropriate form from the Registrar's Office in Willard-DiLoretto, room D202. Once the form is complete, the student's academic dean will forward it to the Registrar's Office.

## Honors Program

### HONORS PROGRAM

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The Honors Program is an interdisciplinary program of comparative culture studies which provides an alternative to part of the general education program for intellectually motivated and academically qualified students.

#### Program Benefits

- \$4,500 Scholarship Per Year
- Priority Course Registration
- Accessible to ALL Majors
- Interdisciplinary Courses Offer a Variety of Unique and Interesting Class Topics
- Smaller Class Size Advantage (25 Student Limit)
- Intriguing Classes that Fulfill General Education Requirements
- Thesis Class with a Topic of Your Choice

### Admission and Application Information

The Honors Program is open by competitive admission to academically superior students, usually defined as those who meet any one of the following qualifications: Top 20% of high school class, 1100+ combined SAT scores (on new 2016 version), or Verbal SAT score of 600+. Please note that these qualifications alone do not guarantee automatic admission to the Program. Students who have equivalent qualifications are also encouraged to apply. The program objectives aim for high academic standards of achievement.

We are currently welcoming applications for the entering freshman class of Fall 2023. To receive full consideration for admission, prospective students must complete both the regular undergraduate admissions process to CCSU and the supplementary Honors Program application. The Priority Honors Program Admission deadline is November 1. The Regular Honors Program Admission deadline is December 15. The standards for admission do not differ between the Priority and Regular Admission deadlines. Applications received after December 15 will be considered for possible placement on a wait list on a case by case rolling basis.

#### About Priority Admission

Applications received by November 1 will be considered for Priority Admission. Those who apply by the Priority Admission deadline are guaranteed to receive an admission decision to the Honors Program no later than December 15.

#### About Regular Admission

Applications received by December 15 will be considered for Regular Admission. Those who apply by the Regular Admission deadline are guaranteed to receive an admission decision to the Honors Program no later than January 31. After December 15, applications may be considered on a rolling basis. Qualified students may be placed on a wait list, as there are limited spots in the program.

#### Transfer Admission

Students who will have completed less than 36 credits upon entering the Honors Program, and who have a cumulative GPA of 3.50 or higher at their current institution, are invited to apply. Transfer applications will be considered on a space-available basis. Students currently registered at CCSU are also eligible to apply, under the same constraints as transfer students.

#### Scholarship and GPA Requirements

Successful candidates will receive admission to the Program and a \$4,500 scholarship for the 2023-2024 academic year, renewable for up to three additional years based on maintaining a 3.30 CCSU cumulative GPA, as well as a 3.30 GPA in Honors Program courses. Please note that this scholarship may be combined with other CCSU scholarships only to the extent allowed by University policy.

**Please note that the Honors Program is designed primarily for entering first year students, and that the University Honors Program curriculum and scholarship are distinct from, and not connected to, the Computer Science BS Honors Program.**

#### Cross-listed Courses:

With the approval of the Honors Director and appropriate Academic Dean, any CCSU course may be cross-listed with the appropriate HON course listed below. Honors students enrolled in cross-listed courses are required to do enhanced work as compared to their non-Honors classmates (as described by Honors Option below).

#### Honors Option:

On a case-by-case basis, students may request that a normal course receive H- designation. Such Honors Option courses require a written agreement between the student and full-time faculty member to incorporate Honors elements into a non-honors course. This should be thought of not as "extra" work but as an enhancement of or alternative to the assignments normally expected of students, as described by the Honors Program Curriculum Committee criteria (see appendix). The Honors work should account for a minimum of 20% of the overall course grade. Honors Options must be approved by the Honors Program Director. Courses are not required to satisfy a particular general education Study or Skill Area, but students must be aware they are responsible for making up any requirements.

#### Additional note:

Students must complete the university's general education program. Courses beyond those in the Honors Program may be required to meet this requirement, depending on the student's major (e.g., LIT, lab science, Skill Area 4). Students should work closely with their advisor(s) (including the Honors Program Director) to incorporate their Honors courses into their academic roadmap.

**REQUIREMENTS (24 CREDITS)****Core Courses ( 7 Credits )**

HON 115	Writing & Research I	3
HON 201	Honors Seminar	1

HON 201 (1 Credit ) *must be taken a minimum of four times* (4 Credits total)

**Honors Electives (12 Credits )**

HON 201	Honors Seminar	1
HON 221	Arts & Culture	3
HON 222	World Cultures	3
HON 223	Human Experience	3
HON 224	Science and Society	3

Students may also select any H-designated, or Honors Option courses, and may include additional credits of HON 201 beyond those applied to the core courses requirement.

**Writing in the Discipline (2 Credits )**

Students must complete a minimum of two credits of writing in the discipline. For majors that require a discipline-specific course, Honors students may use those credits (under the Honors Option defined below) to satisfy this requirement. Otherwise, students will take HON 315. Some programs may require more than the two credits listed here, but only 2 credits may be counted into the total 24 Honors credits.

**Honors Capstone (3 Credits )**

Students must complete 3 credits of a capstone project. For majors that require a capstone, Honors students may use those credits to satisfy this requirement (under the Honors Option defined below). Otherwise, students will take HON 431, HON 451, HON 455.

The Honors capstone represents the culmination of one's Honors academic career. Depending on the student's major and academic and professional plans, the capstone may consist of a traditional **research thesis**, a planned **outreach project**, or a **creative product**. The exact requirements (such as format or page length) are set by departments and Honors advisors, but a capstone must include an appropriate written component that will be submitted to the Honors Program and must include a presentation at URCAD at the conclusion of the work.

Some programs of study may require more than the 3 credits listed here, but only three credits may be counted towards the total 24 credits in Honors.

**Total Credit Hours: 24****Transfer Credit from Other Academic Institutions****Transfer Credit Policy**

Credit is typically awarded to students who earn a C- or higher in 100 level or above course work from regionally accredited institutions. Developmental or basic course work is and will not be accepted. All academic courses with a passing grade (D- or higher) will transfer from Eastern, Southern or Western Connecticut State Universities. Pass/Fail courses are generally NOT eligible for transfer credit except for recreation/physical education courses from any institution and all courses from Connecticut State University institutions.

**Associate Degree Recipients**

Courses with grades of D+, D and D- are transferrable only if the student has earned an Associate's Degree from a Connecticut State Community College or Charter Oak State College.

Continuing matriculated undergraduate CCSU students have the option to take courses at another institution and transfer the credits to Central Connecticut State University. However, students need approval to take a course at another institution before the course is taken. The permission ensures that the credit will be transferable back to CCSU and will determine the CCSU course equivalency. Please note, regardless of the number of credits transferred, a student must complete a minimum number of courses in residence (taken at CCSU) in the major, minor and overall. Review the degree requirements for detailed information. If you have any questions about the procedure, please contact the Registrar's Office.

**Transfer Credit Procedures**

Continuing matriculated undergraduate students at CCSU must submit a Transfer Credit Approval Form and discuss your intentions with your academic advisor. Once complete, please submit the form to the Registrar's Office Transfer Credit Evaluator. Students should not register for coursework at another institution before they receive approval from CCSU. Failure to obtain approval may result in not receiving transfer credit.

To determine CCSU course equivalencies, visit our database of local schools and CCSU equivalencies which can be found **here**.

Bring the approved Request For Transfer Credit Approval form with you to the other school when you register. The other school may require proof of prior approval. If you change your mind and request approval for another course and/or at another school, please submit a new form for the new course and/or college.

A minimum grade of "C-" must be earned for the course to be eligible for transfer credit. The course will appear as transfer credit with a grade of "TR" on your CCSU transcript. This will not affect your CCSU GPA.

If after submitting the approved form you should register for a different course at the other institution, contact the Registrar's Office to update your request form.

Immediately after the course is completed, request to have the other school send your official transcript to the Office of the Registrar for proper transfer credit entry. The official transcript should be sent electronically to the Central Connecticut State University Registrar or mailed to:

Central Connecticut State University  
Office of the Registrar - Transfer Credit Evaluator  
1615 Stanley Street  
New Britain, CT 06050-4010

### **Connecticut State Colleges and Universities (CSCU) Transfer Ticket Degrees**

CSCU's Transfer Tickets are new degree programs providing pathways for community college students to complete degree programs that transfer to Connecticut State Universities (Central, Eastern, Southern, and Western) and Charter Oak State College without losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. You will be able to transfer, apply to competitive admissions majors, and complete your BA/BS degree in the same time and with the same course requirements as students who start at a CSU or COSC.

The Transfer Ticket Majors currently active at CCSU include:

- Art
- Biochemistry
- Biology

- Business: Accounting
- Business: Finance
- Business: Management
- Business: Marketing
- Chemistry
- Communication
- Computer Science
- Criminology
- Economics
- English
- Exercise Science
- French
- Geography
- German
- History
- Italian
- Mathematics
- Physics
- Political Science
- Psychology
- Social Work
- Sociology
- Spanish
- Theatre

Please visit [www.ct.edu/transfer](http://www.ct.edu/transfer) for details.

### **Hartford Consortium Cross Registration**

The Hartford Consortium for Higher Education is a collaborative endeavor of the public and private colleges and universities in the Hartford area.

Full-time undergraduate CCSU students are eligible to register for a select group of courses at any of the following area schools:

- Capital Community College, Hartford CT
- Goodwin College, East Hartford CT

- Hartford Seminary, Hartford CT
- Manchester Community College, Manchester CT
- Saint Joseph College, West Hartford CT
- Trinity College, Hartford CT
- University of Connecticut at Hartford, Hartford CT
- University of Hartford, West Hartford CT

### Eligibility and Procedure

1. The undergraduate student must be full-time at CCSU and registered for at least 12 CCSU credits in the semester.
2. Select one to two courses in a given semester. Discuss your intentions and course selection with your academic advisor.
3. Courses must be from a select group of courses from the following areas:
  - Environmental Studies
  - International Studies
  - Modern and Classical Languages
  - Religious Studies
  - Urban Studies
  - Women's Studies

For CCSU students, visit the other Hartford Consortium institution's website for courses in the above subjects. A list of each of the institutions' course schedules' links can be found on the Hartford Consortium website.

For non-CCSU students wishing to take a course at CCSU through the Hartford Consortium, visit the Hartford Consortium website for a list of eligible courses to take here at CCSU.

Print the Hartford Consortium Course Registration Form

1. Visit the **Hartford Consortium for Higher Education** website or the Registrar's Office in Willard-DiLoretto, room D202, to obtain the Hartford Consortium cross-registration form and necessary approval from the Associate Registrar.
2. Take the completed and signed cross-registration form to the host school's registrar's office for approval and registration.
3. At the end of the semester, your host school will forward your transcript to the CCSU registrar's office. The course and final grade will appear on your CCSU

transcript. The credit and grade will be considered institutional credit and will be calculated into your CCSU GPA.

### Credits Earned During Study Abroad at CCSU Partner and Affiliate Institutions of Higher Education

Coursework completed while studying abroad at one of CCSU's approved study abroad partner and affiliate institutions (as identified on the Center for International Education's website) shall be treated in the same manner as coursework undertaken on the CCSU Campus. (As a result, these courses will not fall under the transfer policy.) Course equivalencies shall be identified by the faculty advisor prior to study abroad and the actual grade earned abroad will be posted to the student's transcript, with the grade earned calculated into the overall GPA. Students may not select which courses are brought onto their CCSU academic record; all grades (A through F) will be recorded and made part of the student's academic record at CCSU.

### Acceptance of Non-Traditional Credit

Central Connecticut State recognizes that many valid learning experiences occur outside the traditional classroom. CCSU accepts from matriculated students the following types of non-traditional credit, up to a maximum of 30 units of credit except for established special programs. When such credit is awarded, it is entered on the transcript but the grade is not included in the University grade-point average. Students should be aware that in all the instances described below, the rules for granting of credit for non-traditional learning may vary among academic schools and departments at CCSU, depending on the rules of external accrediting agencies and in accordance with departmental standards. Students should direct questions to the department chair.

Central Connecticut State University recognizes the International Baccalaureate (IB) Diploma Program and will consider for course credit and advanced placement any higher level IB subject in which a grade of 5 or higher has been earned. Credit is awarded at the discretion of individual departments through the Office of Admissions and credit will be considered on a case by case basis.

### Advanced Placement

The University accepts for college credit advanced placement courses taken in high school under the auspices of the College Entrance Examination Board's Advanced Placement Test Program provided the student

achieves a minimum score of 3 on the test. Official score reports are required by the Office of Admissions.

### **Credit for Standardized Examinations**

Central Connecticut State students may earn up to 30 credits by examination from the College Level Examination Program of the College Entrance Examination Board (CLEP and DANTES) or any nationally-standardized examination. A student is permitted one trial for each examination and must achieve a score equal to, or higher than, the national norm for that particular examination to receive credit. Information about which examinations are approved for departmental credit and minimum score requirements is available from the Office of Admissions or the Office of the Registrar. Official score reports are required by the Office of Admissions.

### **Credit for non-collegiate training programs**

Many businesses and industries, and other non-accredited institutions, provide formal training for which some academic credit may be awarded. Central Connecticut State University will follow ACE recommendations on the acceptance of this credit as published in The National Guide to Educational Credit for Training Programs. CCSU also accepts credit for programs conducted by non-collegiate organizations not evaluated by ACE, according to specific local agreements that comply with Board of Governors for Higher Education regulations. Application of credit as it relates to the student's CCSU degree requirements will be determined by the student's major department. Official transcripts, diplomas or certificates are required. If there is not an ACE recommendation or existing local agreement for the training program, refer to "Credit for life or work experience" below.

### **Credit for life or work experience**

While Central Connecticut State University itself does not evaluate life or work experience, the University will accept such credit as awarded by other regionally-accredited colleges and universities, to the extent that it is applicable to the student's degree program and providing it does not exceed 30 credits. Matriculated students who believe they are eligible for such credit are encouraged to contact Charter Oak State College.

## **Student Records**

### **Family Educational Rights and Privacy Act Notice**

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. These rights include:

1. The right to inspect and review the student's education records within 45 days of the day the College or University receives a request for access. Students should submit to the registrar, dean, head of the academic department, or other appropriate official, written requests that identify the record(s) they wish to inspect. The College or University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the College or University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. The right to request amendment of an education record that the student believes is inaccurate. Students may ask an appropriate College or University official to amend a record that they believe is inaccurate, misleading or a violation of the student's right to privacy. However, FERPA is not intended to provide a process to question substantive judgments that are correctly recorded. Consequently, FERPA amendment requests do not allow a student to contest a grade in a course because the student believes that a higher grade should have been assigned.

To request amendment of an education record, the student should write to the official, clearly identifying the part of the record he or she wants changed and specifying why he/she believes it is inaccurate. The institution will notify the student of the decision. If the institution decides not to amend the record as requested by the student, a College or University official will advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. The right to provide written consent before the College or University discloses personally identifiable information (PII) from the student's education records, except to the extent that FERPA authorizes disclosure without consent. FERPA permits disclosure without a student's prior written consent under the FERPA exception for disclosure to school officials who have a legitimate educational interest. A "school official" is a person employed by a College or University in an administrative, supervisory, academic, research, or support staff position (including law enforcement unit personnel and health staff); a person serving on the Board of Regents; an employee of the Connecticut State Colleges and Universities system office; or, a student serving on an official committee, such as a

disciplinary or grievance committee. A school official also may include a volunteer or contractor outside of the College or University who performs an institutional service or function for which the College or University would otherwise use its own employees and who is under the direct control of the College or University with respect to the use and maintenance of PII from education records, such as an attorney, auditor, or collection agent or a student volunteering to assist another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibilities for the College or University. Upon request, the College or University also discloses education records to officials of another school in which a student seeks or intends to enroll without the prior consent of, or notice to, the student.

FERPA also permits disclosure of education records without consent in connection with, but not limited to:

- To comply with a judicial order or a lawfully issued subpoena;
- To appropriate parties in a health or safety emergency;
- In connection with a student's request for or receipt of financial aid, as necessary to determine the eligibility, amount or conditions of the financial aid, or to enforce the terms and conditions of the aid;
- To certain officials of the U.S. Department of Education, the Comptroller General, to state and local educational authorities, in connection with certain state or federally supported education programs;
- To accrediting organizations to carry out their functions;
- To organizations conducting certain studies for or on behalf of the College or University;
- The results of an institutional disciplinary proceeding against the alleged perpetrator of a crime of violence to the alleged victim of that crime with respect to that crime.
- Directory information as defined in the policy of the Board of Regents.

4. The right to refuse to permit the College or University to release Directory Information about the student, except to school officials with a legitimate educational interest and others as indicated in paragraph 3 above. To do so, a student exercising this right must notify the University's or College's Registrar, in writing. Once filed, this notification becomes a permanent part of the student's record until the student instructs the University or College, in writing, to remove it. A student may exercise his or her right to opt out of Directory

Information, prohibiting disclosure of the student's information without the student's consent as noted in section 3, except however, that pursuant to the Solomon Amendment, military recruiters must be provided the same access to student information as is provided to nonmilitary recruiters.

5. The right to file a complaint with the U.S. Department of Education concerning alleged failures by Colleges to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is:

Family Policy Compliance Office  
U.S. Department of Education  
400 Maryland Avenue, SW  
Washington, DC 20202-4605

Approved by Board of Regents, December 18, 2014;  
Amended by BOR March 2, 2017

### **Directory Information Policy**

Acknowledging that Directory Information is FERPA protected information that may be disclosed at the discretion of a College or University, it is the policy of the Board of Regents for Higher Education for the Connecticut State Colleges and Universities that disclosure of Directory Information is within the sole discretion of the College or University. Colleges and Universities may disclose Directory Information without the prior consent of the student only as provided herein.

The Board of Regents for Higher Education has designated the following as Directory Information:

For purposes of access by school officials of the Colleges and Universities governed by the Board of Regents for Higher Education, the following is designated as Directory Information:

- Student's legal name
- Permanent mailing address
- Month and day of birth
- Photographs
- Student identification number, User ID, or other unique identifier
- Email address
- Telephone number

- University or College previously attended or currently attending
- Dates of attendance
- Full vs. part-time student status
- Academic Awards and Honors
- Class standing/year
- Major, minor, concentration and/or program of study
- Degree(s)/Certificate(s) candidacy
- Degree(s)/Certificate(s) earned
- Previous Institutions attended
- Graduation expected/completion dates  
For purposes of access by military recruiters only, the following is designated as Directory Information (Student Recruiting Information):

- Student's legal name
- Permanent mailing address
- Student email address (issued by the institution)
- Telephone number
- Age
- Place of birth
- Class standing/year
- Major and/or program of study
- Degrees received
- Most recent educational institution attended  
For purposes of participation in any recognized activity or sports, the following is designated as Directory Information:

- Student's preferred name
- City and State of Residence
- Dates of attendance
- Class standing/Year
- Recognized activity or sport
- Team performance statistics
- Team position
- Photos and videos
- Athletic Honors and Awards

- Height and weight of athlete  
For purposes of disclosure to/access by the general public, the following is designated as Directory Information:

- Student's preferred name
- Permanent mailing address Photographs
- Dates of attendance
- Major, minor, concentration and/or program of study Degree/Certificate candidacy Degree(s)/Certificate(s) earned
- Academic Awards and Honors
- Full vs. Part-time status
- Anticipated graduation date Graduation date

Approved by Board of Regents, December 18, 2014;  
Amended March 2, 2017; Amended June 24, 2021  
(Effective Fall 2021 Semester).

### **Student Photos (Permission for Photos of Students)**

Several offices of the University, principally those of Institutional Advancement, provide information to news organizations about CCSU's students' accomplishments and activities while they are at the University and at the time of graduation. Additionally, CCSU supplies photographs and other visual images of students and corollary text in response to requests from news organizations. As a regular practice, photographs of students, faculty, staff, and visitors to campus are used in publications produced by the University for recruitment and general information. Any student who does not wish to appear in any photos used for these purposes must notify the Office of Marketing & Communications (860-832-1790) immediately upon matriculation. It is, however, not possible to practice these restraints with respect to the use of photography (where groups of students appear) of scenes, events, or classes in session.

### **Change of Address**

A student must notify the Office of Registrar in writing of a change of address. Students living off campus and not at their permanent addresses should register their local address with the Office of Registrar.



## Emergency Contact Name and Address

Students are required to review and update their own Contact Information, as well as the name and address of an Emergency Contact, before registration. This requirement ensures that CCSU is able to alert students about campus emergencies and to reach emergency contacts in the event a student is involved in an emergency.

Students can update their Emergency Contact Name and Address by clicking on the *CentralPipeline* link at the top of the [www.ccsu.edu](http://www.ccsu.edu) page and choosing "**Students**". On the **CentralPipeline for Students** page, click on the **WebCentral-Banner Web** link. Log into WebCentral and click on "**Update Contact Information**" on the "**Home**" tab.

## General University Policies

### Academic Advising for Undergraduate Students

Full-time undergraduates in their first year of study are required to meet with their advisor before registration. Students with a declared major are assigned a faculty advisor after the completion of their first semester.

Transfer students with declared majors are advised in their major department.

### Academic Misconduct Policy

At Central Connecticut State University we value personal integrity as fundamental to our interactions with each other. We believe that one of the purposes of a University education is for students to learn to think critically, to develop evaluative skills, and to express their own opinions and voices. We place special weight on academic honesty in all of our intellectual pursuits because it is a value that is fundamental to academic life and scholarly practice. All members of the University community are obligated to uphold high standards of academic honesty in their scholarship and learning. Therefore, we expect students to take personal responsibility for their intellectual work and to respect and acknowledge the ideas of others. Academic honesty means doing one's own work and giving proper credit to others whose work and thought one may draw upon. It is the responsibility of each student to become familiar with what constitutes academic dishonesty and plagiarism and to avoid all forms of cheating and plagiarism.

The CSU code of conduct, Guidelines for Student Rights and Responsibilities and Judicial Procedures, defines academic misconduct as including, but "...not limited to providing or receiving assistance in a manner not authorized by the instructor in the creation of work to be submitted for academic evaluation including papers, projects, and examinations (cheating); and presenting, as one's own, the ideas or words of another person or persons for academic evaluation without proper acknowledgement (plagiarism)."

Cheating may take many forms. It includes, but is not limited to, the following actions, unless explicitly authorized by the instructor:

### Exams

- Copying from another person's paper or receiving unauthorized aid from another person during an examination;
- Use of unauthorized materials or devices during an examination or any other form of academic evaluation and grading; e.g., use of signals, notes, books, or calculators during an examination when the instructor has not approved their use;
- Knowingly allowing another person to copy from one's paper during an examination.

### Improper Behavior

- Use of another person as a substitute in any form of academic evaluation or acting as a substitute for another person in any form of academic evaluation; e.g., a student cannot have another person take an examination for him/her;
- Acquisition or distribution of improperly acquired examinations; e.g., stealing examinations before the test period or taking a copy of an examination from a testing room without the permission of the instructor (examinations which have been distributed by an instructor are legitimate study tools);
- Submission of another's material as one's own for academic evaluation;
- Preparation of work for another student to submit for academic evaluation;
- Unauthorized collaboration in the preparation of materials to be submitted for academic evaluation; e.g., working with another student on an assignment when the instructor has not authorized working together;

- Submission of the same work, or substantially similar work, in more than one course without prior consent of the evaluating instructor(s);
- Disruption in classroom, lab, or research and study areas; any conduct or actions that grossly or persistently interferes with the academic process. (See the CSU, Rights and Responsibilities, "Proscribed Conduct," No. 7, CCSU Student Handbook.)

### **Falsification or Misuse of Academic Information**

- Falsification or misrepresentation of one's own academic record or that of anyone else; e.g., altering a transcript for admission, hacking into the University's computer system and changing a grade, having another student take an examination in one's place, signing someone else's name to an attendance sheet.
- Unauthorized use of information in University computer records or the computer files of other students (see Computer Use Policy);
- Using unauthorized materials or fabricated data in an academic exercise; e.g., falsifying data in a research paper or laboratory activity; conducting research on human or animal subjects without review by the appropriate panel or supervisor.

### **Plagiarism**

- Copying sentences, phrases, paragraphs, tables, figures, or data directly or in slightly modified form from a book, article, or other academic source without using quotation marks or giving proper acknowledgment to the original author or source.
- Copying information from Internet Web sites and submitting it as one's own work;
- Buying papers for the purpose of turning them in as one's own work;
- Selling or lending of papers for the purpose of violating academic honesty policies. (This may also be an academic crime, see Connecticut General Statutes, §53-392a.)

### **Understanding Plagiarism**

Plagiarism is presenting another person's work without acknowledgements, whether in the same or in slightly modified form. In academic practice this is regarded as theft, intended to gain undeserved credit. Like other forms of academic dishonesty, plagiarism is cheating. To academicians, a well-documented paper is more impressive than one that arouses the suspicion of a reader familiar with the student's work and alert to echoes from

other writers. The proper use of outside sources does not necessarily mean that a paper is lacking in originality, nor does the presence of quotation marks in the text. In fact, the purpose of research and documentation is to share useful information with the reader. The penalties for plagiarism greatly exceed the unlikely reward of gaining credit by getting away with it.

Students must be careful to avoid plagiarism and are responsible for learning how to present the ideas of others in their own work. For current documentation practice, consult the instructor and a style manual. When material is borrowed from another person, the source must be indicated. There are three ways in which another writer's material may appear:

1. By putting quotation marks around short passages borrowed verbatim (word for word); or by setting off from the text, without quotation marks, for longer quotations.
2. By *précis*; condensing part of a writer's argument.
3. By paraphrase: interpretation of a writer's ideas. All three must be acknowledged either in footnotes or informally in the text.

### **Consequences of Academic Misconduct**

- On May 10, 2010, the CCSU Faculty Senate approved a new policy regarding the disciplinary procedures for academic misconduct. This policy applies to both undergraduate and graduate students, with the following exceptions:
  - Attending an Academic Misconduct Workshop will not be considered as a sanction for graduate students.
  - When an incident of academic misconduct involves a graduate student, the Dean of Graduate Studies, rather than the Dean of the academic program, should receive a copy of the Academic Misconduct Report.
  - The specifics of the policy and all relevant forms can be found at [www.ccsu.edu/AcademicIntegrity](http://www.ccsu.edu/AcademicIntegrity). As an overview, when a student is suspected of academic misconduct, the instructor shall attempt to meet with the student to discuss the alleged misconduct and the sanction he or she intends to impose. Consequences for academic sanction should be commensurate with the severity of the misconduct. These sanctions may include one or more of the following: a reduced grade for the assignment in question, the opportunity to revise

the assignment or complete additional course work, a grade of F for the assignment in question, a grade of F for the course.

- Instructors are encouraged to file an Academic Misconduct Report for all violations, especially when the sanction involves a failing grade for the course and/or if the instructor believes that further disciplinary sanctions (e.g., disciplinary probation, suspension, or expulsion) are warranted. If the student feels unjustly accused, he or she may appeal to the chairperson of the department in which the alleged misconduct occurred. If the student is not satisfied with the decision of the department chairperson, he or she may submit a formal appeal to the Office of Student Conduct requesting review by a Faculty Hearing Board. A Faculty Hearing Board also would be convened in cases for which the student has a prior academic misconduct violation and in cases for which the instructor recommends disciplinary sanctions.

#### ***When Undergraduate Students Are Suspected of Academic Misconduct***

When a faculty member reasonably believes that there is sufficient information to demonstrate that a student may have engaged in Academic Misconduct:

1. The faculty member will discuss the incident with the student, in the presence of the department chair if the faculty member or student so desires.
2. At this time, the faculty member shall outline the possible penalties specified in the CCSU Student Handbook.
3. The faculty member will indicate that the matter may be referred to the University Judicial Officer for possible disciplinary action.

Based on the available documentation, the response offered by the student, if any, and any other relevant information:

1. The faculty member will, within a reasonable period of time, reach a determination whether the student has engaged in Academic Misconduct.
2. Should the faculty member determine that Academic Misconduct has occurred, the faculty member shall retain evidence of the said misconduct.

3. If the faculty member determines that Academic Misconduct has not occurred, no University Academic Misconduct Report need be prepared.

If the faculty member determines that Academic Misconduct has occurred, the faculty member shall:

1. Impose an academic sanction.
2. Prepare and forward a University Academic Misconduct Report indicating the determination reached and sanctions imposed.
3. Direct the student to attend the Academic Integrity Workshop at the Learning Center.
4. Prior to making any determinations, a faculty member may consult with the Learning Center and/or the University Judicial Officer to determine whether the student has already attended the Academic Integrity Workshop.

The faculty member:

1. Shall inform the student that additional University Academic Misconduct Reports may result in more severe penalties.
2. May also contact the University Judicial Officer regarding additional University disciplinary actions, which may include probation, suspension, or expulsion.

In accordance with the "Student Records and Disclosure Policy," "Data from academic, disciplinary, and counseling files shall not be available to unauthorized persons on campus or to any person off campus without the express consent of the student involved, except under legal compulsion." (**CCSU Student Handbook**)

#### ***Understanding the Academic Conduct Workshop***

The Academic Integrity Workshop is available to all CCSU students so that they will not violate the Academic Misconduct Policy as a result of misunderstanding. For those students who have violated the Academic Misconduct Policy, the Academic Integrity Workshop is designed to educate students about what constitutes Academic Misconduct so that future violations will not occur. Upon completion of the Academic Integrity Workshop, notification will be forwarded to the University Judicial Officer who will document such completion in the student's file. Students must sign up for the Academic

Integrity Workshop at the Learning Center within 10 school days of being provided with the University Academic Misconduct Report. Refusal or failure to attend the workshop will result in a referral to the University Judicial Officer for immediate action.

#### ***Subsequent Violations of the Academic Misconduct Policy***

When the University Judicial Officer receives multiple University Academic Misconduct Reports regarding a particular student, whether or not the faculty member has made a complaint, a "Pre-Hearing Investigation" will normally be conducted in anticipation of disciplinary action, which may result in disciplinary probation, suspension, or expulsion from the University. If the University Judicial Officer determines that a formal hearing is warranted, a faculty member or members may be requested to provide information.

#### ***A Student's Rights When Suspected and or Charged With Academic Misconduct***

A student has the right:

1. To meet with the faculty member, in the presence of the department chair if so desired, before any determination has been made.
2. To be informed during this meeting of the faculty member's suspicions and have an opportunity to discuss the matter.
3. To appeal a finding of Academic Misconduct made during the course of the semester, within 10 school days of being provided with a University Academic Misconduct Report.

A written statement of appeal must be provided to the faculty member, the department chairperson, the Dean, and the University Judicial Officer, setting forth the basis of the student's appeal. Upon receipt of a student's mid-semester appeal, the University Judicial Officer will consult with the faculty member, the department chair, and the Dean and communicate to the student within 10 school days the results of the student's appeal.

- Once a final grade is awarded, the student may file a grade appeal in accordance with the "Appeals for Grade Change Policy" (CCSU Student Handbook).
- If a student receives a final grade of "F" as a result of violating the Academic Misconduct Policy, and that grade is upheld by the grade appeal process, no retroactive withdrawal from the course will be permitted.

- All end of the semester appeals must be made in accordance with the "Appeals for Grade Change Policy."
- In addition to academic sanctions provided by the faculty member, if disciplinary proceedings have been initiated by the University Judicial Officer, a student has the right to have such proceedings resolved in accordance with the CSU "Guidelines for Student Rights and Responsibilities and Judicial Procedures."

#### ***Professor's Responsibilities When Academic Misconduct is Suspected During End of the Semester Grading***

If a faculty member reasonably suspects academic misconduct during end of the semester grading, a grade of Incomplete may be entered, to be replaced by an appropriate grade once the issue is resolved. The grade of Incomplete allows a faculty member to complete end of the semester grading and still follow up on suspected violations of the University Academic Misconduct Policy.

Academic Misconduct reported by a member of the University Community other than the relevant faculty member: See "Academic Misconduct" in "Guidelines for Student Rights and Responsibilities and Judicial Procedures" (CCSU Student Handbook). Adopted by the Faculty Senate, December, 2011

#### ***Disciplinary Procedures***

This policy was adopted by the Central Connecticut State University Faculty Senate on May 10, 2010, amended on February 14, 2011, amended on December 5, 2011, and amended May 4, 2020.

The following procedure guides instructors in addressing allegations of academic misconduct for all students of Central Connecticut State University. Academic misconduct is defined in the Student Code of Conduct and spelled out at [www.ccsu.edu/AcademicIntegrity](http://www.ccsu.edu/AcademicIntegrity). Instructors and students should be aware of this definition; instructors should consult it as a guide for addressing academic dishonesty in their classes. This procedure must be established by the Senate, in agreement with the University President.

The basic principle of this procedure is that instructors have oversight over academic penalties. In cases involving multiple acts of misconduct, and/or which involve both academic and non-academic misconduct, only the academic portion shall be handled according to the disciplinary procedures for academic misconduct described below. The non-academic portion shall be

handled through the Office of Student Rights and Responsibilities which may precede any academic disciplinary action.

#### Faculty Role

##### 1. Instructor's Role and Responsibilities:

a. Instructors are encouraged to inform their students of course-specific requirements and the penalties the Instructor may impose for academic misconduct as informed by their professional judgment. Instructors should also refer students to the definition of academic misconduct in the Student Code of Conduct and at [www.ccsu.edu/academicintegrity](http://www.ccsu.edu/academicintegrity).

b. Incidents of academic misconduct can range in severity from minor violations to major violations. Instructors determine academic sanctions according to their professional judgment as to the severity of the misconduct. The academic sanction should be commensurate with the severity of the misconduct (see Guide for Evaluating Academic Misconduct). These sanctions may include one or more of the following: a reduced grade for the assignment in question, the opportunity to revise the assignment or to complete additional course work, a grade of F for the assignment in question, or a grade of F for the course.

c. Upon the well-founded suspicion that an act of academic misconduct has occurred, the Instructor shall notify the student of the alleged misconduct and sanction to be applied.

d. Whenever an Instructor has reasonable evidence that a student has engaged in academic misconduct, they should complete an Academic Misconduct Report. One copy of the Academic Misconduct Report shall be sent to the Department Chair, one copy shall be sent to the Office of Student Rights and Responsibilities, one copy to the Registrar and another copy should be maintained by the Instructor.

e. If, based on an appeal from the Accused Student (see item 2b), the Department Chair or the Faculty Hearing Board determines that the Instructor did not provide sufficient evidence to support the alleged misconduct, then the Instructor should assign a grade based on the quality of the work as originally submitted.

#### Student Rights and Responsibilities

##### 2. Student Rights and Responsibilities:

a. It is the responsibility of each student to become familiar with what constitutes academic dishonesty and plagiarism and to avoid all forms of cheating and plagiarism as directed by their individual instructors.

b. If a student can demonstrate that they have been unjustly accused of academic misconduct, they have the right to appeal the allegation to the Chair of the Department in which the alleged misconduct occurred. The appeal to the Department Chair must be made using the Academic Misconduct Student Appeal Form within seven (7) University calendar days of receipt of the Instructor's written decision and should include substantial evidence supporting the student's appeal or suggesting that the Instructor's standard was applied unfairly. The Department Chair shall respond to the student's appeal in writing within ten (10) University Calendar Days of its receipt and meet with the student during a mutually convenient time. The Department Chair shall also forward a copy of the Appeal Form with an indication of their ruling to the Office of Student Rights and Responsibilities.

c. If upon a receipt of the ruling by the Department Chair the Accused Student still believes they have been unjustly accused, they may contact the Office of Student Rights and Responsibilities within seven (7) University calendar days to request a hearing of the Faculty Hearing Board.

d. A Student who has been notified that they have been accused of academic misconduct shall not be permitted to withdraw from the course in which the alleged misconduct has occurred without the approval of the Provost/Vice President for Academic Affairs.

#### Complaint from Someone Other Than Instructor

##### 3. Complaint by Person other than Student's Instructor:

Any member of the University Community may file a complaint against a Student alleging academic misconduct. A complaint made by a person other than the Student's instructor should be submitted to the instructor as soon as possible after the occurrence of the alleged violation, but not later than ten (10) University calendar days following the occurrence of the alleged violation. The Instructor would then follow procedures as outlined in this policy. Alleged violations also may be reported anonymously to the Office of Student Rights and Responsibilities, but must include enough evidence to warrant follow up by an Office of Student Rights and Responsibilities representative.

#### Office of Student Rights and Responsibilities

##### 4. Office of Student Rights and Responsibilities' Role:

a. The Office of Student Rights and Responsibilities will be responsible for retaining all records of reported cases of academic misconduct. Upon receipt of the Academic Misconduct Report, the Office of Student Rights and

Responsibilities will review the case to determine if the Student has any previously reported cases of academic misconduct and notify the instructor. The Office of Student Rights and Responsibilities will determine if the matter can be disposed of administratively by mutual consent of the Accused Student and the Instructor, or if a Faculty Hearing Board shall be convened (per item 5a) and the Director or his/her representative will preside over such hearings.

b. The Office of Student Rights and Responsibilities will require students to attend an Academic Integrity Workshop for their first academic misconduct incident. The Office of Student Rights and Responsibilities may require additional sanction(s) based on disciplinary history and will keep records of sanction completion.  
Faculty Hearing Board

#### 5. Faculty Hearing Board's Role and Responsibilities:

a. The Faculty Hearing Board shall be convened by the Director of the Office of Student Rights and Responsibilities in cases where (i) the student has evidence that may demonstrate that they have been incorrectly accused of academic misconduct, (ii) the student has any prior cases of academic misconduct, or (iii) the student rejects additional disciplinary sanctions determined by the Office of Student Rights and Responsibilities.

The Faculty Hearing Board shall be responsible for determining whether there is sufficient evidence to find the student responsible for academic misconduct and determine the appropriate sanctions.

b. An Office of Student Rights and Responsibilities representative shall convene the board and preside over the hearing, but will be a non-voting member.

c. The Faculty Hearing Board shall be composed of three (3) faculty members of the Academic Integrity Committee. The Academic Integrity Committee Member cannot serve if they have a conflict of interest.

d. The student may request that a substitute faculty member be appointed if the student can demonstrate that the appointed faculty member may have bias.  
Hearing Procedures

#### 6. Hearing Procedures:

The hearing procedures governing allegations of academic misconduct shall be as follows:

a. Notice of Hearing: Normally, a hearing will be conducted within ten (10) University calendar days of the receipt by the Office of Student Rights and Responsibilities

of an Academic Misconduct Report and the Office of Student Rights and Responsibilities' determination that prior academic misconduct warrants a hearing and/or an Accused Student's request for a hearing. The notice of hearing shall advise the Accused Student of the specific allegation(s) of academic misconduct. The Accused Student shall be afforded a reasonable period of time to prepare for the hearing, which shall not be less than three (3) University calendar days.

b. Hearing: Hearings shall be closed, but the Faculty Hearing Board may, at its discretion, admit any person into the hearing room. The hearing board shall have the authority to discharge or to remove any person whose presence is deemed unnecessary or obstructive to the proceedings. The Accused Student and the Instructor shall have the right to be present at all stages of the hearing process except during the private deliberations of the hearing board.

c. Record of Hearing: The University shall make a recording of the hearing. The recording shall be the property of the University. No other recordings shall be made by any person during the hearing. Upon request, the Accused Student may review the recording in a designated University office in order to prepare for an appeal of the decision rendered by the Faculty Hearing Board. Further disclosure of the recording shall be governed by applicable state and federal law.

d. Opportunity to Present Positions to the Board: Both the Instructor and the Accused Student shall have the opportunity to fully present their positions to the Faculty Hearing Board, including the opportunity to present the testimony of witnesses and documents in support of their positions.

e. Support Persons: During the hearing, the Accused Student shall have the right to be accompanied by a support person who may observe but not participate in the hearing. A support person should be a person whose schedule allows attendance at the scheduled date and time for the hearing because delays will not normally be allowed due to the scheduling conflicts of a support person.

f. Written Notice of Decision: Within ten (10) University Calendar Days of the hearing, the Accused Student and the Instructor shall receive written notice of the Faculty Hearing Board's decision, which will indicate whether the Accused Student has been found to be "Responsible" or "Not Responsible." The notice shall also set forth any disciplinary sanctions imposed by the Board. The decision of the Faculty Hearing Board, as well as the disciplinary

sanction(s) imposed, if any, generally will not be released to third parties without the prior written consent of the Accused Student. However, certain information may be released if and to the extent authorized by state or federal law.

g. If the Faculty Hearing Board determines that the Accused Student is "Not Responsible," the Board shall not impose any sanctions. The Board shall so advise the Student's instructor and the instructor shall reevaluate the student's course grade in light of the Board's determination. If the Faculty Hearing Board determines that the Accused Student is "Responsible," the academic sanction imposed will be set forth by the instructor.

The Faculty Hearing Board may make a recommendation to change the academic sanction imposed by the instructor on the basis of its hearing of the evidence of academic misconduct.

#### Disciplinary Sanctions

##### 7. Disciplinary Sanctions:

Upon determination by the Office of Student Rights and Responsibilities that the Accused Student has no prior record of academic misconduct, the Student will be required to attend an Academic Integrity Workshop provided by the Learning Center. If the Accused Student has a prior record of academic misconduct or has engaged in a severe act of misconduct, they may face disciplinary sanctions as determined the Faculty Hearing Board. The Faculty Hearing Board may impose one or more of the following disciplinary sanctions: warning, disciplinary probation, discretionary sanctions, suspension and/or expulsion, as described in II.D of the Student Code of Conduct.

#### Appeal of the Faculty Hearing Board Ruling

##### 8. Appeal of the Faculty Hearing Board Ruling:

a. The decision rendered by the Faculty Hearing Board may be appealed by the Accused Student to the Provost/Vice President of Academic Affairs, who shall review the record of the hearing, including any and all documents presented to the Faculty Hearing Board. An appeal shall be in writing and shall be delivered to the Provost/Vice President of Academic Affairs within three (3) University calendar days of receipt of the Faculty Hearing Board's written decision.

b. An appeal may be brought on three grounds: (a) a claim that error in the hearing procedure substantially affected the decision; (b) a claim that new evidence or information material to the case was not known at the time of the hearing; or (c) a claim that the academic and/or

disciplinary sanction(s) imposed were not appropriate for the violation of the Code for which the accused student was found responsible. The Provost/Vice President of Academic Affairs shall have the right to deny an appeal not brought on any of the foregoing grounds.

c. The decision rendered by the Provost/Vice President of Academic Affairs shall be final and there shall be no further right of appeal.

#### Annual Reporting

##### 9. Annual Reporting:

At the end of each academic year, the Office of Student Rights and Responsibilities shall notify the Academic Integrity Committee of the total number of academic misconduct cases reported for the year, including the number of appeals, and the number and type of disciplinary sanctions recommended by the Faculty Hearing Board. No individual case decisions or outcomes will be identified in this report. Where necessary, the report will aggregate data over several years in order to maintain confidentiality. The Academic Integrity Committee will include this information in its annual report to the Senate.

#### Attendance

Regular class attendance is expected by the University. The following regulations are in effect.

- A student is responsible for class attendance, although each instructor should establish his/her policy and inform the class.
- A student absent from class for five (5) consecutive days or less should, upon return, explain the absence to the instructor.
- A student absent from class for more than five (5) days, who has not been seen as a patient in the University Health Service for the evaluation of the illness, should submit verification of the absence from his/her physician to the Office of Student Affairs. Notification of a student's absence will be relayed to the appropriate professor only if a physician's verification is submitted at the time of the request for notification.
- The setting and enforcing of an attendance policy for a class is the prerogative of the instructor. Decisions as to whether to excuse an absence and whether and how to allow missed work to be made up are solely at the discretion of the instructor, who makes those decisions based on considerations specific to the class

in question. The policy that follows is a set of recommendations that may be used by instructors to make these and related decisions if they wish.

1. Students are expected to notify instructors in advance for absences related to official University trips, conferences, intercollegiate athletic events, musical performances, and other events.
2. Due to the fact that the university recognizes that educational experiences extend beyond the classroom and campus, faculty are encouraged to be flexible with students who are acting as official representatives of the university, or participating in university-sanctioned events or activities that require absence from class.
3. A university sanctioned event or activity shall be one in which a student represents the university to external constituencies in academic, extra-curricular, or community engagement activities. These include but not limited to student government, intercollegiate athletic and debate contests, music/academic competitions, academic meetings, academic field trips, international travel experiences, and conferences.
4. It is the responsibility of the student to give the professor adequate notice of the absence and discuss arrangements for making up the work.
5. Official notice of a university-sanctioned event shall consist of an excused absence request letter from the sponsoring unit or program to the faculty whose class(es) will be missed, delivered by the student. The excused absence letter may request blanket approval for a series of events or approval of a single event.
6. Faculty are encouraged to provide students who miss an examination or other measurement of academic progress because they are participating in university-sanctioned events or activities with opportunities to be evaluated at other times and by comparable alternative evaluation methods within a reasonable period of time prior to or after the absence.
7. Students who seek excused absences to attend university-sanctioned events are expected to complete assignments on time, actively participate in other class sessions, and to make up work missed as agreed upon with the faculty

member. Students are expected to attend regularly at all other times.

- Make-up work is the responsibility of the student.

### **Weather-Related Cancellations/Closing Information**

Based on information from the state's meteorologist and local weather forecasts, the University determines when classes are canceled and/or delayed, in addition to when the campus hours of operation change.

In most situations, employees who are identified as "Level One" are expected to report to work as instructed by their supervisor.

Staff (other than Level One employees) are not required to work remotely when campus is closed.

### **When Decisions are Made**

- Morning issues - We will communicate decisions about a delayed opening or a closed campus by 6:15 a.m.
- Evening issues – Classes that begin at 4:30 p.m. or later are considered "evening" classes. We will announce decisions about evening classes by 2:30 p.m.

### **Where to Find the Latest Info**

- [ccsu.edu](https://ccsu.edu) - notification at the top of the page
- [ccsu.edu/cancel](https://ccsu.edu/cancel) - additional details about campus operations related to weather conditions
- CCSU Storm Phone (860) 832-3333
- Check your CCSU email account
- WFSB-TV, WTNH-TV, NBC CT, and Fox CT storm closing sites
- Our Emergency Notification System may be deployed if severe weather rapidly develops.

### **Campus Parking Ban**

Anytime snow or icy conditions are forecasted, CCSU's Parking Ban automatically goes into effect.

- All vehicles must be removed from surface parking lots or the owner risks being ticketed and towed.
- Parking is allowed in the garages, but avoid the top floors.



- In the event staff and faculty are required to report to work during inclement weather, they should also park in the garages.

### **Travel Decision Is Yours**

Please keep in mind that only *you* can determine whether it is safe enough for you to travel to campus. Our decision to cancel, close, or delay is based on many factors, but not all individual situations can be taken into account. For example, the New Britain roads may be fine while another part of the state may be experiencing severe conditions.

Upon making your decision, we ask that you share that information in a timely manner:

- Faculty deciding that conditions are not sufficiently safe for their travel are expected to make every effort to notify their students via University e-mail or voice mail.
- Students who elect not to travel to campus should inform their instructors at their first opportunity.
- Staff who decide they are unable to travel should alert their supervisor and charge that time to accrued leave.

We urge all parties to make allowances for the diversity of situations and the various levels of driving confidence.

### **Catalog Disclaimer**

The content of this catalog is provided for the information of the student. It is accurate at the time of posting but subject to change from time to time as deemed appropriate by Central Connecticut State University in order to fulfill its role and mission or to accommodate circumstances beyond its control. Any such changes may be implemented without prior notice and without obligation and, unless specified otherwise, are effective when made. This catalog does not constitute a contract; either expressed or implied, and is subject to revision at the University's discretion.

### **Computer Use Policy**

The campus computing facilities are available to undergraduate students to facilitate educational objectives, research, and study. In exercising computer privileges, undergraduate students are expected to follow University rules and regulations governing the use of computer accounts and equipment. These regulations are found in the Student Handbook from Student Affairs.

### **Email Policy**

Email is our primary means for official communication to students. Students have a responsibility to check their email on a regular basis.

### **Assignment of email addresses**

The Information Technology Department will assign each employee and student an official email address. It is to this official address that the University will send email communications. This official address will be listed in the University's Global Address List found in the Exchange/Outlook Address Directory and will be the official email address included with personal information within the administrative computing system.

### **Educational uses of email**

Faculty members may determine how email will be used in their classes. It is strongly recommended that if faculty members have email requirements and expectations, they specify these requirements in their course syllabi.

### **English Language Proficiency Requirement for Acceptance of International Students**

To ensure maximum benefit from academic study, all applicants who have not earned a minimum of a high school diploma or equivalent at an institution where English is the medium of instruction must provide evidence of English language proficiency in order to be

considered for admission to the university for undergraduate studies.

Evidence of English language proficiency in these cases is required in one of the following forms:

- Official results no older than two years on one of the following tests of English proficiency at or above the minimum score indicated:
  - The Test of English as a Foreign Language (TOEFL) minimum iBT score of 65 (PBT 500).
  - The International English Language Testing System (IELTS) minimum score of 6.5.
  - The Duolingo English Test (DET) minimum score of 95.
- For those already in Connecticut, language proficiency can also be assessed through the CCSU office of the Intensive English Language Program (IELP).

### **English Proficiency Score Exemptions for International Students**

Undergraduate applicants may be exempt from providing English proficiency scores if one of the following criteria is met:

1. Completion of a high school diploma or equivalent at a non-United States institution in a country where English is the primary language and in which English is the primary medium of instruction, within five years of the proposed semester of initial enrollment at CCSU.
2. Completion of a previous undergraduate or graduate degree at a non-United States institution of Higher Education in a country where English is the primary language and where English is the primary medium of instruction, within five years of the proposed semester of initial enrollment at CCSU.
3. Completion of a high school diploma or a previous undergraduate or graduate academic program from an accredited U.S. institution of higher education.

The Admissions Office may consider additional factors in consultation with the International Education Committee of the Senate.

Official documentation must be submitted from the overseas institution verifying that the applicant's undergraduate or graduate study is from an institution where all instruction is in English. The university reserves

the right to require additional testing or evidence of competency and may require study in the Intensive English Language Program.

### **Extracurricular Activity**

A full-time undergraduate student is eligible for participation in, election and/or appointment to committees and recognized Central Connecticut State student organizations, and for participation in extracurricular activities, such as intercollegiate athletics, band and theatre, provided the student is matriculated and is not under disciplinary sanction prohibiting same. This is a minimum requirement for the University and does not replace any conditions established by individual organizations.

### **Graduation Rate Statistics**

Students may request information on completion and graduation rates from the Office of Planning and Institutional Effectiveness (860-832-1780) or by going to the following Office of Institutional Research and Assessment webpage: <https://www.ccsu.edu/oira/>

### **Transcript Policy**

A transcript is the complete, unabridged academic record, without deletions or omissions, compiled while at Central Connecticut State University. Upon the granting of a degree or completion of a program, a student's transcript is considered officially sealed, meaning no changes in grades or alteration in courses will be made unless that student believes that the information in his or her transcript is inaccurate, misleading, or in violation of his or her rights of privacy. It is a student's responsibility to review and confirm the accuracy of his or her academic record. A student may view his or her transcript at any time on the Web to verify its content. It is recommended that the degree recipient confirm the accuracy of all grades, honors, terms, and cumulative GPA notations at the time final grades are posted to their academic record upon graduation.

It is a student's responsibility to notify the Office of the Registrar, in writing, of the information in the transcript that he or she believes is inaccurate, misleading, or in violation of his or her rights of privacy. A student who believes that his or her transcript is inaccurate, misleading, or in violation of his or her rights of privacy has the right to request an amendment to the transcript and, if this request is denied, the right to an opportunity for a hearing to challenge the content of the transcript on

the ground that it is inaccurate, misleading, or in violation of his or her rights of privacy. If, as a result of the hearing, the student's request is denied, the University shall inform the student of the right to place a statement with the transcript, commenting on the contested information in the record or stating why he or she disagrees with the decision of the University, or both.

Transcripts may be obtained from the Office of Registrar. Please refer to the Registrar's Website, for further information.

### **Veterans Benefits**

U.S. Department of Veterans Affairs (VA) regulations require that all students receiving VA educational benefits meet the College's satisfactory academic progress (SAP) standard and the College's academic standing policy as stated in the college catalog. Students failing to make SAP will have their VA educational benefits discontinued in accordance with the institution's policy found here. Students who are academically dismissed for failing to meet the college's academic standing policy will be reported to the VA. Students may appeal their academic dismissal in accordance with the undergraduate policy found here or the graduate policy found here. Should the appeal be successful, the student's enrollment will be reported retroactively to VA for the enrollment period to which the appeal applies.

### **School and Program Based Policies**

Many school and program based policies are listed in this section of the catalog.

Please be sure to also review the School or College's webpage for additional information.

- College of Liberal Arts and Social Science webpage
- School of Business webpage
- School of Education and Professional Studies webpage
- School of Engineering, Science, and Technology webpage

### **School of Education and Professional Studies Policies**

#### ***Nursing***

Admission to the Nursing Program is typically highly competitive and meeting the following minimum criteria does not guarantee admission.

- Application to the University by December 1 for Fall admission;
- A minimum cumulative GPA of 3.00 for coursework taken at CCSU, as well as an overall minimum cumulative GPA of 3.00 for all course work taken at all institutions (including CCSU);
- Minimum grade of "C+" or higher in CHEM 161 and CHEM 162: General Chemistry I or its equivalent;
- Minimum adjusted individual total score of 70% or higher for the ATI TEAS V exam (aligned with nation BSN standard);
- Completion of or enrollment in EXS 207 and EXS 211: Anatomy & Physiology in Exercise Science I or its equivalent. BMS 318 and BMS 319 completion or equivalent prior to application is optional. Must complete with C+ or higher.

Once admitted to the BSN program a student must maintain the following standards in order to remain in good standing within the Nursing program:

- a cumulative GPA of 2.70 in all NRSE courses and all related requirements including BMS 206, BMS 216, CHEM 210, BMS 318 and BMS 319.
- no less than a C+ in each NRSE course, and
- no less than a C+ in a related requirement (PSY 136 and BMS 216 C is required).

If any of these standards are not met, the student will be considered in provisional status within the Nursing Program. The student must develop and follow an action plan with his or her academic advisor or the Chairperson of the Department of Nursing.

If less than a C+ is earned in a NRSE course, that course must be repeated in the next fall or spring semester that it is offered and may be repeated only once.

If a student earns less than a C+ in two or more NRSE courses the student will be removed from the Nursing Program.

For more information regarding application process, please consult the Nursing Department website.

#### ***Direct Admissions to Nursing***

### **Admission Requirements:**

**To be admitted directly into the Nursing Program, students must meet the following criteria:**

- a high school GPA of 3.2 or higher
- high school grades of B or better in high school Chemistry class that included a laboratory component
- high school grade of B or better in Algebra II
- One of the following:
  - Eligibility to take CHEM 161 and CHEM 162 in the first semester at CCSU;
  - A score of 4 or 5 on the Chemistry Advanced Placement exam if applicable;
  - College credit for the equivalent of CHEM 161 and CHEM 162 with a grade of C+ or higher

**To successfully progress to the sophomore year in the Nursing Program, students must meet the following additional requirements:**

- Completion BMS 102 and BMS 103 with a grade of C+ or higher
- Completion of CHEM 161 and CHEM 162 with a grade of C+ or higher NOTE: Nursing majors with prior credit for CHEM 161/162 are exempt from this.
- Completion of PSY 136 with a grade of C or higher
- Completion of CHEM 210 with a C+ or higher
- A 3.00 or higher CCSU cumulative GPA

**Pre-Nursing**

## Admission Requirements:

Eligibility to enroll in CHEM 161 and CHEM 162: General Chemistry I and laboratory (For first year students, that is a math score of 550 or higher on SAT or 24 on the ACT)

Or

AP credit for CHEM 161 and CHEM 162

For transfer students and re-entry students only:

1. A cumulative GPA of 3.00 or better
2. A grade of "C" or better in any required science courses, if completed.
3. A grade of "C+" or higher in CHEM 161 & CHEM 162: General Chemistry I or its equivalent, if completed

4. A grade of "B-" or better in any nursing course, if completed For more information regarding application process, please consult the Nursing Department website.

**Social Work**

The Social Work Program at CCSU has a selective admissions policy. The policy is based on the need to maintain a program of excellence in the classroom and to assure availability of quality internship placements. Acceptance to the Social Work Program is based upon successful completion of the requirements outlined below. Meeting the minimum standards for admission does not guarantee acceptance to the Social Work Program. The Program reserves the right to admit a limited number of students each year.

- Minimum cumulative GPA of 2.00 for courses taken at CCSU, as well as an overall GPA of 2.00, which includes both CCSU grades and grades for courses taken at other institutions;
- Completion of the following ten pre-requisite courses with a grade of C or better:
  - PS 110 or PS 230
  - ECON 200
  - BIO 111 or BMS 111
  - STAT 215 (prerequisite = MATH 101 (C- or higher) or math placement exam)
  - SOC 110 or ANTH 140
  - SOC 111 or SW 100
  - SOC 233
  - SW 225 (prerequisite = ENG 110; co-requisite = SW 226 or SW 227)
  - \*SW 226 (3 prerequisites = SOC 110 or ANTH 140, SOC 111 or SW 100, & PS 110 or PS 230)
  - \*SW 227 (2 prerequisites = SOC 233 & BIO 111 or BMS 111)
- \*70 hours volunteer fieldwork required throughout the semester, therefore, SW 226 & SW 227 cannot be taken in the same semester.
- Minimum of 2.50 Program GPA including all ten pre-requisite courses listed above;

- NOTE: Students may be enrolled in some prerequisite courses at the time of application but must complete them with a C or better and maintain the minimum GPA requirements before full admission will be granted;
- Successfully complete a minimum 70-hours of volunteer work in a human service agency which may include shadowing or working with social workers or other human service personnel who are providing assistance to individuals, families, organizations, and communities in need. The 70-hours of volunteer work are completed as part of SW 226 and SW 227;
- Minimum scores of 2 (target) on the Professional Social Work Disposition Rubric. This is assessed in SW 225, SW 226, and SW 227, if taken at CCSU;
- Minimum scores of 2 (developing) on the Potential for Professional Competence for Generalist Social Work Practice Scale in Council on Social Work Education competencies. This is assessed through examination of the student portfolio.  
For more information regarding application process, please consult the Social Work Department website.

### ***Athletic Training***

#### **Athletic Training Program Information**

Undergraduate applicants seeking admission to the athletic training education program are required to submit a file of materials for review by the Department of Physical Education and Human Performance (PE & HP).

Applications for admission may be obtained in the Department of Physical Education and Human Performance, Kaiser Hall, Room 0180.

#### **REQUIREMENTS FOR ADMISSION**

1. Completion of application to the professional program for Athletic Training.
2. Successful completion of 50-80 hours of observation in the athletic training facility and sport coverage at CCSU.
3. Completion of 30 credits of which a minimum of 15 credits have been earned at CCSU.
4. Successful completion of 4 credits of Human Anatomy & Physiology I with lab (C- or better grade in lecture and lab).
5. Successful completion of EXS 112 and EXS 217 at CCSU (C- or higher grade in both courses).

6. Successful completion of BMS 380: EMERGENCY MEDICAL TECHNICIAN course or verification of equivalent course.

7. University Grade Point average (GPA) of 2.50.

8. Departmental grade point average (GPA) of 2.70.

9. Two letters of recommendation: one from a CCSU faculty preceptor and the second from a Department of PE & HP faculty member

using the required forms.

10. The presentation of an essay demonstrating command of the English language, citing reasons for wanting to enroll in the program, and emphasizing

experiences related to athletic training (500-700 words).

11. An interview with Screening Committee of the Department of Physical Education and Human Performance, including

at least one core ATEP faculty member.

#### **APPLICATION DEADLINE**

Fall Semester: September 10

Spring Semester: February 10

or next regular day of classes if the date falls on a weekend or holiday

#### **Athletic Training Retention Policy**

Once admitted to the professional program in Athletic Training, the following requirements must be maintained in order to remain in "**Good Standing**" within the Athletic Training Education Program.

1. Maintain a University cumulative grade point average (GPA) of 2.50.

2. Maintain a Departmental grade point average (GPA) of 2.70.

3. Successfully demonstrate required clinical skill proficiencies in EXS 218, EXS 240, EXS 315, EXS 317, EXS 316, EXS 319, EXS 445.

4. Maintain current State of Connecticut or National Registry EMT-B Certification or higher throughout EXS 315, EXS 316, EXS 319, EXS 445.

If a candidate drops below the required GPA levels; and/or fails to complete the skill competencies; and/or fails to maintain EMT certification, he or she may be denied enrollment to professional program courses, practicum courses and

internship assignments until the GPA and/or competencies reach the appropriate level; and/or EMT certification is valid.

Candidates who fail to meet the GPA requirement needed for application to the professional program for two consecutive semesters after completing EXS 217 will no longer be allowed to apply to the Athletic Training Professional Program.

**Please Note:** Revisions to the athletic training education program may occur in order to maintain compliance with national accreditation standards. Students should check with the program director and/or the CCSU athletic training education

website regarding the possibility of new requirements. Physical Education and Human Performance

### **Teacher Preparation**

#### **Admission to the Professional Program**

Admission to the Professional Program for Teacher Certification, including programs in elementary education, secondary education, and all-level education, requires that students meet the following criteria:

- Submission of Application to the Professional Program for Teacher Certification;
- Completion of 45 credits;
- Minimum of 2.70 cumulative GPA;
- Passing scores on PRAXIS CORE ACADEMIC SKILLS TESTS or official waiver based on SAT or ACT scores;
- Satisfactory writing skills based on an essay outlining the student's teaching goals and experiences;
- Favorable references supporting the applicant's ability to work with children;
- Satisfactory completion of prerequisite courses specific to the student's program;
- Demonstrated ability to work with children or young adults;
- Satisfactory interview with departmental faculty committee.

#### **Retention Policy**

Once admitted to the Professional Program for Teacher Certification (PPTC), a teacher candidate is required to maintain a semester grade point average (GPA) of 2.70 and a cumulative GPA of 2.70 for all coursework completed at CCSU and elsewhere. If a candidate's GPA drops below this level, he or she may be denied enrollment in PPTC courses and student teaching until the GPA reaches the required level. In addition, teacher candidates must receive grades of C or better in every professional program course; candidates may not proceed to the next sequence of professional program course; candidates may not proceed to the next sequence of professional program courses until such grades are earned. The Graduate School requires candidates enrolled in graduate or post baccalaureate certification programs to maintain at least a 3.00 GPA.

#### Continuation in the PPTC

In addition to academic good standing, teacher candidates must:

- Engage in professional behavior, attitudes, and attributes that positively impact performance as a teacher;
- Demonstrate acceptable performance during field experiences and student teaching;
- Perform at an acceptable level on all program assessments;
- Adhere to the *Connecticut Code of Professional Responsibilities for Teachers*;
- Maintain the confidentiality of professional information at all times; and
- Exhibit integrity and honesty in written and verbal communications, documentation, and coursework.

#### Continuation Issues Related to Field Experiences and Student Teaching

Issues revealed in criminal background checks, conviction of crimes, or other due and sufficient cause may lead to removal from field experiences, student teaching, and PPTC. The university makes every effort to secure

appropriate field placements for every professional program candidate; however, there are times when such placements cannot be procured. If three requests to districts to obtain a field placement for a candidate are denied based on the candidate's criminal background check, other public records, and /or the candidate's performance in interviews, this could also result in removal from PPTC. If a candidate encounters difficulties in a field experience, the opportunity to move forward may be delayed or denied. Should a candidate experience difficulties during student teaching, the Competency Review Team (see Student Teaching Handbook) will convene and make recommendations regarding continuance in Student Teaching and the PPTC.

### **Appeals Policy**

Admission to the Professional Program for Teacher Certification (PPTC) at Central Connecticut State University (CCSU) and continuation in the PPTC are academic decisions which reflect careful and deliberate judgement by the PPTC faculty. Factors which are considered in such decisions include, but are not limited to, the credentials, performance, and progress of the PPTC student relative to PPTC requirements and performance standards, the Connecticut *Code of Professional Responsibility for Teachers*, professional performance standards and attributes mandated by the Connecticut State Department of Education, the Council for the Accreditation of Educator Preparation (CAEP) standards, and the PPTC's unique responsibilities to children and schools.

The University recognizes that on occasions there may be an error or palpable injustice in decisions about admission to the PPTC or in decisions regarding continuation in or removal from the PPTC program or a PPTC course or practicum (field experience, internship, or student teaching). A Student who believes that an error or a palpable injustice has occurred in arriving at any of these decisions may elect to pursue an appeal.

This policy applies to all appeals of admission to, continuation in, and removal from the professional program for the PPTC or any element of the PPTC. The policy applies to undergraduate and graduate students seeking initial teacher certification as well as any student completing coursework, practica, or internships required for cross endorsement. Because academic decisions about admission to and retention in a program are the purview of the faculty, the appeals available under this policy pertain to the procedures followed to reach the academic decision in question, to insure that no error or palpable injustice occurred in reaching the decision. If the

PPTC Appeals Committee concludes there may have been an error or a palpable injustice, the SEPS Dean will consult with relevant department/program faculty regarding possible solutions. The decision of the SEPS Dean is final and no further appeal is available within the university.

This policy replaces all previous appeal policies that applied to the PPTC. This policy does not apply to appeals for grade change, which are governed by the University Appeal for Grade Change Policy found in the undergraduate and graduate catalogs. This policy does not apply to items covered by the Graduate Studies Non-Graded Appeals that are governed by Graduate Studies appeals process found in the graduate catalog.

In addition to appeals based on an error or palpable injustice, a student whose undergraduate cumulative GPA is below 2.70 may elect to appeal for a waiver of the PPTC GPA requirements. The process for submitting an appeal for such a waiver for purposes of program admission is described in the final section of this policy.

### **Professional Program for Teacher Certification (PPTC) Appeals Committee**

The SEPS Dean has identified a PPTC Appeals Committee with the following membership: The steering committee of the Central Teacher Education Committee (CTEC) and the coordinator or designated representative of the student's program. The PPTC Appeals Committee quorum shall be 3 members and must include the coordinator or designated representative of the student's program. This committee typically meets once a month throughout the school year and at least once in the summer months.

### **Professional Program for Teacher Certification (PPTC) Appeals Process**

If a student is not permitted to continue in the PPTC or is not allowed to enter, continue in, return to, or repeat some element of the PPTC, the student will be notified in writing by the SEPS Dean. In such a case, the student will be advised to meet with a SEPS Counselor to explore the academic options available to him or her at the university. If the student elects to appeal the decision the appeal must be submitted by the deadline given in the notification letter. For students already in the PPTC, the student will remain suspended from the PPTC while any appeal is being reviewed.

The student will not visit or contact field experience or student teaching sites or cooperating teachers during the appeals process without express written permission from the program coordinator and the Coordinator of the SEPS Office of School/Community Partnerships.

If a student elects to appeal a PPTC decision, the student should submit a formal written letter of appeal with supporting documentation. Because the student will not have the opportunity to supplement an appeal once it has been submitted, it is important that the appeal packet submitted include all relevant information. The appeal letter should a) identify the error or palpable injustice the student believes occurred, and b) describe the circumstances of the alleged error or palpable injustice. In addition, the student should attach all corresponding documentation, providing evidence of error or palpable injustice.

A signed, hard copy of the appeal letter and appended documentation should be submitted to the Office of the SEPS Dean within 14 days of removal from the Professional Program for Teacher Certification or denial of access to any element of the program. A *second* copy of the appeal must be submitted as an attachment to an email to the SEPS Dean. The Dean will forward the appeal to the PPTC Appeals Committee to determine if an error or palpable injustice has occurred. The committee will review the appeal submitted and may request additional information from other University sources. If an appeal is submitted less than two weeks prior to a scheduled appeals meeting, review of the appeal may need to be deferred to allow adequate time for investigation; however, the PPTC Appeals Committee will make a recommendation within 30 days of receipt of the appeal when reasonably possible. The PPTC Appeals Committee will report its recommendation along with supporting documentation to the SEPS Dean who will notify the student of his or her final decision within 2 weeks of receiving the committee's recommendation. The decision of the SEPS Dean is final and no further appeal is available within the university.

#### **Denial of PPTC admission based on cumulative undergraduate GPA below 2.70 or test score(s)**

A cumulative undergraduate GPA of B- (2.70 GPA) on all undergraduate coursework from all institutions attended is mandated by state law. In addition, the CCSU PPTC requires that students have a minimum cumulative GPA of 2.70 at CCSU. (Some programs have additional GPA requirements specific to that program.) The state allows the University to grant a limited number of GPA waivers; however, CAEP accreditation standards, specific programmatic requirements (e.g. a specific GPA in the content area), evidence that the student has the potential to pass teacher licensure tests, and state teacher preparation priorities are factors in the decision to grant any GPA waiver.

If a student is denied consideration for PPTC admission based on a cumulative undergraduate GPA below 2.70, the student may elect to submit a written appeal requesting a waiver of the requirement for purposes of program admission. A signed, hard copy of the appeal should be submitted to the Office of SEPS Dean by the deadline given in the denial letter. A *second* copy of the appeal must be submitted as an attachment to an email to the SEPS Dean. The Dean will forward the appeal to the PPTC Appeals Committee for review.

To be considered, the appeal must include a formal letter explaining how the applicant believes he or she has addressed the following criteria:

1. Evidence of a pattern of recent exemplary academic performance in courses required in the degree program or certification endorsement sought. The appeal letter should cite evidence supporting the claim that the pattern of recent academic performance is exemplary and provide an explanation for this change in the pattern of performance.
2. Evidence of recent experience working with children or in a profession/vocation that has contributed to the applicant's growth and development relevant to teaching. The appeal letter should describe the experience and explain how it has enhanced their potential for and commitment to teaching. A letter of reference documenting the cited experience and the applicant's performance in that experience should be submitted with the appeal letter. (Note: Previous experience cannot be used to meet requirements of field experiences and student teaching in the PPTC.)
3. The applicant should append any additional evidence that documents potential for success in the program. Relevant Praxis II or ACTFL scores are a primary example of such evidence.

The PPTC Appeals Committee will review the student's appeal and the student's PPTC application file. The committee may also request additional information from the University sources. The committee will send the SEPS Dean its recommendation along with supporting documentation and the Dean will make the final decision regarding the appeal. The decision of the SEPS Dean is final and there is no further appeal available within the university. The Dean will notify the student in writing of the final decision within 2 weeks of the PPTC appeals committee meeting. A GPA waiver addresses only one portion of PPTC admission requirements: applicants



granted such a waiver must also meet all other requirements to be admitted.

If the student is granted a GPA waiver and earns less than a 2.70 GPA for the semester in which the GPA waiver is granted, or in a semester, including a summer session, before beginning professional program classes, the waiver will be immediately withdrawn and admission to the PPTC will be revoked. Once in the PPTC, a student admitted under a GPA waiver must, like all other PPTC candidates, earn no less than a 2.70 GPA in each subsequent semester if an undergraduate, and no less than a 3.00 GPA in each subsequent semester if a graduate student, as well as meet all other PPTC standards to continue in the PPTC.

If an admissions appeal is denied, the student may reapply to the PPTC in a future application cycle.

For more information regarding application process, please consult the School of Education Website.

### **Dance Education**

#### **Major in Dance Education with Specialization in Teacher Education**

Students must meet the following requirements to be admitted to the professional program in the School of Education and Professional Studies:

1. Completion of 45 credits, 15 of which must be at CCSU;
2. Cumulative grade point average (GPA) of a 2.70;
3. Department grade point average (GPA) of a 3.00.
4. Passing scores for Praxis Core or official waiver;
5. Successfully (C- or higher) completed DAN 110, DAN 272, EXS 207, and two DAN skill/technique courses;
6. Completed application, signed and dated, with name written on all documents;
7. Two Letters of Recommendation (signed originals) from persons able to testify candidate's suitability as a professional in the dance education field;
8. Competency in writing; pass an essay demonstrating a command of the English language, describing in written narrative the reasons for wanting to enroll in

the Professional Program, emphasizing experiences which are relevant to dance education;

9. Successful interview; pass an interview with the Department of Physical Education and Human Performance Screening Committee, which is conducted AFTER the application is submitted;
10. Successful audition; pass an audition with the Dance Education faculty based on specified criteria, which is performed after the application is submitted.

#### **Exercise Science**

To apply, you must meet all the Criteria for Admission to the Exercise Science Professional Program, which include:

- Completed 45 hours total, of which 15 hours are at CCSU.
- A minimum of 2.50 Cumulative GPA.
- A minimum of 2.70 GPA in Exercise Science major courses
- Successful completion of the following courses: EXS 109 plus 7 additional credits of EXS courses. Courses must be completed before full admission is granted.
- Two Letters of Recommendation (signed originals) from persons able to testify candidate's suitability as a professional in the exercise science field. Avoid seeking letters from family friends.
- Submit an essay demonstrating the command of the English language, describing in written narrative the reasons for wanting to enroll in the Professional Program, emphasizing experiences which are relevant to exercise science.
- If your Department (Exercise Science courses) GPA is below 3.0, you must pass an interview with the Screening Committee. This will be conducted AFTER the application is submitted.
- NOTE: We reserve the right to seek recommendations from faculty concerning candidates for admission.

Once admitted to the professional program in Exercise Science, the following requirements must be maintained

in order to remain in good standing within the exercise science program:

- A grade of C or higher in all professional program courses;
- a University GPA of 2.50; and
- a departmental GPA of 2.70.

Internship assignments require the student to be in good standing. If a candidate drops below the required GPA levels, and/or fails to get a C or higher in any professional program course, he or she may be denied admission to the professional program courses, practicum courses, and internship assignments until the GPA or grade reaches the appropriate level.

For more information regarding application process, please consult the Exercise Science website.

## School of Business Policies

### ***Admission Policy***

The School of Business requires objective evidence that a student possesses the quantitative and verbal aptitude and the fundamental economics and accounting skills to move on to upper division business coursework and successfully complete their business degree. Students are also expected to have a working knowledge of basic computer applications, including word processing and spreadsheets.

### **Pre-Major Status**

Students may apply for admission to the School of Business as part of their initial application for admission to the University, or thereafter. Students will have pre-major status until they are formally admitted to business major status. All students entering the School of Business will start as pre-majors.

While the student maintains pre-major status, they will be advised in the Student Services Center. Generally, students who have successfully completed the requirements for the business major status will have their status automatically changed from pre-major to major status and will be assigned a faculty advisor in their major department(s).

**For further information, call the School of Business Student**

**ent Services Center at 860-832-3205.**

### **Business Major Status**

Students must be formally assigned business major status before they enroll in upper division (300-400 level) business courses. Students who expect to successfully complete the pre-major requirements by the close of the current semester will be permitted to conditionally register for upper division business courses in their major for the following semester. If such students subsequently do not successfully complete the pre-major requirements, their conditional permission will be revoked, and they will be removed from upper division business courses.

Before being admitted to business major status students must:

- Have completed at least 54 credit hours delivered at or accepted by the University (aka “attain junior status”).
- Earn a CCSU cumulative GPA of 2.00 or greater.
- For all pre-major courses, students must:
  - Attain a C- or better
  - Attain a pre-major course GPA of 2.00 or greater (including transferred grades).
  - The pre-major courses are:
    - AC 211 Introduction to Financial Accounting
    - AC 212 Introduction to Managerial Accounting
    - ECON 200 Principles of Macroeconomics
    - ECON 201 Principles of Microeconomics
    - WRT 105/105P Enhanced Intro to College Writing OR WRT 110 Introduction to College Writing
    - MATH 123 Applied Business Mathematics OR MATH 125 Applied Calculus
    - STAT 200 Business Statistics (STAT 104, STAT 215, or equivalent)
    - MC 207 Managerial Communication

## Common Business Core

All School of Business Graduates must complete a common business core. A grade of C- or better is required in all these courses:

- AC 211 Introduction to Financial Accounting
- AC 212 Introduction to Managerial Accounting
- FIN 295 Managerial Finance
- LAW 250 The Legal and Ethical Environment of Business
- MC 207 Managerial Communication I
- MGT 295 Fundamentals of Management and Organizational Behavior
- MIS 201 Introduction to Management Information Systems
- MKT 295 Fundamentals of Marketing
- BUS 480 Capstone Seminar
- MGT 480 Strategic Management

AC 211, AC 212 and MC 207 are required in and counted towards both the common business core and as a pre-major required course requirement.

## Additional Common Core Requirement

All majors in the School of Business require STAT 201 Business Statistics I and BUS 250 Introduction to Business Analytics and Skills, and in many cases, it is a prerequisite for major level courses.

## Transfer Students

Transfer students must meet the same course requirements, application procedures, and grade point averages (pre-major requirements and overall cumulative) as CCSU students. Transfer credit for required pre-major courses, common business core courses, and chosen major will only be granted by the School of Business if completed with grades of C- or better. Transfer grades for pre-major courses (or equivalencies as approved by the School of Business) taken at other colleges and universities will be included in the GPA calculation of pre-business major courses. Students will be asked to repeat those courses to attain a minimum GPA of 2.00 for the pre-business major courses.

## Graduation GPA and Grade Requirements

To graduate from the School of Business students must have an overall CCSU GPA of 2.00 or greater and attain a C- or better in all pre-major, major and common business core courses.

## GRADUATE ACADEMIC POLICIES AND REQUIREMENTS

The academic policies and degree requirements for graduate students at Central Connecticut State University are governed by the University faculty, and administered by the Office of the Registrar. The Graduate Studies Committee, composed of faculty and graduate students who represent the graduate programs at Central Connecticut State University, reviews graduate curriculum and proposes policies affecting graduate students and programs that then need approval by the Faculty Senate. The Graduate Studies Committee also hears appeals related to student academic/performance matters.

The sections summarize graduate academic policies of the University. All graduate students are urged to become familiar with these policies and to follow them when making decisions about their graduate studies at Central Connecticut State University. Advisors are assigned to assist in planning the academic program, but they are not authorized to change established policy of the University. Advisors and students are responsible for ensuring that the academic program complies with the policies of the University.

### Admission Policies for Acceptance to Graduate Programs

#### Admission Criteria

In order to be admitted to the School of Graduate Studies a student must meet the following standards:

1. For most programs, students must have a minimum undergraduate GPA of 2.70 (Some programs require an undergraduate GPA of 3.00.)
2. The student must have a minimum GPA of 3.00 in all post-baccalaureate course work.
3. When applicable, students who have successfully completed a master's degree from an accredited institution with a minimum 3.00 GPA, on a four-point scale (where A=4.00), will be admitted to the School of Graduate Studies. (The undergraduate GPA will not be counted.)

Individual programs may have different GPA requirements as well as additional requirements, such as essays or letters of recommendation and/or a personal interview. Please contact the Department Chair or Coordinator of your intended program of study, or access the Graduate Admissions website for further information.

A prospective student must submit:

1. Official transcripts for all coursework from every undergraduate institution that they attended to the Graduate Admissions Office.
2. Official transcripts showing all graduate coursework completed to the Graduate Admissions Office.
3. A \$50.00 non-refundable fee for application processing.
4. Additional materials, if required by individual program, must be uploaded per the instructions provided within the online application.
5. Applicants who hold a Master's degree from a regionally accredited university with a 3.00 or higher GPA on a four-point scale (where A = 4.00) are required to request that official transcripts be submitted: one from where they obtained their undergraduate degree and one from where they obtained their Master's degree as well as from any other institution where graduate courses were taken. (Please note that applicants to the MAT program and to Post Baccalaureate programs are required to submit all undergraduate transcripts as well). The Graduate Recruitment and Admissions office will maintain the right to request other official transcripts to review courses that are essential to the applicant's program of study.

The Graduate Recruitment and Admissions Office may use discretion to waive the need to request missing transcript(s) if all of the following apply:

- Applicants with undergraduate transcripts that appear to have up to a total of 6 credits from another institution(s) that are posted to the transcript(s) presented, and the courses/grades listed from the missing transcript would not affect the overall university/program undergraduate GPA requirement.
- The presenting overall undergraduate GPA is at least a 3.50.
- The missing transcripts are only for undergraduate coursework.

Applications for the MAT and Teacher Certification programs would not be eligible to have the transcripts waived.

### Number of times a student may apply for admission to the same program.

A prospective student who is denied admission will be considered for acceptance to the same program if their department application materials and/or cumulative GPA demonstrate substantial improvement. However, no prospective student may apply to the same program for more than three times, and no appeal can be made to extend this limit.

### English Language Proficiency Requirement for Acceptance

To ensure maximum benefit from academic study, all applicants who have not earned a minimum of a bachelor's degree at an institution where English is the medium of instruction must provide evidence of English language proficiency before acceptance to a graduate program at the University.

Evidence of English language proficiency is evaluated based on factors such as:

the amount and type of formal U.S. education, and/or official Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) scores.

(TOEFL and IELTS scores must be valid within the most recent two years as evaluated by the CCSU office of the Intensive English Language Program (IELP). Proof of competency in English is indicated by the TOEFL with a score of no less than 550 on the paper based test (or 213 on the computer based test or 79 on the iBT) or an IELTS overall band score of 6.5).

Language proficiency can also be assessed through the CCSU office of the Intensive English Language Program (IELP).

The Pathway Program requires intensive English courses for one or two semesters while beginning studies toward a graduate degree. International applicants with slightly lower English proficiency scores can be considered for full admission to an academic program as part of the Pathway Program based on the following minimum test scores:

- One-semester Pathway minimum English proficiency score: TOEFL iBT of 65 (PBT 500), IELTS of 6.5, or DET of 95.

- Two-semester Pathway minimum English proficiency score: TOEFL iBT of 53 (PBT 475), IELTS of 6.0, or DET of 85.

### English Proficiency Score Exemptions

Graduate applicants may be exempt from providing TOEFL or IELTS scores if one of the following criteria is met:

1. Completion of a four year undergraduate academic program at a non-United States institution in a country where English is the primary language and in which English is the primary medium of instruction, within five years of the proposed semester of initial enrollment at CCSU. (A list of countries will be provided on the graduate website.) **Click here**
2. Completion of a graduate degree at a non-United States institution of Higher Education in a country where English is the primary language and where English is the primary medium of instruction, within five years of the proposed semester of initial enrollment at CCSU. (A list of countries will be provided on the graduate website.) **Click here**
3. Completion of an undergraduate or graduate academic program from an accredited U.S. institution of higher education.  
The Graduate Recruitment and Admissions Office may consider additional factors in consultation with the program department chair or coordinator.

Official documentation must be submitted from the overseas institution verifying that the applicant's undergraduate or graduate study is from an institution where all instruction is in English. The Graduate School reserves the right to require additional testing or evidence of competency, and may require study in the Intensive English Language Program.

### Admission Appeals with a Cumulative GPA between 2.40-2.69

Applicants who are denied admission to graduate programs at Central Connecticut State University may request review of these decisions through an appeal process. In most cases, a minimum GPA of 2.40 is required to be eligible to appeal.

A student may appeal for **conditional admission**, provided the following conditions are met.

1. The student has an undergraduate GPA between 2.40 and 2.69.

2. The student has a graduate GPA of 3.00 for all coursework.
3. For the student who has taken courses at the graduate level, but who does not meet the minimum undergraduate GPA of 2.70, the quality points of credits for graduate level courses will be added to the quality points of the undergraduate GPA to compute the total GPA, which needs to fall in the range of 2.40-2.69.
4. The department of application agrees in advance to make a conditional admittance for the student.

Students may request a review of the denial decision, **in writing**, to the Associate Vice President for Enrollment Management; they may include additional academic information (such as scores from standardized tests, grades in recent courses, or letters of recommendation) not submitted with the original application.

Depending on the nature of the appeal, the Associate Vice President for Enrollment Management will consult with the academic department to which admission is sought, as well as with the Graduate Appeals Committee when applicable, before making a decision.

### **Admission Appeals with a Cumulative GPA below 2.40**

Applicants who are denied admission to graduate programs at Central Connecticut State University may request review of these decisions through an appeal process. In most cases, a minimum GPA of 2.40 is required to be eligible to appeal.

However, in rare cases programs may consider Conditional Admission for students whose cumulative GPA is lower than 2.40. Such consideration is at the discretion of individual departments and the Associate Vice President for Enrollment Management, provided the applicant demonstrates exemplary professional experiences and accomplishments or other relevant evidence in recent years.

Such appeals must be made in writing to the Graduate Admissions Office with written justification supporting the applicant's current readiness. This may include additional academic information (such as scores from standardized tests, grades in very recent courses, or letters of recommendation from instructors, etc.) which was not submitted with the original application. The Associate Vice President will first consult the department offering the program for reconsideration of the applicant. Depending on the nature of the appeal, further consultation may be

made with an appropriate designee of the academic school or the department chair of the relevant program before making a decision. The student will be notified of the decision in writing. If an unfavorable decision is rendered, there will be no further official recourse for an appeal.

### **Conditional Acceptance Policy**

An applicant for a graduate program who does not meet undergraduate or graduate GPA standards for regular admission but has an undergraduate GPA of at least 2.40 (some programs require a minimum 2.70) may be considered for conditional admission when the department of application has agreed in advance to make this option available to prospective students. The conditional admission program is an arrangement that allows students to demonstrate the ability to perform successfully in a graduate degree program.

Conditional admission is available only in a limited number of fields by department agreements. Students admitted conditionally will be notified of the conditions, and will be given an opportunity to fulfill all conditions.

If conditions are not met, the student will receive a letter of dismissal from the Registrar's Office. A second attempt may be granted by the department and the dean of the academic school in exceptional circumstances; however, no student will be granted more than two opportunities to fulfill any conditions.

### **Graduate Student Fresh Start Policy**

A post-baccalaureate student who has been admitted to a graduate program can independently, or in conjunction with his or her department, initiate an appeal to the dean of the academic school, that includes a rationale as to why grades for graduate-level courses taken seven or more years ago at CCSU that appear on the graduate transcript should not be used in calculating the student's GPA. The appeal should also substantiate why he or she is now able to complete graduate-quality work.

If the appeal is approved, courses omitted from the GPA calculation may not be used in the planned program in which the student is now enrolled. Please note that courses omitted from the GPA will include all courses that were attempted in the Fresh Start period.

Each appeal will be decided on its own merits and students may use this option only once.

## Academic Advising and the Planned Program of Graduate Study

At the time of admission, graduate students receive the name, telephone number and email address of their program advisor in their acceptance letter. Planned Programs of Graduate Study forms are available on the School of Graduate Studies Resources web page. Students and advisors should meet as soon as possible to plan their program of study but must be approved prior to the completion of 16 credits of course work. A student may request a change of advisor by completing and submitting the appropriate form to the Office of the Registrar.

### The Planned Program of Graduate Study

The Planned Program of graduate study is an official document which lists the courses and other requirements that students must finish prior to graduation for both degree and non-degree programs.

After a student has been admitted to a graduate program of any kind, the student must consult with the faculty advisor to develop the planned program of graduate study. An approved planned program is required for all graduate programs.

After the advisor and student have signed the planned program form, it must be submitted by the advisor to the School of Graduate Studies for approval. Once approved by the dean, School of Graduate Studies, or designee, it then becomes a formal plan for graduate study which may be subject to revision by the University to reflect additional requirements imposed by outside licensing or accrediting agencies. A planned program of study does not constitute a contract, either express or implied, and is subject to revision as described above. Any changes in the planned program must be approved by the advisor and the dean, School of Graduate Studies. Additional planned program forms and course substitution forms are available on the School of Graduate Studies Resources web page.

The planned program should be developed with the advisor early in the student's graduate studies but must be approved prior to the completion of 16 credits of course work. Further, no student may undertake the capstone requirement without having a planned program of study on file in the Graduate Studies Office; in addition no student is eligible for graduation without a planned program of study on file. There is also no assurance that course work completed prior to admission to a program, or before the planned program has been agreed upon with the academic advisor, will be approved.

Graduate policy stipulates that no more than nine credits taken at the 500 level as a non-matriculated graduate student will be approved for programs requiring 30-35 credits (or 25% of the total credits for programs over 36 credits). In addition, at the request of the student, the Department and Dean will review the student's graduate transcript for courses taken as a non-matriculated student and may approve other courses, beyond those nine credits, that he or she wishes to be applied to that degree program.

Graduate students may have a maximum of nine credits (and in some cases zero to six, depending on the program) at the 400 level provided they are found in the graduate catalog and approved by the program advisor listed on their planned program of study. Graduate students enrolled in 400-level classes are required to do additional work as compared to their undergraduate classmates.

The nine credit limit on 400-level courses does not apply to graduate post-baccalaureate teacher certification programs and to some official certificate programs. Courses numbered under 400 may be applied toward teacher certification and official certificate programs when recommended by the advisor but will not be approved for inclusion in other graduate degree programs.

### Changes in the Planned Program

A course substitution form must be completed whenever a student wants to modify degree requirements or apply a course not previously included in an approved planned program toward requirements. This form must be signed by the student's advisor and submitted to Graduate Studies. Requests to change program requirements, which are initiated after the student has started a thesis or attempted after the comprehensive examination, must be approved by the student's academic department chair as well as by Graduate Studies.

### Transfer Policy for Graduate Credits

Students may request transfer credit for graduate courses completed at another regionally accredited institution of higher education or a college/university of equivalent status outside of the U.S. that is not a CCSU Partner and Affiliate Institution of Higher Education.

The amount of graduate work transferable to a graduate degree program is limited to a maximum of nine credits for programs requiring 30 to 35 credits or 25 percent of the total credits for programs requiring 36 credits or

more, not including prerequisites. The number of credits transferable to a CCSU Official Certificate Programs is limited to a maximum of six credits. (Some programs may have more stringent policies for either degree or non degree programs.) In order to be transferred, a course or courses must be determined to be:

- graduate level from an regionally-accredited institution or an out-of-country equivalent authorized to grant graduate degrees;
- passed with an earned grade of 3.00 (B) or higher or an equivalent (Pass/fail courses may not be transferred);
- within the six-year limit at the time of graduation from CCSU;
- recorded on an official transcript from the granting institution; and
- included on the planned program by the graduate program advisor.

**Courses which were applied to a previously completed degree will not be transferred to a new degree program.**

When international credits are presented for transfer, official transcripts must be provided from the institution attended along with a verified translation of the academic record. In some cases, it may be necessary to seek assistance from an agency recognized by the National Association of Credential Evaluation Services during the credit evaluation process.

Students who have been admitted to graduate programs must obtain prior written approval from their advisors and the dean of the academic school/designee if they wish to take courses at another institution for transfer into their planned programs of graduate study. Forms for requesting transfer and substitution of credit are available on the School of Graduate Studies Resources web page. Students who do not receive prior approval may not be able to use courses from other institutions as part of their planned programs. Students are responsible for requesting that an official transcript of any approved transfer courses is sent to the Office of the Registrar. Students should be aware that "continuing education units" (CEUs) may not be transferred to graduate degree programs or applied toward the completion of graduate degree requirements.

Graduate students in non-degree Post Baccalaureate Teacher Certification programs may receive an advisor's agreement to offset undergraduate general education deficiencies through departmentally approved subject examinations from the College Level Examination Program

(CLEP) of the College Board. The same rules that govern undergraduate students in teacher certification programs as specified in the undergraduate catalog will apply to graduate students. Passing results for such CLEP exams may be posted on graduate records for students enrolled in Teacher Certification Programs. Official results for advisor-approved examinations must be submitted for consideration to the Office of the Registrar.

**Credits Earned During Study Abroad at CCSU Partner and Affiliate Institutions of Higher Education**

Coursework completed while studying abroad at one of CCSU's approved study abroad partner and affiliate institutions (as identified on the Center for International Education's website) shall be treated in the same manner as coursework undertaken on the CCSU Campus. (As a result, these courses will not fall under the transfer policy.) Course equivalencies shall be identified by the faculty advisor prior to study abroad and the actual grade earned abroad will be posted to the student's transcript, with the grade earned calculating into the overall GPA. Students may not select which courses are brought onto their CCSU academic record; all grades (A through F) will be recorded and made part of the student's academic record at CCSU.

This policy is particularly relevant to the MA Modern Language: HNAIU Specialization, given that courses taken at the University of Salamanca are required for the MA Modern Languages, HNAIU Specialization, degree. The Modern Language department has stipulated that the 9 credits of graduate coursework taken at the University of Salamanca will be the only credits accepted outside CCSU.

**Six-Year Time Limit**

All course work and capstone requirements (i.e., dissertations, theses, special projects and comprehensive exams) for the degree must be completed during the six years, which precede degree conferral. That is, the student has six years from the earliest course listed on the planned program (including any work transferred from another institution or completed prior to matriculation) to complete ALL degree requirements.

**Extensions Requests for the Six-Year Time Limit**

If a student, due to extenuating circumstances, anticipates that he/she will be unable to complete all degree requirements within the six-year time limit, the student may request an extension by writing to the graduate



advisor who will forward it with recommendations to the academic dean or designee. When making the request, the student should include the semester and year in which he or she expects to complete the degree and the reason for not meeting the six-year time limit. If the dean deems the request justified, an extension will be granted. However, for programs of 30-35 credits, a maximum of eight years will be allowed in total to complete the degree; for programs of 36 credits or more, a maximum of nine years will be allowed.

Even if an extension is granted, however, any courses that were completed before those 8 years (in the case of programs of 30-35 credits) or 9 years (in the case of programs of 36 credits or more) prior to the year in which the graduate degree is to be granted may not be counted toward the completion of that degree. Special approval to include older courses may be granted if the department can confirm the content of the course will have changed less than 15% from the time the course was completed to the time of degree award and the dean approves. An additional exam may be required to document student's level of knowledge on the subject.

For a student enrolled in a thesis or special project, the capstone advisor can require regular progress reports from the student. Based on a lack of progress, the advisor can choose not to recommend an extension beyond the six-year time limit. Further, the advisor can choose to assign a failing grade for the thesis or special project.

## Student Status (Definitions and Policies)

### Full Time Matriculation (FT) Course Load and Credits

A student who has been accepted to a graduate program through Graduate Recruitment and Admissions is considered a matriculated student. A graduate student who registers for nine to fifteen credits is considered a full-time student.

Full-time students who fall below the nine credit minimum course load, required to maintain full-time status, must change their status to part-time. Part-time charges will replace full-time charges and any money that has been paid will be transferred to the new charges. Any excess payment will be refunded according to University refund policies. Please note that those enrolling as full-time students may not withdraw from the University as part-time students during the first week of University-wide classes, without incurring the 10% penalty.

### Part-time Matriculation (PT) Course Load and Credits

A graduate student who has been accepted to a graduate program through Graduate Recruitment and Admissions is considered a matriculated student. A student who enrolls in *eight or fewer credits* is considered a part-time student.

In summer and winter sessions, all students are considered part-time. Graduate students may take up to seven credits during each five-week summer session and up to four credits in the winter session.

Part-time graduate students are charged a fixed rate per credit, plus a non-refundable \$65 Registration Fee.

### Changing Status from Full-Time to Part-Time

Students can change their status from full-time to part-time and vice versa for any given semester during the course of their graduate studies through the Registrar's Office. Any student who wishes to change his/her status must report to the Registrar's Office (Willard-Diloreto Hall) or complete the change of status form available at the Registrar's website: [www.ccsu.edu/registrar](http://www.ccsu.edu/registrar). Such status changes must be made in writing prior to the beginning of semester when the change is desired. Full-time students who plan to change their status must contact the Registrar's Office to avoid billing problems.

### Non-Matriculation

A **non-matriculated** student is someone who has not been accepted by CCSU to pursue a degree. Non-matriculated students may only enroll as part-time and may register up to a maximum of 8.99 credits. Non-matriculated graduate students are allowed to take a maximum of nine credits at the 500 level. Thereafter, they should seek matriculation into a graduate program. Graduate policy also stipulates that no more than nine credits taken at the 500 level as a non-matriculated graduate student will be approved for programs requiring 30-35 credits (or 25% of the total credits for programs over 36 credits). Non-matriculated students are not eligible for Financial Aid.

### Time Expectations for Graduate Student Course Equivalent Work

Graduate students are expected to invest a minimum of three hours of out-of-class student work for every one hour of classroom or direct faculty instruction each week for approximately fifteen weeks for one semester. At least an equivalent amount of student work time applies to lab

work, internships, practica, studio work, as well as other academic work that leads to the award of credit hours.

## Simultaneous Matriculation in Two Graduate Programs

### Adding a Certificate to a Master's Program

Students pursuing a master's degree may apply to enroll simultaneously in an Official Certificate Program. Applicants will need to meet the Certificate Program's initial admission requirements, and may need to supply new additional materials beyond those required for admission to the master's program. Application can be made through the Change Program/Major Advisor or Add Certificate form, available on the School of Graduate Studies Resources website. Program directors or admissions committees will decide whether applicants are qualified and whether the certificate program sought is appropriate. Note that to avoid excessive course duplication, some master's program tracks and specializations may not be allowed to pair with certain OCP's.

## Major and Degree Policies

### Master's Degree Requirements

Each candidate for the master's degree is expected to demonstrate ability to present effectively the results of graduate study at the University and to analyze problems related to the area of specialization. Candidates must also maintain a minimum cumulative grade point average of 3.00 (B) on the graduate record at Central Connecticut State University. In addition to grade-point requirements for good academic standing, students should note that no more than two grades of C+ or C (i.e. two C's, or two C+'s, or one C and one C+) are permitted for courses included on the planned program of graduate study. Any courses with grades of C- or below will not be applied to program course requirements.

### **Master's Degree Capstone Requirements (Thesis, Comprehensive Examination, Special Project)**

The master's degree is conferred upon the student who has completed, subject to approval of the faculty and administrative officials, all requirements of the planned program of graduate study. Requirements include a minimum of 30 credits of approved graduate courses and a capstone experience of a master's thesis (Plan A), a special project such as an art exhibit, performance, or

applied research project (Plan C or E), and/or a comprehensive examination (Plan B).

A student must have a 3.0 cumulative GPA to be eligible to apply for all graduate program capstones.

### **Thesis (Plan A)**

The master's thesis is required of all graduate students completing degrees under the Plan A option. The thesis represents a report of original scholarship completed under the supervision of a faculty thesis advisor. Depending on department curriculum policy, students receive either three or six credits for completing the thesis requirement as listed in the catalog course descriptions.

Students electing to write a thesis, in accordance with department or program policy, will select or be assigned a faculty thesis advisor. Students select a topic in consultation with the thesis advisor. The advisor and committee of a minimum of one additional faculty member must approve the thesis proposal and the thesis prior to the submission of each item to the academic dean, who assures that the thesis meets University standards for format and quality. Some departments require the student to give an oral defense of the thesis before it is submitted for approval. When all requirements are met and approved, the thesis is transmitted to the University library.

The following University requirements apply to all students writing theses:

1. Whenever possible, the student's graduate advisor will serve as the thesis advisor. If the student and the advisor deem it appropriate, another faculty member may be appointed by the department chair to serve as thesis advisor.
2. The student must register for the thesis using the Graduate Capstone Course Registration Form, available on the website. Students must obtain all signatures as required on the form and must register during the regular registration period. To register, students must have a minimum grade point average of 3.00 and at least 18 credits completed in programs of 30-35 credits or 24 credits completed in programs with greater than 35 credits.
3. A thesis proposal must be approved by the thesis advisor and academic dean before a student begins substantive work on the thesis. An approved proposal is also required to be eligible to participate in an upcoming Commencement ceremony.

4. If human or animal subjects will be used, the student must submit a proposal to the Institutional Review Board (IRB) or Institutional Animal Care and Use Committee (IACUC) **prior** to data collection.
5. The thesis must be prepared in a style and format appropriate to the discipline and approved by the thesis advisor, any additional committee members/readers, and the academic dean. Among the currently approved styles are ACA, APA, MLA, Campbell, and Chicago.
6. An electronic copy of the approved thesis and abstract (not to exceed 200-300 words and one to two pages) must be submitted to the dean's office, accompanied by the Public Access Approval form signed by the student and thesis advisor. Some program require an oral defense prior to the submission of the final thesis for approval.
7. If a student planning to graduate wishes the thesis title to be included in the Commencement Program, the final thesis must be submitted by April 8 for May or November 8 for December of the year in which the student plans to graduate. If the student only has an approved proposal by this date, the student's name will be listed under the Master's Degree Candidates but their thesis title will be listed in a future Commencement Program once the final thesis is approved.
8. Final Thesis must be submitted for approval by the last day of finals, as listed on the University calendar, in order for the Master's degree to be awarded in that semester.
9. As a service to our students, Elihu Burritt Library provides the option to have up to two personal copies of a Master's Thesis bound professionally for \$20 per copy. The turnaround time for students to receive their bound thesis is two to six months. To obtain copies of your thesis please utilize the Bound Personal Copy of Thesis Request form.

#### ***Comprehensive Examination (Plan B)***

The comprehensive examination is required of all students who select the Plan B option. The comprehensive examination covers the course work in the student's planned program. At the option of the department, the comprehensive examination may include an oral examination and/or an oral defense of the written examination.

The comprehensive examination is normally taken during the last semester of study, but may be attempted any

time after the completion of at least 75% of planned program requirements. Exceptions may be granted with the recommendation of the advisor and permission of the dean. Students are required to have a minimum 3.00 grade point average at the time of application. Examinations are given each fall and spring semester and, at the discretion of the academic department, during the summer. Students should consult their advisors and/or department chairs concerning the availability of a summer session comprehensive examination.

To be eligible to take the examination, students must complete the Comprehensive Exam Application form, which is available on the website. Students should submit this form to gradstudies@ccsu.edu no later than October 1 for fall semester examinations, and no later than February 15 for spring semester examinations. The academic department will notify students concerning the time and place of the examination and will inform students of the results.

With departmental permission, students may retake the comprehensive examination and must submit a new application form. Students who do not pass the examination on a first attempt may be required to enroll in additional course work or to make other special preparations for reexamination. Students who fail the examination a second time must appeal to the dean for permission to retake the examination.

If the student receives a failing grade on all or parts of the comprehensive examination for a third time, he or she will be dismissed from the graduate program, unless he or she is granted permission to choose another capstone option by the program's department chair and the dean. The student may file an appeal within two weeks of receiving the dean's dismissal letter. If denied, the student may make a final written appeal to the standing Appeals Committee of the Graduate Studies Committee.

If a student does not attend a scheduled comprehensive exam without prior notification to the academic department, the results will be counted as a failure and require a new application and departmental approval for a future exam.

Final results of the comprehensive exam (pass/fail) will be included on the student's graduate transcript.

#### ***Special Project (Plan C)***

In general a special project involves completion of a body of work appropriate to the degree specialty. The availability of this option and the requirements for the special project vary according to the degree program.

However, all special projects must include as a minimum an abstract, a definition of the project, project objective (purpose, rationale for conducting the project), a review of literature, research methods or a plan for the project, results or findings, summary or conclusions, and bibliography or references, as well as appendices, if appropriate.

For Plan C, the faculty advisor or another faculty member in the department will supervise the project. Students select a topic in consultation with the advisor. The advisor must approve the capstone proposal and the final project prior to the submission of each item to the academic dean, who assures that the thesis meets University standards for format and quality. Some departments require the student to give an oral defense before it is submitted for approval. The student's work will be evaluated by the advisor and by at least one other faculty member as determined by departmental requirements.

The following University requirements apply to all students completing a special project:

1. The student must register for the special project using the Graduate Capstone Course Registration Form, available on the website. Students must obtain all signatures as required on the form and must register during the regular registration period. To register, students must have a minimum grade point average of 3.00 and at least 18 credits completed in programs of 30-35 credits or 24 credits completed in programs with greater than 35 credits. The special project proposal will not be approved by the Dean, School of Graduate Studies, until the student has registered for the course.
2. A capstone proposal must be approved by the special project advisor and academic dean before a student begin substantive work on the project. An approved proposal is also required to be eligible to participate in an upcoming Commencement ceremony.
3. If human or animal subjects will be used, the student must submit a proposal to the Institutional Review Board (IRB) or Institutional Animal Care and Use Committee (IACUC) **prior** to data collection.
4. The special project must be prepared in a style and format appropriate to the discipline and approved by the capstone advisor, any additional committee members/readers, and the academic dean. Among the currently approved styles are ACA, APA, MLA, Campbell, and Chicago.

5. An electronic copy of the approved project and abstract (not to exceed 200-300 words and one to two pages) must be submitted to the dean's office, accompanied by the Final Capstone Approval form signed by the student and thesis advisor. Some program require an oral defense prior to the submission of the final approval.
6. If a student is planning to graduate in the current term, the Capstone proposal must be approved by April 8 for May or November 8 for December of the year in which the student plans to graduate in order to have the student's name listed under the Master's Degree Candidates. Special Project titles are not listed in the Commencement Program.
7. Final Projects must be submitted for approval by the last day of finals, as listed on the University calendar, in order for the Master's degree to be awarded in that semester.

#### ***Special Project (Plan E)***

Students in a Plan E special project will register for the designated special project departmental course. To register, students must have a minimum grade point average of 3.00 and at least 18 credits completed in programs of 30-35 credits or 24 credits completed in programs with greater than 35 credits. The student's work will be evaluated by the course instructor and by other members of the department as appropriate.

Students should discuss with their advisors their departments' requirements for the special project. Students normally receive three credits upon successful completion of their projects.

#### ***Continuing Registration Fee (CREG)***

Students only register for their capstone one time. During fall and spring semesters in which no courses work is taken, matriculated graduate students involved in completing Theses (Plan A), Comprehensive Examinations (Plan B), or Special Projects (Plan C or E) must register for a zero-credit course, CREG 001. Registration for the course requires a fee of \$40.00 plus the standard Registration Fee.

If the student receives a grade of incomplete (INC) in the capstone, the student must register for CREG 001 each fall and spring semester until the capstone is completed and a grade change has been submitted to the Registrar's office. Enrollment in CREG 001 allows the student continued access to campus resources, such as computer labs,

library, parking, and the faculty when not registered for other courses.

Students are responsible for this course registration during the regular registration period for the semester.

A matriculated graduate student completing a capstone but taking no other course work who does not register for CREG 001 will be withdrawn and lose his/her matriculation status. Matriculated graduate students withdrawn for this reason will have to apply for re-enrollment through Graduate Admissions and pay a Re-enrollment Fee of \$50 to regain their matriculation. They will also need to register for CREG 001 for the semester of re-enrollment. The length of time to obtain a graduate degree will remain at six years from the first course taken that applied to the planned program of study.

### ***Degree Candidacy for Relevant Programs***

Some graduate programs require students to make formal application for degree candidacy following the completion of nine credits (at least six of which must be from the area of specialization) in the planned program of graduate study. Students should consult the academic advisor concerning degree candidacy requirements of the particular program for which they have been accepted.

Admission to degree candidacy involves a formal review of the student's progress and potential by department faculty and a decision as to whether the student will be permitted to continue in the graduate program. Degree candidates must have a minimum cumulative average of 3.00 and must meet requirements for candidacy established by the academic department.

If a student is not approved for degree candidacy, he or she will be withdrawn from graduate study for that particular program.

### ***Non-Capstone Qualifying Exam***

Some graduate programs require qualifying examinations. Students should contact their academic advisor or department for information on these requirements, if applicable.

### **The Sixth-Year Certificate**

The sixth-year certificate is presently offered in educational leadership and reading and language arts. The certificate degree is awarded, subject to approval by faculty and administrative officials, to students who complete all requirements of the planned program. Candidates for the sixth-year certificate must complete a minimum of 30 credits in addition to a Master's degree

and maintain a minimum cumulative grade point average of 3.00 (B) on the graduate record at Central Connecticut State University. In addition to grade-point requirements for good academic standing, students should note that no more than two grades of C+ or C (i.e. two C's, or two C+'s, or one C and one C+) are permitted for courses included on the planned program of graduate study. All course work and any related requirements for the sixth-year certificate must be completed as specified within the "Six-Year Time Limit" section.

### **Graduate Teacher Certification Programs**

These programs are designed for students who have earned a bachelor's degree and would now like to complete the requirements necessary for teacher certification in the State of Connecticut.

After the student has been admitted, requirements for teacher certification at the graduate level will be individually prescribed through a transcript evaluation by an advisor in the School of Education and Professional Studies and departmental subject advisor when applicable. Certification requirements include not only course work (such as completion of undergraduate requirements for appropriate subject majors, professional education, and student teaching) but also the satisfactory completion of all requirements for admission to the Professional Program of the School of Education and Professional Studies.

Students are advised to contact their advisors as soon as possible after they are admitted to graduate study. For current information concerning Connecticut and University requirements for certification, they may consult the office of the dean, School of Education and Professional Studies. Post-Baccalaureate Teacher Certification programs are not degree granting programs, therefore, students completing these programs for teacher certification do not participate in graduation ceremonies or receive a diploma. Completion of the program will be noted on the academic transcript.

Credits for these programs will be posted on a graduate transcript but may not be applicable to a graduate degree program in the future.

### **Official Certificate Programs**

Official Certificate Programs (OCP) are defined as academic programs of study that have been through a complete University curricular review and approval process, but which do not lead directly to a formal degree. These programs are designed for people interested in

developing expertise in a particular field of study, but who do not wish to complete formal degree requirements. However, when applicable, students may be able use their OCP courses to a future graduate degree program.

The advantage to these programs is that they are formal programs of study, in which students are matriculated, and may pursue their studies on a full- or part-time basis, and be may eligible for financial aid. Most importantly, these programs are coordinated by faculty closely tied to the area of interest who are committed to advising students enrolled in these programs, ensuring that the student is best able to achieve his or her educational goals.

Requirements for Official Certificate Programs at the graduate level will be individually prescribed by the program director after the student has been admitted to Graduate Studies. Candidates are expected to maintain a minimum cumulative grade point average of 3.00 (B) on the graduate record at Central Connecticut State University and have no more than two grades of C+ or C (i.e. two C's, or two C+'s, or one C and one C+) for courses included on the planned program of graduate study. When requirements have been completed, students are issued a certificate. Students completing graduate certificate programs do not participate in graduation ceremonies.

## **Doctoral Degree Requirements**

### ***Doctor of Nurse Anesthesia Practice***

The Doctor of Nurse Anesthesia Practice (DNAP) program is a practice-based doctoral degree with two specializations. The first specialization is the Entry-Level DNAP, designed for bachelor's prepared licensed registered nurses to become certified registered nurse anesthetists (CRNAs) and provides discipline specific preparation in biology and anesthesia. The second specialization is the Advanced DNAP for master's level practicing CRNAs to become DNAP-prepared practitioners, allowing these individuals to expand their background in areas of biology and anesthesia specific to their discipline.

DNAP candidates must maintain a minimum cumulative grade point average of 3.00 (B) on the graduate record at Central Connecticut State University. In addition to grade-point requirements for good academic standing, students should note that no more than two grades of C+ or C (i.e. two C's, or two C+'s, or one C and one C+) are permitted for courses included on the planned program of graduate study.

The DNAP degree is conferred upon the student who has completed, subject to approval of the faculty and administrative officials, all requirements of the planned program of graduate study, including a Doctoral Scholarly Project. Each candidate is responsible for identifying a project advisor, choosing a topic with the advisor, and completing the project as outlined in the department's approval processes. Doctoral Scholarly Project titles will be listed in the Commencement program booklet.

### ***Ed.D in Educational Leadership***

The Ed.D. in Educational Leadership program serves educational leaders in Connecticut through an innovative program of study integrating course work and field studies founded in authentic inquiry. The program is limited to admitting approximately 25 students in alternate years for each track: Pre-K through 12 and Higher Education. They proceed through the program as a cohort, taking the same required courses and having the same experiences.

At time of admission, all candidates must commit to summer study. Courses and learning experiences are sequenced over four summers and three academic years. If candidates are able to keep up with their cohort and do their dissertations in the planned one-year period of time, the program can be completed in three and one-half years.

Ed.D. candidates must maintain a minimum cumulative grade point average of 3.00 (B) on the graduate record at Central Connecticut State University. In addition to grade-point requirements for good academic standing, students should note that no more than two grades of C+ or C (i.e. two C's, or two C+'s, or one C and one C+) are permitted for courses included on the planned program of graduate study.

The Ed.D. degree is conferred upon the student who has completed, subject to approval of the faculty and administrative officials, all requirements of the planned program of graduate study. Requirements include a minimum of 63 credits beyond the master's degree of approved graduate courses and a dissertation. A dissertation is different from a thesis. The dissertation in the Ed.D. program focuses on the translation of theory to practice. It is connected to the candidate's research interest and is expected to break new ground by providing a bridge between what is known from research and what needs to be done in practice. Each candidate is responsible for identifying a dissertation advisor, choosing a dissertation topic with the dissertation advisor, and completing the dissertation as outlined in the department's approval processes. Doctoral dissertation

titles will be listed in the Commencement program booklet.

### **Accelerate Central Programs**

*Accelerate Central* is a program that offers highly motivated and well-qualified Central Connecticut State University undergraduate students the opportunity to complete both a bachelor's and a master's degree in as few as 5 years of full-time study. *Accelerate Central* allows CCSU students to get a jump-start on a graduate degree by taking up to four (4) graduate level courses, for graduate credit, while remaining a matriculated undergraduate student. Depending on the program, two to four courses may count at both the undergraduate and graduate level. Please see the undergraduate program page to determine how many courses may be counted at both levels.

All CCSU undergraduate students are eligible to apply to *Accelerate Central* after successful completion of 60 or more credit hours; of which, at least 12 credit hours must be completed at CCSU. Some programs may require more credits to be completed at CCSU before a student is eligible to apply to an *Accelerate Central* program.

For acceptance into *Accelerate Central*, the standard undergraduate student will need a GPA of 3.3 or higher (for the most recent 60 credit hours of completed study) and meet program-specific admission criteria.

Students who are accepted into *Accelerate Central* will officially matriculate into the School of Graduate Studies the semester immediately following conferral of their bachelor's degree, provided the minimum 3.0 GPA is maintained.

Students wishing to defer their graduate studies must notify graduate admissions of this decision prior to the start of the term following the conferral of their bachelor's degree.

### **Registration Related Policies**

#### **Request to Change a Program**

To change a graduate program after admission, the student must complete the Change Program/Major/Advisor form, have it approved and signed by the new department, and submit it to the Office of Registrar. Students must be matriculated and must meet any special requirements of the program to which they are seeking approval for a change. The student is

responsible for submitting additional materials for acceptance, if required. The department may also assign conditions for admission.

If the change in program is approved, the student will be notified and assigned a new advisor. The student must then consult with the new advisor to develop a new planned program of graduate study for submission and approval. Subject to approval, course work completed prior to the change in program may be recommended for inclusion on the new planned program at the advisor's discretion.

### **Graduate Student Research**

Research is defined by the Uniform Federal Policy for the Protection of Human Subjects as a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalized knowledge. The university's policy on the use of human participants in research conforms to federal and state laws and regulations designed to assure that the rights of participants are fully protected. In addition, the policy serves to protect researchers from inadvertently causing harm. Thus, in compliance with federal regulations, all research (including research conducted by graduate students) using human subjects must be reviewed and approved by CCSU Institutional Review Board (IRB). Proposals must be submitted for review prior to data collection, as there is a strict policy that no research will be reviewed retroactively. Information regarding the HSC and the proposal submission process can be found at [www.ccsu.edu/humanstudies](http://www.ccsu.edu/humanstudies). Students may also contact the IRB Administrator for more detailed information regarding conducting research using human subjects.

If research involves the use of animals, CCSU policy mandates that approval must be sought from the CCSU Institutional Animal Care and Use Committee (IACUC), which is responsible for oversight and evaluation of the animal care and use program at CCSU. Its functions include inspection of facilities; evaluation of programs and animal-activity areas; review of proposals for the use of animals in research, testing or education; and the review of concerns involving the care and use of animals at CCSU. Research application materials may be obtained by contacting the IACUC chair.

### **Alternate Pins for Registration**

Newly accepted students do not require an alternate pin number for the first semester of enrollment. After the first semester, continuing students who have not filed a

planned program will not be able to register until they obtain an alternate pin from their faculty advisor. Alternate pin numbers are available at the start of the advising period. Students should take the opportunity to plan their program of study. Graduate students who have filed an official planned program of study with their advisor that was then submitted to and approved by Graduate Studies do not require an alternate pin to register.

### Course Numbering System

The following numbering system is used by Central Connecticut State University for Undergraduate and Graduate Courses

- 001-099 Non-credit courses and developmental courses
- 100 Search courses (undergraduate credit)
- 101-199 Courses open to first-year students, and in general to all undergraduate students
- 200-299 Courses open to sophomores, and in general to all undergraduate students
- 300-399 Courses open to juniors, and in general to sophomores, juniors, and seniors
- 400-499 Courses open to seniors, and in general to juniors, seniors, and graduate students, when included in the graduate catalog. Additional work is required for graduate students to earn graduate credit.
- 500-599 Courses open to graduate students and seniors, with approval.

600-699 Graduate courses are open only to master's, sixth-year, and doctoral students.

700-799 Graduate courses are open only to doctoral students

\*Courses numbered under 400 may be applied toward teacher certification, but will not be approved for inclusion in a degree program.

\*Courses numbered 400 and above may be included in a planned program of graduate study only when they are listed in the graduate catalog and the course description so allows and when approved by the advisor and the School of Graduate Studies Dean. Students may have a maximum of nine credits (and in some cases zero to six,

depending on the program) at the 400 level as approved by the program advisor.

### Odd and Even Year Course Offerings

The marking of courses as available in an odd year (O) or an even year (E) refers to the whole academic year. Thus, a course scheduled for (O), odd year, would be given in an odd-starting academic year, such as 2011-2012, that fall or the next spring. One marked (E), even year, would be available in an even-starting academic year, such as 2012-2013, that fall or the next spring. If unspecified, the course is offered both semesters.

### 400 Level Policy for Graduate Students

400-499 Courses are open to in general to juniors, seniors, and also to graduate students, when included in the graduate catalog. Students may have a maximum of nine credits (and in some cases zero to six, depending on the program) at the 400 level as approved by the program advisor. Graduate students enrolled in 400-level classes are required to do additional work as compared to their undergraduate classmates.

### Bridge Courses

A "bridge" course is an entry-level graduate course which may share lectures with a specific advanced undergraduate (400-level) capstone course that is integral to each program (undergraduate and graduate). Each of these courses will have different numbers, titles, syllabi, and requirements. Undergraduate bridge courses must not have graduate credit.

### Link Courses

A "link" course is a graduate course which may share lectures with a specific advanced undergraduate (400-level) course on the same topic. These courses may be electives. Each of these courses will have different numbers, titles, syllabi, and requirements. Undergraduate link courses must not have graduate credit.

400-599 Graduate courses. Courses numbered 400 and above may be included in a planned program of graduate study only when they are listed in the graduate catalog and the course description so allows and when approved by the advisor and the dean, School of Graduate Studies.

### Cross-Listed Courses

Cross-listed courses may be offered under different identifiers (e.g. COMM and CINE), but they have the same description and syllabus. These courses are listed in the



catalog as "cross-listed", and no student may receive credit for the course under one identifier if they have already received credit for the course on the same topic under the other identifier. These courses are treated as equivalent for all purposes including graduation requirements, G.P.A. calculations, and earned credits.

### **Adding a Course**

Students may add courses on a space-available basis (that is, enroll in courses in addition to those for which they have previously registered) prior to the scheduled beginning and through the first seven days of each fall or spring semester. Summer and winter courses must be added prior to the second class meeting. All students add courses online through their pipeline accounts or through the Registrar's Office. Capstone and independent study courses also may be added within this same period; however specific forms are used that require signatures including that of the dean. Registration after a semester's scheduled beginning but within the add period is dependent on course enrollment and/or the willingness of the instructor, department chair, and dean(s) to approve an additional student.

### **Dropping a Course**

Dropping courses will be allowed up to the last day of the third week of classes during a regular semester. If a full-time graduate student drops below nine credits, the student must change status from full-time to part-time. Requests for dropping a course must be in writing. Courses dropped by the deadline do not appear on the student's transcript. Forms are available in the Registrar's Office, Willard-DiLoreto Hall. The deadline for dropping all full-semester courses is included in the schedule of classes provided by the Registrar's Office as found on the Registrar's Office website. If all courses are dropped between the first day of classes and the last day of the third week of classes, the student will be withdrawn in good standing from the University and a "W" will appear on the transcript for each course dropped.

Warning: Failure to carry a minimum of nine credits may affect Satisfactory Academic Progress (SAP) and receipt of certain federal, state, and other benefits, including but not limited to various financial aid programs, Veterans benefits, and Social Security benefits. Students dropping below nine credits are ineligible for participation in intercollegiate athletics. In addition, full-time graduate assistants must carry a minimum of nine credits.

### **Withdrawing from a Course**

Graduate students, full-time or part-time, may withdraw from any class from the beginning of the 4th week of the semester until the end of the 12th week of classes by completing and submitting the Course Withdrawal Form available on the Registrar's Website or at the Registrar's Office. No permission is required. A "W" will appear on the transcript in all cases of withdrawal; no exceptions.

A student seeking to withdraw after the 12th week of class and until the last day of classes must present documentation of extenuating circumstances for his or her request. After the twelfth week of classes, withdrawals are only permissible under extenuating circumstances after recommendation of the instructor and chair, and approval of the Dean. Poor academic performance is not considered an extenuating circumstance. Students may find the Course Late Withdrawal Request Form at the Registrar's Website or at the Registrar's Office. If the request is approved, a "W" will be recorded on the student's transcript. In all cases of withdrawal, a "W" does not affect the student's grade-point average. If a student stops attending and fails to officially withdraw from a course, a grade of "F" will be recorded on the student's record.

### **Pass/Fail Option for Graduate Students**

The pass/fail option is not available to graduate students for courses in which they are enrolled. Pass/fail is only used for recording performance on the Comprehensive examinations.

### **Auditing a Course Option for Graduate Students**

Graduate Students may audit a course that is not included in their plan of study. No credit will be earned and no grade is given. The tuition for an audited course is the same as a credit-bearing course.

### **Maximum Course Load**

Students who register as part-time students may enroll for a maximum of eight credits. Students who register as full-time students enroll for no fewer than nine credits, and up to a maximum of 15 credits. Both part-time and full-time students may register online through their pipeline accounts or through the Registrar's Office.

### **Eligibility for Extra Credits or Course Overloads**

A full-time graduate student who wishes to register for 16-18 credits must receive written authorization from the Dean. Authorization for credit overloads during winter

and summer sessions must also be obtained from the Dean. Credit Overload forms are provided by the University Registrar.

### **Exceeding the 18 Credit Limit Enrollment**

Students who wish to register for more than 18 credits should apply in writing to the Dean at least one week prior to registration for the semester in which the additional course credits are to be taken. Applications for Over 18 Credits are available on the Registrar's Website at [www.ccsu.edu/Registrar](http://www.ccsu.edu/Registrar).

Effective fall, 2003, in addition to the applicable tuition/required fees, full-time students registering for more than 18 credits will be assessed appropriate excess per credit fees for each credit beyond 18. **These fees are non-refundable and will not be deleted if at a later time the total credits number less than 19.**

### **Taking Summer and Winter Courses**

Summer and Winter Session registration is conducted by the Registrar's Office for all graduate students. Summer Session offerings and the Winter Session offerings are available online. Summer and Winter Session fees are the same as part-time fees during regular academic semesters.

### **Maximum Credits for Summer/Winter Sessions**

The University permits a maximum registration of seven credits during the first five-week and eight-week Summer Sessions; seven credits during the second five-week Summer Session; and four credits during the three-week post Summer Session. No more than fourteen total credits may be taken during the Summer Sessions. During Winter Session, students may enroll in up to four credits of academic course work.

### **500 Level Graduate Courses Taken by Undergraduates**

Prior to enrollment, undergraduates who meet requirements of a minimum 3.00 GPA and 90 credits of study, may request registration by using the appropriate form to obtain approval of undergraduate advisor, instructor, chair of the department offering the course, and the dean of the school, who will give preferential admission to graduate students. Seniors who have been accepted into an AccelerateCentral program do not need to complete the form and may select 500-level courses in consultation with the academic advisor.

### **Refund Policy**

This information is subject to change. For a complete list of the Refund Policy, please visit the **Bursar's Office** website. Refer to the Registration Calendar for specific semester dates. Please remember that you need to maintain a minimum of 12 credits for Undergraduate students or 9 credits for Graduate students per semester to be considered a full-time student and to retain eligibility for financial aid, University-billed Sickness Insurance, Veterans Benefits, and student athletics. Part-time students dropping below 6 credit hours may affect their financial aid award. Note: Some fees are non-refundable.

All refunds will be made automatically upon formal withdrawal from an institution.

Application Fee	Upon Submission of Application	Non-refundable	Housing Deposit \$250	On or before April 1 for returning students and on or before May 1 for new students, with specific date to be established annually. Dates will be no less than 30 days prior to the dates shown above (April 1 and May 1).	fourth week of the term. Non-refundable
Confirmation Deposit (UG/G) \$200 (applied to Tuition/Fees)	May 1 or within 15 days of invoicing thereafter	Non-refundable			
Re-registration Fee	Upon re-registration	Non-refundable			
Full-time Tuition and Fees	Fall Semester: not later than July 15 Spring Semester: not later than December 15	<ul style="list-style-type: none"> <li>• Upon withdrawal from the University up to, but not including, the first day of the term, as defined by the published university calendar, 100% of the term charges will be cancelled</li> <li>• 90% of the term charges will be cancelled during the first week of the term</li> <li>• 60% of the term charges will be cancelled during the second week of the term</li> <li>• 40% of the term charges will be cancelled during the third and the fourth weeks of the term</li> <li>• No cancellation of charges after the</li> </ul>	Housing Fee (applies to students who withdraw from university)	Academic year contract to be paid in two installments: Fall Semester: not later than July 15 Spring Semester: not later than December 15	<ul style="list-style-type: none"> <li>• Upon withdrawal from the University, the housing refund will mirror the University refund policy for tuition and fees</li> <li>• 100% of the term charges will be cancelled upon withdrawal from the University up to, but not including, the first day of the term as defined by the published university calendar,</li> <li>• 90% of the term charges, will be cancelled during the first week of the term,</li> <li>• 60% of the term</li> </ul>

charges, will be cancelled during the second week of the term,

- 40% of the term charges, will be cancelled during the third and fourth weeks of the term,

- No cancellation of charges after the fourth week of the term.

Housing Fee (applies to students who remain enrolled but withdraw from university housing)

- Upon withdrawal from University housing up to and including June 30, 100% of the housing charges will be removed from the student's account.

- No cancellation of charges for students who withdraw from housing on or after July 1 (academic year) or December 1 (spring term – for those students who plan to enter housing for the first time in spring), unless otherwise approved by Residence Life through an appeal process.

Housing Contract Cancellation

1. Students who wish to cancel their Housing Contract/Assignment must do so in writing by adhering to the Housing Withdrawal process for their respective University.

2. Students who request to cancel their Housing Contract/Assignment will be released for the following reasons:

- The student is participating in an internship, co-op, study abroad, student teaching, or other academic obligation that reduces or eliminates the need for on-campus housing.
  - The student has medical reasons for cancellation that are verified by the appropriate university department.
  - The student has graduated from the University before the end of the contract period.
  - The student is academically suspended before the end of the contract period.
  - The student has officially withdrawn, or taken an official leave of absence, from the University.
3. Students who request a Housing Contract Cancellation for reasons other than those noted in section 2 will have their Housing Cancellation request reviewed through a process to be established by each University.
  4. Students who are approved to have their Housing Contract cancelled for reasons other than those noted in section 2, will forfeit the Housing Deposit that they have paid if their cancellation is before or during their initial contracted term of occupancy.
  5. Students who are not approved to have their Housing Contract cancelled shall remain responsible for the fees associated with the duration of their Housing Contract and retain the right to occupy their assigned room.
  6. Students who have their Housing Contract cancelled for

the convenience of the university will not be required to pay any housing fee associated with the contract period. Students who have their Housing Contract cancelled for judicial/disciplinary reasons will be responsible for paying for the duration of the semester in which their contract was cancelled and are not entitled to a refund.

Housing  
Contract  
Cancellation  
Review  
Process

1. The Vice President for Student Affairs (or Vice President to whom Residence Life reports) at each university will establish a process to review and decide upon student requests to cancel their housing contract when the student does not meet any of the conditions identified in section 2 above and the student requests relief from their obligation to pay the full academic-year housing fee.

2. Under the process, each university may define conditions under which it will waive or refund any portion of the housing fee, with the exception of the housing deposit. In cases where the Committee agrees to cancel the housing contract during the fall term (or first term of occupancy), the student forfeits their housing deposit.

Food Service  
Fee

Fall Semester:  
not later than  
July 15  
Spring  
Semester: not  
later than  
December 15

Meal portion of fee refundable, on a prorated basis, upon withdrawal from the University; or upon withdrawal from

University housing at the request of the student and contingent upon the concurrence of the University. The discretionary cash component of the food service fee, if any, will be refunded according to procedures established at each University.

Part Time  
Registration  
Fee

Part-time  
Tuition,  
General  
University  
Fee, and  
Course Fees

All Terms

All Terms,  
Courses eight  
weeks or greater  
in length

Courses three  
weeks to seven  
weeks in length

Non Refundable

- 100% of the term charges will be cancelled during the first week of the term,
- 60% of the term charges will be cancelled during the second week of the term,
- 40% of the term charges will be cancelled during the third and the fourth weeks of the term,
- No refund after the fourth week of the term.
- 100% of the term charges will be cancelled during the first 3 calendar days of the term,
- 60% of the term charges will be cancelled during the fourth, fifth, and sixth calendar day of the term,
- 40% of the term charges will be cancelled during the seventh, eighth, and ninth calendar day of

the term,

Courses less than three weeks in length

- No cancellation of charges after the ninth calendar day of the term.

- 100% of the term charges will be cancelled during the first 2 calendar days of the term,

- 60% of the term charges will be cancelled during the third and fourth calendar day of the term,

- No cancellation of charges after the fourth calendar day of the term.

- 75% of the term charges will be cancelled within the first 2 calendar days of the term,

- No cancellation of charges thereafter

Non Refundable

Included within Full-time and Part-time Refund Schedules Above

This refund policy excludes the effect of the return of Title IV funds. Students receiving Federal aid should consult with their University or College Financial Aid office prior to withdrawal in order to determine the financial impact that the return of Title IV funds will have upon the student.

In accordance with the Higher Education Amendments of 1998 (Public Law 105-244), the Federal government mandates that students receiving Title IV assistance who withdraw from all classes may only keep the financial aid they have "earned" up to the time of withdrawal. Title IV funds that were disbursed in excess of the earned amount must be returned by the University or College and/or the student to the Federal government. This could result in the student owing funds to the University or College, the government, or both. The amount of unearned aid to be returned is based on the percentage of enrollment period completed.

Federal regulations require that all refunds be restored to Federal programs in the following priority sequence:

1. Unsubsidized Federal Stafford Loans
2. Subsidized Federal Stafford Loans
3. Unsubsidized Federal Direct Stafford Loans
4. Subsidized Federal Direct Stafford Loans
5. Federal Perkins Loans
6. Federal PLUS Loans received on behalf of the student
7. Federal Direct PLUS received on behalf of the student
8. Federal Pell Grants
9. Federal SEOG Program Aid
10. Other grant or loan assistance authorized by title IV of the HEA  
After obligations to the above are satisfied, funds will then be returned to:
11. Other State, Private, or Institutional Assistance
12. Student

**Refunds of Tuition and Fees Under Unusual Circumstances**

Ed.D. Professional Seminar

Summer – four full days, not meeting consecutively

E-Learning On-Line Fee

Upon Registration

E-Learning Course Fees

**Refund of Federal Funds**



Under circumstances beyond the control of the student or in cases where attendance has been denied by the institution, the University or College President may authorize the deferment or waive the collection of the admissions and/or housing deposit, as well as the refunding of tuition and fees otherwise designated as non-refundable.

### **Waiver for Students Over Age 62**

Full Time Matriculated Students:

The payment of Tuition and State University Fee is waived for any Connecticut resident presenting evidence of being 62 years of age or older as of the first day of the semester, who has been accepted for full-time admission, and is enrolled in a degree-granting program. Other fees, including the General Fee, SA/Media Fee, Accidental Insurance Fee, (and for online courses an Online Fee per online course), are still due.

Part Time Matriculated Students:

The Course Fee is waived for any Connecticut resident presenting evidence of being 62 years of age or older as of the first day of the semester. The Registration Fee, and for online courses an Online Fee per online course, are still due.

Non-Matriculated Students:

The Course Fee is waived for any Connecticut resident presenting evidence of being 62 years of age or older as of the first day of the semester. The Registration Fee is still due. Registration is on a space-available basis and special registration dates apply. Check with the Registrar's Office for session/term registration dates.

For more information, visit the Bursar's Office webpage for Tuition/Fee information and Policy/Waiver authorization information.

## **Leaving the University and Reenrolling**

### **Medical Leaves of Absence**

The University is committed to supporting the health and well-being of their students. The University provides a wide range of counseling services to address the mental and physical health needs of their students, including counseling, psychiatric services, consultation, and referral assistance. The goal of the universities is to enable each and every student to function fully as a member of the academic community.

Students are permitted to take voluntary leaves of absence for physical or mental health reasons.

If a student so requests, the Student Health Service or Counseling Center will assist a student in determining whether to take a voluntary medical leave of absence and in arranging that leave. A student on a voluntary medical leave of absence may maintain contact with, and may visit, campus friends and teaching, residence, counseling and administrative staff.

### **Withdrawing from the University**

A full-time or part-time student who wishes to withdraw in good standing from the University must consult with the Registrar and have the appropriate forms completed and approved by that office no later than four weeks before the last day of the final examination period. The Registrar's Office will assist in filing the form necessary for withdrawal.

Withdrawals after this date will be permitted only under extenuating circumstances and will require consultation and approval of the Dean. The student must complete a reenrollment form with the Graduate Admissions to initiate reenrollment.

### **Continuing Enrollment and Losing Matriculation Status**

During fall and spring semesters in which no course work is taken, matriculated graduate students involved in completing Theses (Plan A), Comprehensive Examinations (Plan B) or Special Projects (Plan C or E) must register for zero-credit course, CREG 001. Registration for the course requires a fee of \$40.00 plus the standard Registration Fee. All students registered for the course are entitled to any services provided to matriculated students. A matriculated graduate student completing a capstone but taking no other course work who does not register for CREG 001 will be withdrawn and lose his/her matriculation status. Matriculated graduate students

withdrawn for this reason will have to re-apply using the Graduate Re-Enrollment form and pay a Re-enrollment Fee of \$50 to regain their matriculation. They will also need to register for CREG 001 for the semester of re-enrollment. The length of time to obtain a graduate degree will remain at six years from the first course taken that applied to the planned program of study.

Including when students do not pay their CREG fee, four other instances can occur regarding loss of matriculation status.

1. In the first instance, a full time student who has been accepted but who does not attend is subsequently withdrawn from their requested program. To be considered for readmission, the student must complete a Request for Reactivation form.
2. The second instance has to do with full time and part time students who are denied admission or whose admissions applications are withdrawn; when these students wish to reactivate their application, they do so by completing a Request for Reactivation form if the request is submitted within two years of the initial application. An additional application fee is not required in this instance; however, submission of official transcripts from any additional institutions attended after the initial application will be required.
3. If the reactivation is not requested within the two year period, students must then complete a new graduate application, pay the application fee, and re-submit all official transcripts to the Graduate Recruitment and Admissions Office directly from each institution where courses were taken.
4. The last instance occurs when, after two years of not being registered for classes, both full time and part time graduate students will be notified that they are in danger of becoming inactive and being dropped from their programs, unless they register for courses in the next semester. Once students are made inactive, they must submit a Re-Enrollment request form and pay a re-enrollment fee of \$50 to continue in the program. Students may also need to pay a \$40 continuation fee if they are enrolled in their capstone thesis, special project, or comprehensive examination. Any semesters in which the student has not taken course work still continue to count toward the six-year time limit for completing the graduate degree program. Only students in good standing (3.00 graduate GPA or higher) are considered for reenrollment.

### Re-enrollment into a Graduate Program

Any student who no longer wishes to pursue a graduate degree program must provide written notification to the Office of the Registrar. Readmission into a graduate program will be contingent on the student's academic standing (3.00 or higher) and consideration of performance while in the program. Students obtain apply for reentry through Graduate Admissions. If the student subsequently wishes to resume full-time graduate study within two years, a Request for Reactivation form must be submitted through Graduate Admissions. After two years, students must request re-enrollment by filing a re-enrollment form and paying a fee of \$50 to resume their studies.

### Financial Aid Policies

#### Satisfactory Academic Progress for Financial Aid Recipients

CCSU is required by federal law to establish, publish and apply reasonable standards for measuring whether a matriculated student is maintaining satisfactory academic progress toward a degree objective, and to ensure progress toward the degree for all periods of enrollment, whether or not the student has received financial aid. These standards are applicable to all financial aid recipients at CCSU and affect eligibility for all federal and state aid, including grants, student loans, and work-study.

**SPECIAL NOTE:** *For 2012-2013 financial aid eligibility: All Students must accomplish a passing rate of 67.5% by the end of spring 2012 during the 2011-12 academic year to be eligible for 2012-13 financial aid. (Non-matriculated students are not eligible for Financial Aid.)*

#### Degree Objective-Specific Minimum CCSU GPA

- Doctoral, Masters: 3.0
- Credential/certification: 2.5
- Undergraduates:
- Junior/Senior (54+ credits): 2.0
- Sophomore (26-53 credits): 2.0
- Freshmen (0-25 credits): 2.0

#### Completion of 67.5% of Attempted Units with Passing Grades

Students must complete at least 67.5% of the credits attempted with a passing grade of A, B, C, D, P. For example, a student who enrolls in 30 credits for an

academic year must complete at least 20 credits (30 x .675 = 20). Non-passing grades of F, INC, NC, U, W, and AU will lower a student's completion rate.

All attempted credits resulting in either an academic grade or administrative transcript notation will be included in the quantitative calculation. Incomplete courses, course withdrawals, course repeats and non credit remedial courses will be included in this assessment. Transfer credits will be counted as attempted and earned credits in the calculation for determining satisfactory academic progress.

### Eligibility Limit - Unit Cap

Students must complete their program within 150% of their program's required units. For example, a student in a 120 unit program must receive his/her degree within 180 credits. All graded coursework will be counted, including transfer units, repeats, and withdrawals. Up to 30 remedial credits may be excluded. Courses with grades of RD (report delayed) or RP (report in progress) will be considered as completed credits until a final grade is determined.

### Financial Aid Probation

Students will be placed on probation status (can receive aid) at the end of the academic semester if any of the following applies:

- CCSU GPA falls below their objective-specific GPA
- Completion rate of attempted units with passing grades falls between 50% and 67.5%.

Federal Regulations require students who have reached Junior or Senior status to maintain at least a 2.0 CCSU Grade Point Average.

### Financial Aid Disqualification

Students will become disqualified from receiving financial aid if any of the following applies:

- Student is in a Financial Aid Probation status for two consecutive academic semesters;
- Student completes fewer than 50% of their attempted units with passing grades in any academic year;
- Student fails to complete their program within 150% of their degree program required units.

### Financial Aid Appeal

Students who become disqualified from receiving financial aid will be notified on their CCSU e-mail account and will

be provided instructions on the financial aid appeal process. Appeals will be evaluated based on the student's extenuating circumstances.

### Regaining Eligibility

Students who are disqualified due to low GPA or low unit completion will regain financial aid eligibility once they achieve the required GPA or credit completion as long as they have not completed more than 150% of their program requirements. Undergraduate students who are disqualified due to exceeding the 150% of the required units for their program will regain eligibility after they become a master's or credential student after their bachelor's degree is posted. Students who meet this condition before the spring semester may submit a SAP Appeal Form to request their eligibility be reinstated; otherwise progress will be reviewed after spring grades have posted.

## Grades and Grading Policies

### The Grading System

Letter grades, including their plus and minus combinations, are utilized.

The following grade point equivalents will be used to compute cumulative grade averages:

- A (4.00);
- A- (3.70);
- B+ (3.30);
- B (3.00);
- B- (2.70);
- C+ (2.30);
- C (2.00);
- C- (1.70);
- D+ (1.30);
- D (1.00);
- D- (0.70);
- F (0.00).

No planned program credit is awarded for grades of C- or below, but all grades received in post-baccalaureate status at Central Connecticut State University remain on the graduate transcript and are included in the student's cumulative grade average. A grade of NR (not recorded by instructor) will be entered if grades are not submitted in a

timely manner. Grades of NR not changed to another grade by the instructor within a year will be changed to an F. (For undergraduates the deadline is the first eight weeks of the subsequent major semester.) Responsibility for removing an NR within this time limit rests with the student.

Additional grades used at CCSU include:

AU Audit (no credit)

INC Incomplete

IP In Progress (Doctoral)

NC Satisfactory completion of a non-credit course

S Satisfactory performance in a non-credit course

TR Transfer credit

U Unsatisfactory performance in a non-credit course

W Withdrawal

The Pass/Fail grading option is not available to graduate students, other than for recording performance on the Comprehensive Examination. Programs may receive permission to use the pass/fail option for specific courses.

### GPA Calculation

For the purposes of computing grade-point average, grades are evaluated as follows for each semester hour of credit:

Grade Quality	Points	Grade Quality	Points
A	4.0	C	2.0
A-	3.7	C-	1.7
B+	3.3	D+	1.3
B	3.0	D	1.0
B-	2.7	D-	0.7
C+	2.3	F	0.0

For example, if a student receives an A in two courses, one carrying 3 credits and one carrying 1 credit; a B in a 3-credit course; a B- in a 3-credit course; a C- in a 2-credit course; a D in a 3-credit course; and an F in a 2-credit course, the grade-point average is computed as follows:

1. A or 4 quality points per hour x 4 credits = 16 quality points-B or 3 quality points per hour x 3 credits = 9 quality points-B- or 2.7 quality points per hour x 3 credits = 8.1 quality points-C- or 1.7 quality points per hour x 2 credits = 3.4 quality points-D or 1 quality point per hour x 3 credits = 3 quality points-F or 0

quality points per hour x 2 credits = 0 quality points-17 credits for a total of 39.5 quality points

2. To calculate this student's semester grade-point average, the quality point total is divided by the total number of credits taken:  $39.5 \div 17 = 2.32$ .
3. The cumulative grade-point average (CGPA) for a student's record is determined by adding the credits attempted and dividing this total into the total number of quality points. The cumulative grade-point average indicates the academic record of the student for the time enrolled at the University and does not include transfer credit.

### Grades of C+/C and C-

No more than two grades of C+ or C (i.e. two C's, or two C+'s, or one C and one C+) may be carried in a planned program; courses beyond these in which grades of C+ or C are achieved may have to be repeated or additional course work may have to be taken on the planned program of study.

Courses in which students receive a C- or lower will not be counted for graduate credit in the planned program and may not be used to meet prerequisite requirements for graduate courses. Students will be required to retake required courses as listed on their planned program of study in which grades of C- or lower are earned.

### Mid-Semester Grades

Mid-semester grades may be recorded online by faculty for full-length fall and spring semester courses. Mid-semester grades are considered an approximate grade of student's performance to date. Mid-semester grades are not recorded on transcripts and are not used in the calculation of grade point averages.

### Repeating Courses/Course Repeat Policy (Graduate Students)

If a graduate student retakes a graduate course in which the student earned less than a C, both grades will appear on the student's transcript. However, only the most recent course grade and credit will be applied to the GPA and course requirements. No course may be repeated more than once without permission from the graduate advisor and Dean. Certain graduate programs may not be eligible for the retake policy. This policy is applicable only for failing grades of C- or less. The policy refers to courses taken from summer 2009 to the present.

### **Incomplete Grades**

A grade of Incomplete may be recorded at the discretion of the instructor when a student, for circumstances which cannot be controlled, is unable to complete the requirements of a course in which he or she is registered during the current semester or session.

The student who receives a grade of Incomplete will be responsible for assuring that all course requirements are completed within one calendar year of issuance, or sooner if required by the instructor. A grade of Incomplete which has not been changed by the instructor within the year allowed for course completion will become an F (failure) automatically.

This latter policy does not refer to grades of Incomplete received for capstone theses or special projects. However, students must register for CREG 001 in each semester they maintain an incomplete in a capstone thesis or special project. Letters will be sent to students who do not register for CREG 001 each semester; failure to register and pay the associated fee will result in being withdrawn from the program. Students who are withdrawn will then have to re-enroll and pay a \$50 re-enrollment fee.

### **Grade Appeals Policy**

Academic grading reflects careful and deliberate judgment by the faculty member instructing a course. However, the University recognizes that there may, on occasion, be an error or injustice in the determination of a final grade for a course.

Any student who believes that a final grade involved an error or a palpable injustice should confer with the instructor who awarded the grade no later than the fourth week of the following regular academic semester (fall/spring). If the outcome is not satisfactory, the student may present the case next to the department chair who may effect a settlement upon written agreement with the instructor. Further appeal shall be to the dean of the appropriate academic school, and, if no settlement can be effected, to the Grade Appeals Review Board of the Academic Standards Committee. The full text of the Appeals for Grade Changes Policy may be found on the Academic Standards and Regulations page of the Undergraduate Catalog.

### **Non-Graded Appeals**

A formalized process for appealing non-graded, performance-based assessments, such as comprehensive examinations, degree candidacy, etc., has been established by the Graduate Studies Committee. Similar to

grade appeals, a student who believes that an error or a palpable injustice has occurred should first confer with the department to which the appeal is directed. If the outcome is not satisfactory, further appeal shall be to the dean of the appropriate academic school. If no settlement can be effected, the student should bring the appeal to the Standing Appeals Committee of the Graduate Studies Committee. The Graduate Appeals Committee will meet as a group to determine whether there is merit to an appeal of a non-graded, performance-based assessment by reviewing documents and records that are presented with the appeal. If the Appeals Committee believes that additional information is needed, the committee will request clarification from the department and/or student. The Committee's determination will be based on whether the student was denied due process. The Appeals Committee will render its decision in writing by notifying the graduate student and copying the dean. Decisions of the Appeals Committee cannot be appealed.

### **Good Academic Standing**

All graduate students must maintain a 3.00 (B) cumulative grade point average (CPA) in course work at Central Connecticut State University in order to be in good academic standing. Good academic standing is required to receive financial aid and to graduate.

### **Academic Probation/Academic Dismissal Policies**

Students who drop below a 3.00 average will receive a letter from the Registrar's Office, informing them that they are no longer in good academic standing and that they have been placed on academic probation or dismissed from their programs.

In addition to grade-point requirements for good academic standing, students should note that no more than two grades of C+ or C (i.e. two C's, or two C+'s, or one C and one C+) are permitted for courses included on the planned program of graduate study leading to a doctoral or master's degree or sixth-year certificate. Students who achieve grades low enough so that they will not be able to attain the 3.00 GPA required for graduation, will be dismissed from the graduate program.

Students who are dismissed from graduate study may request re-enrollment upon attainment of a 3.00 grade point average on the Central Connecticut State University graduate record. Forms for requesting file re-enrollment are available on the Graduate Admissions website, [www.ccsu.edu/grad](http://www.ccsu.edu/grad). Along with submitting the re-enrollment form to Graduate Admissions, the student must submit to the department offering the program any

additional materials that are required by the department for its review of the file. A department may also consider prior performance in the program when reviewing for re-enrollment file of a student who has been formally dismissed by the University.

## Graduation Policies and Requirements

Upon completion of all applicable course and capstone requirements for the doctoral degree, master's degree, or sixth-year certificate, students are eligible to receive their degrees and to graduate.

### Application for Graduation

Degree award and graduation are not automatic. While a student may have completed all applicable course and capstone requirements for his or her program, every degree candidate is required to notify the University about program conclusion by filing a graduate-level Application for Graduation form with the Registrar's Office by the due date as listed on the University calendar in the semester in which they intend to graduate. Not submitting an Application for Graduation in a timely manner may result in failure to receive the appropriate degree for the requested semester. Further, if a degree-seeking student fails to finish all requirements by the completion date indicated on the submitted Application for Graduation, a new application must be filed.

Central Connecticut State University confers degrees four times during the academic year: May, August, December, and January. Students expecting to receive degrees during any of these periods must complete all applicable program requirements by the last official day of the semester or session in which the degree is to be awarded.

Students who anticipate finishing degree requirements during the spring or summer semesters (May or August completion) should submit the Application for Graduation no later than February 15. Students who plan to finish degree requirements during the fall or winter semesters (December or January completion) should submit the Application for Graduation no later than October 1. Graduate-level Application for Graduation forms are available on the Registrar's Office website. Students must be admitted to a graduate program and complete all degree requirements and meet graduate degree policies in order to be awarded a degree in that program.

### Participation in Commencement Ceremonies

Students who submit a Graduation Application and expect to receive the doctoral degree, master's degree, or sixth-

year certificate in May or August (a maximum of one course or capstone may be completed in the summer), or completed their degree in the previous January, are eligible to participate in formal University-wide commencement ceremonies held in May. Students who submit a Graduation Application and expect to receive the doctoral degree, master's degree, or sixth-year certificate at the end of the fall term are eligible to participate in formal University-wide commencement ceremonies held in December. Doctoral students who have completed the degree the previous August or December may choose to participate in December or May Commencement.

Thesis (Plan A)/Special Project (Plan C) must have an approved proposal on file with Graduate Studies and be registered for the corresponding course to be eligible to participate in Commencement ceremonies.

Information about commencement ceremonies will be made available on the University website. Students who are on the pending list for graduation and are eligible to participate in the ceremony will receive information to their CCSU email address. These emails will include details about the day, RSVP information, security procedures, cap and gown distribution, and ticket information if applicable.

Participation in commencement does not guarantee the award of the degree.

## Student Regulations and Conduct

Graduate students at Central Connecticut State University are expected to follow University regulations outlined in the Student Handbook. This handbook describes in detail the code of student conduct and subsequent disciplinary actions that may occur as a result of violations of this code.

## Student Records

### Family Educational Rights and Privacy Act Notice

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. These rights include:

1. **The right to inspect and review the student's education records within 45 days of the day the College or University receives a request for access.**

Students should submit to the registrar, dean, head of the academic department, or other appropriate official, written requests that identify the record(s) they wish to inspect. The College or University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the College or University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. **The right to request amendment of an education record that the student believes is inaccurate. Students may ask an appropriate College or University official to amend a record that they believe is inaccurate.** However, FERPA is not intended to provide a process to question substantive judgments that are correctly recorded. Consequently, FERPA amendment requests do not allow a student to contest a grade in a course because the student believes that a higher grade should have been assigned.

To request amendment of an education record, the student should write to the official, clearly identifying the part of the record he or she wants changed and specifying why he/she believes it is inaccurate. The institution will notify the student of the decision. If the institution decides not to amend the record as requested by the student, a College or University official will advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. **The right to provide written consent before the College or University discloses personally identifiable information (PII) from the student's education records, except to the extent that FERPA authorizes disclosure without consent.** FERPA permits disclosure without a student's prior written consent under the FERPA exception for disclosure to school officials who have a legitimate educational interest. A "school official" is a person employed by a College or University in an administrative, supervisory, academic, research, or support staff position (including law enforcement unit personnel and health staff); a person serving on the Board of Regents; an employee of the Board of Regents System Office; or, a student serving on an official committee, such as a disciplinary or grievance committee. A school official also may include a volunteer or contractor outside of the

College or University who performs an institutional service or function for which the College or University would otherwise use its own employees and who is under the direct control of the College or University with respect to the use and maintenance of PII from education records, such as an attorney, auditor, or collection agent or a student volunteering to assist another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibilities for the College or University.

Upon request, the College or University also discloses education records to officials of another school in which a student seeks or intends to enroll without the prior consent of, or notice to, the student

**FERPA also permits disclosure of education records without consent in connection with, but not limited to:**

- To comply with a judicial order or a lawfully issued subpoena;
- To appropriate parties in a health or safety emergency;
- In connection with a student's request for or receipt of financial aid, as necessary to determine the eligibility, amount or conditions of the financial aid, or to enforce the terms and conditions of the aid;
- To certain officials of the U.S. Department of Education, the Comptroller General, to state and local educational authorities, in connection with certain state or federally supported education programs;
- To accrediting organizations to carry out their functions;
- To organizations conducting certain studies for or on behalf of the College or University;
- The results of an institutional disciplinary proceeding against the alleged perpetrator of a crime of violence to the alleged victim of that crime with respect to that crime.
- Directory information as defined in the policy of the Board of Regents.

4. **The right to refuse to permit the College or University to release Directory Information about the student,**

**except to school officials with a legitimate educational interest and others as indicated in paragraph 3 above.** To do so, a student exercising this right must notify the University's or College's Registrar, in writing. Once filed, this notification becomes a permanent part of the student's record until the student instructs the University or College, in writing, to remove it. A student may exercise his or her right to opt out of Directory Information, prohibiting disclosure of the student's information without the student's consent as noted in section 3, except however, that pursuant to the Solomon Amendment, military recruiters must be provided the same access to student information as is provided to nonmilitary recruiters.

5. **The right to file a complaint with the U.S. Department of Education concerning alleged failures by Colleges to comply with the requirements of FERPA.** The name and address of the Office that administers FERPA is:  
Family Policy Compliance Office  
U.S. Department of Education  
400 Maryland Avenue, SW  
Washington, DC 20202-4605

### Directory Information Policy

Acknowledging that Directory Information is FERPA protected information that may be disclosed at the discretion of a College or University, it is the policy of the Board of Regents for Higher Education for the Connecticut State Colleges and Universities that disclosure of Directory Information is within the sole discretion of the College or University. Colleges and Universities may disclose Directory Information without the prior consent of the student only as provided herein.

The Board of Regents for Higher Education has designated the following as Directory Information:

For purposes of access by school officials of the Colleges and Universities governed by the Board of Regents for Higher Education, the following is designated as Directory Information:

- Student's legal name
- Permanent mailing address
- Month and day of birth
- Photographs
- Student identification number, User ID, or other unique identifier

- Email address
- Telephone number
- University or College previously attended or currently attending
- Dates of attendance
- Full vs. part-time student status
- Academic Awards and Honors
- Class standing/year
- Major, minor, concentration and/or program of study
- Degree(s)/Certificate(s) candidacy
- Degree(s)/Certificate(s) earned
- Previous Institutions attended
- Graduation expected/completion dates  
For purposes of access by military recruiters only, the following is designated as Directory Information (Student Recruiting Information):
- Student's legal name
- Permanent mailing address
- Student email address (issued by the institution)
- Telephone number
- Age
- Place of birth
- Class standing/year
- Major and/or program of study
- Degrees received
- Most recent educational institution attended  
For purposes of participation in any recognized activity or sports, the following is designated as Directory Information:
- Student's preferred name
- City and State of Residence
- Dates of attendance
- Class standing/Year
- Recognized activity or sport
- Team performance statistics
- Team position



- Photos and videos
- Athletic Honors and Awards
- Height and weight of athlete  
For purposes of disclosure to/access by the general public, the following is designated as Directory Information:
- Student's preferred name
- Permanent mailing address Photographs
- Dates of attendance
- Major, minor, concentration and/or program of study Degree/Certificate candidacy Degree(s)/Certificate(s) earned
- Academic Awards and Honors
- Full vs. Part-time status
- Anticipated graduation date Graduation date

Approved by Board of Regents, December 18, 2014;  
Amended March 2, 2017; Amended June 24, 2021  
(Effective Fall 2021 Semester).

### **Student Photos (Permission for Photos of Students)**

Several offices of the University, principally those of Institutional Advancement, provide information to news organizations about CCSU's students' accomplishments and activities while they are at the University and at the time of graduation. Additionally, CCSU supplies photographs and other visual images of students and corollary text in response to requests from news organizations. As a regular practice, photographs of students, faculty, staff, and visitors to campus are used in publications produced by the University for recruitment and general information. Any student who does not wish to appear in any photos used for these purposes must notify the Office of Marketing & Communications (832-1790) immediately upon matriculation. It is, however, not possible to practice these restraints with respect to the use of photography (where groups of students appear) of scenes, events, or classes in session.

### **Change of Address**

A student must notify the Office of Registrar in writing of a change of address. Students living off campus and not at their permanent addresses should register their local address with the Office of Registrar.

### **Emergency Contact Name and Address**

Students are required to review and update their own Contact Information, as well as the name and address of an Emergency Contact, before registration. This requirement ensures that CCSU is able to alert students about campus emergencies and to reach emergency contacts in the event a student is involved in an emergency.

Students can update their Emergency Contact Name and Address by clicking on the *CentralPipeline* link at the top of the [www.ccsu.edu](http://www.ccsu.edu) page and choosing "Students". On the **CentralPipeline for Students** page, click on the **WebCentral-Banner Web** link. Log into WebCentral and click on "Update Contact Information" on the "Home" tab.

If you do not have access to a computer, please click on the link to the form below to submit your Emergency Contact Name and Address.

### **General University Policies**

#### **Academic Misconduct Policy**

At Central Connecticut State University we value personal integrity as fundamental to our interactions with each other. We believe that one of the purposes of a University education is for students to learn to think critically, to develop evaluative skills, and to express their own opinions and voices. We place special weight on academic honesty in all of our intellectual pursuits because it is a value that is fundamental to academic life and scholarly practice. All members of the University community are obligated to uphold high standards of academic honesty in their scholarship and learning. Therefore, we expect students to take personal responsibility for their intellectual work and to respect and acknowledge the ideas of others. Academic honesty means doing one's own work and giving proper credit to others whose work and thought one may draw upon. It is the responsibility of each student to become familiar with what constitutes academic dishonesty and plagiarism and to avoid all forms of cheating and plagiarism.

The CSU code of conduct, Guidelines for Student Rights and Responsibilities and Judicial Procedures, defines academic misconduct as including, but "not limited to, providing or receiving assistance from another, in a manner not authorized by the instructor, in the creation of work to be submitted for academic evaluation (including papers, projects, and examinations). Plagiarism is defined as presenting, as one's own, the ideas or words

of another person, for academic evaluation, without proper acknowledgement."

Cheating may take many forms. It includes, but is not limited to, the following actions, unless explicitly authorized by the instructor:

### Exams

- Copying from another person's paper or receiving unauthorized aid from another person during an examination;
- Use of unauthorized materials or devices during an examination or any other form of academic evaluation and grading; e.g., use of signals, notes, books, or calculators during an examination when the instructor has not approved their use;
- Knowingly allowing another person to copy from one's paper during an examination.

### Improper Behavior

- Use of another person as a substitute in any form of academic evaluation or acting as a substitute for another person in any form of academic evaluation; e.g., a student cannot have another person take an examination for him/her;
- Acquisition or distribution of improperly acquired examinations; e.g., stealing examinations before the test period or taking a copy of an examination from a testing room without the permission of the instructor. (Examinations which have been distributed by an instructor are legitimate study tools.);
- Submission of another's material as one's own for academic evaluation;
- Preparation of work for another student to submit for academic evaluation;
- Unauthorized collaboration in the preparation of materials to be submitted for academic evaluation; e.g., working with another student on an assignment when the instructor has not authorized working together;
- Submission of the same work, or substantially similar work, in more than one course without prior consent of the evaluating instructor(s);
- Disruption in classroom, lab, or research and study areas; any conduct or actions that grossly or persistently interferes with the academic process. (See Rights and Responsibilities, "Prohibited Conduct," Student Handbook.)

### Falsification or Misuse of Academic Information

- Falsification or misrepresentation of one's own academic record or that of anyone else; e.g., altering a transcript for admission, hacking into the University's computer system and changing a grade, having another student take an examination in one's place, signing someone else's name to an attendance sheet.
- Unauthorized use of information in University computer records or the computer files of other students (see Computer Use Policy);
- Using unauthorized materials or fabricated data in an academic exercise; e.g., falsifying data in a research paper or laboratory activity; conducting research on human or animal subjects without review by the appropriate panel or supervisor.

### Plagiarism

- Copying sentences, phrases, paragraphs, tables, figures, or data directly or in slightly modified form from a book, article, or other academic source without using quotation marks or giving proper acknowledgment to the original author or source.
- Copying information from Internet Web sites and submitting it as one's own work;
- Buying papers for the purpose of turning them in as one's own work;
- Selling or lending of papers for the purpose of violating academic honesty policies. (This may also be an academic crime, see Connecticut General Statutes, §53-392a.)

### Understanding Plagiarism

Plagiarism is presenting another person's work without acknowledgements, whether in the same or in slightly modified form. In academic practice this is regarded as theft, intended to gain undeserved credit. Like other forms of academic dishonesty, plagiarism is cheating. To academicians, a well-documented paper is more impressive than one which arouses the suspicion of a reader who is familiar with the student's work and alert to echoes of other writers. The proper use of outside sources does not necessarily mean that a paper is lacking in originality, nor does the presence of quotation marks in the text. In fact, the purpose of research and documentation is to share useful information with the reader. The penalties for plagiarism greatly exceed the unlikely reward of gaining credit by getting away with it.

Students must be careful to avoid plagiarism and are responsible for learning how to present the ideas of others in their own work. For current documentation practice, student should consult the instructor and a style manual. When material is borrowed from another person, the source must be indicated. There are three ways in which another writer's material may appear:

1. by putting quotation marks around short passages borrowed verbatim (word for word); or by setting off from the text, without quotation marks, for longer quotations;
2. by *précis*: condensing part of a writer's argument; and
3. by paraphrase: interpretation of a writer's ideas.

All three must be acknowledged either in footnotes or informally in the text.

### ***Consequences of Academic Misconduct***

- On May 10, 2010, the CCSU Faculty Senate approved a new policy regarding the disciplinary procedures for academic misconduct. This policy applies to both undergraduate and graduate students, with the following exceptions:
- Attending an Academic Misconduct Workshop will not be considered as a sanction for graduate students.
- When an incident of academic misconduct involves a graduate student, the Dean of Graduate Studies, rather than the Dean of the academic program, should receive a copy of the Academic Misconduct Report.
- The specifics of the policy and all relevant forms can be found at [www.ccsu.edu/AcademicIntegrity](http://www.ccsu.edu/AcademicIntegrity). As an overview, when a student is suspected of academic misconduct, the instructor shall attempt to meet with the student to discuss the alleged misconduct and the sanction he or she intends to impose. Sanctions for academic sanction should be commensurate with the severity of the misconduct. These sanctions may include one or more of the following: a reduced grade for the assignment in question, the opportunity to revise the assignment or complete additional course work, a grade of F for the assignment in question, a grade of F for the course.
- Instructors are encouraged to file an Academic Misconduct Report for all violations, especially when the sanction involves a failing grade for the course and/or if the Instructor believes that further disciplinary sanctions (e.g., disciplinary probation, suspension, or expulsion) are warranted. If the student feels unjustly accused, he or she may appeal to the

chairperson of the department in which the alleged misconduct occurred. If the student is not satisfied with the decision of the department chairperson, he or she may submit a formal appeal to the Office of Student Conduct requesting review by a Faculty Hearing Board. A Faculty Hearing Board also would be convened in cases for which the student has a prior academic misconduct violation and in cases for which the instructor recommends disciplinary sanctions.

### ***When Graduate Students Are Suspected of Academic Misconduct***

When a faculty member reasonably believes that there is sufficient information to demonstrate that a student may have engaged in Academic Misconduct:

1. The faculty member will discuss the incident with the student, in the presence of the department chair if the faculty member or student so desires.
2. At this time the faculty member shall outline the possible penalties specified in the CCSU Student Handbook.
3. The faculty member will indicate that the matter may be referred to the Dean, School of Graduate Studies or the University Judicial Officer for possible disciplinary action.
4. Based on the available documentation, the response offered by the student, if any, and any other relevant information:
5. The faculty member will, within a reasonable period of time, reach a determination whether the student has engaged in Academic Misconduct.
6. Should the faculty member determine that Academic Misconduct has occurred, the faculty member shall retain evidence of the said misconduct.
7. If the faculty member determines that Academic Misconduct has not occurred, no University Academic Misconduct Report need be prepared.
8. If the faculty member determines that Academic Misconduct has occurred, the faculty member shall:
9. Impose an academic sanction.
10. Prepare and forward to the Dean, School of Graduate Studies or the University Judicial Officer, a University Academic Misconduct Report indicating the determination reached and sanctions imposed.

The faculty member:

11. Shall inform the student that additional University Academic Misconduct Reports may result in more severe penalties.
12. May contact the dean, School of Graduate Studies or the University Judicial Officer to request a conference with the student to further explain the act leading to the University Academic Misconduct Report. The conference will be facilitated by the dean of the School of Graduate Studies and include the University Judicial Officer, a Graduate Studies Committee member not affiliated with the graduate program of the student, and the graduate student. This meeting will not be a disciplinary hearing, but a consultation with the student to further explain the misconduct.
13. May request a disciplinary hearing with the dean of the School of Graduate Studies and the University Judicial Officer, in cases of serious forms of academic misconduct.

In accordance with the "Student Records and Directory Information Policy (FERPA)," "Data from academic, disciplinary, and counseling files shall not be available to unauthorized persons on campus or to any person off campus without the express consent of the student involved, except under legal compulsion" (CCSU Student Handbook). One exception, which permits disclosure without consent, is disclosure to school officials with legitimate educational interests. A school official is defined as a person employed by the University in an administrative, supervisory, academic, or support staff position (including law enforcement unit and health staff); a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Regents or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.

#### ***Subsequent Violations of the Academic Misconduct Policy***

When the University Judicial Officer receives multiple University Academic Misconduct Reports regarding a particular student, whether or not the faculty member has made a complaint, a "Pre-Hearing Investigation" will normally be conducted in anticipation of disciplinary action, which may result in disciplinary probation, suspension, or expulsion from the University. If the University Judicial Officer determines that a formal

hearing is warranted, a faculty member or members may be requested to provide information.

#### ***A Student's Rights When Suspected and or Charged With Academic Misconduct***

A student has the right:

1. To meet with the faculty member, in the presence of the Department Chair if so desired, before any determination has been made.
2. To be informed during this meeting of the faculty member's suspicions and have an opportunity to discuss the matter.
3. To appeal a finding of Academic Misconduct made during the course of the semester, within 10 school days of being provided with a University Academic Misconduct Report. A written statement of appeal must be provided to the faculty member, the Department chairperson, the Dean, and the University Judicial Officer, setting forth the basis of the student's appeal. Upon receipt of a student's mid-semester appeal, the University Judicial Officer will consult with the faculty member, the Department Chair, and the Dean and communicate to the student within 10 school days the results of the student's appeal.
4. Once a final grade is awarded, the student may file a grade appeal in accordance with the "Appeals for Grade Change Policy" (CCSU Student Handbook).
5. If a student receives a final grade of "F" as a result of violating the Academic Misconduct Policy, and that grade is upheld by the grade appeal process, no retroactive withdrawal from the course will be permitted.
6. All end of the semester appeals must be made in accordance with the "Appeals for Grade Change Policy."
7. In addition to academic sanctions provided by the faculty member, if disciplinary proceedings have been initiated by the University Judicial Officer, a student has the right to have such proceedings resolved in accordance with the CSU "Guidelines for Student Rights and Responsibilities and Judicial Procedures."

#### ***Professor's Responsibilities When Academic Misconduct is Suspected During End of the Semester Grading***

If a faculty member reasonably suspects academic misconduct during end of the semester grading, a grade of Incomplete may be entered, to be replaced by an

appropriate grade once the issue is resolved. The grade of Incomplete allows a faculty member to complete end of the semester grading and still follow up on suspected violations of the University Academic Misconduct Policy.

Academic Misconduct reported by a member of the University Community other than the relevant faculty member: See "Academic Misconduct" in "Guidelines for Student Rights and Responsibilities and Judicial Procedures" (CCSU Student Handbook).

### ***Disciplinary Procedures***

This policy was adopted by the Central Connecticut State University Faculty Senate on May 10, 2010, amended on February 14, 2011, amended on December 5, 2011, and amended May 4, 2020.

The following procedure guides instructors in addressing allegations of academic misconduct for all students of Central Connecticut State University. Academic misconduct is defined in the Student Code of Conduct and spelled out at [www.ccsu.edu/AcademicIntegrity](http://www.ccsu.edu/AcademicIntegrity). Instructors and students should be aware of this definition; instructors should consult it as a guide for addressing academic dishonesty in their classes. This procedure must be established by the Senate, in agreement with the University President.

The basic principle of this procedure is that instructors have oversight over academic penalties. In cases involving multiple acts of misconduct, and/or which involve both academic and non-academic misconduct, only the academic portion shall be handled according to the disciplinary procedures for academic misconduct described below. The non-academic portion shall be handled through the Office of Student Rights and Responsibilities which may precede any academic disciplinary action.

#### **Faculty Role**

##### **1. Instructor's Role and Responsibilities:**

- a. Instructors are encouraged to inform their students of course-specific requirements and the penalties the Instructor may impose for academic misconduct as informed by their professional judgment. Instructors should also refer students to the definition of academic misconduct in the Student Code of Conduct and at [www.ccsu.edu/academicintegrity](http://www.ccsu.edu/academicintegrity).
- b. Incidents of academic misconduct can range in severity from minor violations to major violations. Instructors determine academic sanctions according to their professional judgment as to the severity of the misconduct. The academic sanction should be

commensurate with the severity of the misconduct (see Guide for Evaluating Academic Misconduct). These sanctions may include one or more of the following: a reduced grade for the assignment in question, the opportunity to revise the assignment or to complete additional course work, a grade of F for the assignment in question, or a grade of F for the course.

- c. Upon the well-founded suspicion that an act of academic misconduct has occurred, the Instructor shall notify the student of the alleged misconduct and sanction to be applied.

- d. Whenever an Instructor has reasonable evidence that a student has engaged in academic misconduct, they should complete an Academic Misconduct Report. One copy of the Academic Misconduct Report shall be sent to the Department Chair, one copy shall be sent to the Office of Student Rights and Responsibilities, one copy to the Registrar and another copy should be maintained by the Instructor.

- e. If, based on an appeal from the Accused Student (see item 2b), the Department Chair or the Faculty Hearing Board determines that the Instructor did not provide sufficient evidence to support the alleged misconduct, then the Instructor should assign a grade based on the quality of the work as originally submitted.  
**Student Rights and Responsibilities**

##### **2. Student Rights and Responsibilities:**

- a. It is the responsibility of each student to become familiar with what constitutes academic dishonesty and plagiarism and to avoid all forms of cheating and plagiarism as directed by their individual instructors.
- b. If a student can demonstrate that they have been unjustly accused of academic misconduct, they have the right to appeal the allegation to the Chair of the Department in which the alleged misconduct occurred. The appeal to the Department Chair must be made using the Academic Misconduct Student Appeal Form within seven (7) University calendar days of receipt of the Instructor's written decision and should include substantial evidence supporting the student's appeal or suggesting that the Instructor's standard was applied unfairly. The Department Chair shall respond to the student's appeal in writing within ten (10) University Calendar Days of its receipt and meet with the student during a mutually convenient time. The Department Chair shall also forward a copy of the Appeal Form with an indication of their ruling to the Office of Student Rights and Responsibilities.

c. If upon a receipt of the ruling by the Department Chair the Accused Student still believes they have been unjustly accused, they may contact the Office of Student Rights and Responsibilities within seven (7) University calendar days to request a hearing of the Faculty Hearing Board.

d. A Student who has been notified that they have been accused of academic misconduct shall not be permitted to withdraw from the course in which the alleged misconduct has occurred without the approval of the Provost/Vice President for Academic Affairs.

#### Complaint from Someone Other Than Instructor

#### 3. Complaint by Person other than Student's Instructor:

Any member of the University Community may file a complaint against a Student alleging academic misconduct. A complaint made by a person other than the Student's instructor should be submitted to the instructor as soon as possible after the occurrence of the alleged violation, but not later than ten (10) University calendar days following the occurrence of the alleged violation. The Instructor would then follow procedures as outlined in this policy. Alleged violations also may be reported anonymously to the Office of Student Rights and Responsibilities, but must include enough evidence to warrant follow up by an Office of Student Rights and Responsibilities representative.

#### Office of Student Rights and Responsibilities

#### 4. Office of Student Rights and Responsibilities' Role:

a. The Office of Student Rights and Responsibilities will be responsible for retaining all records of reported cases of academic misconduct. Upon receipt of the Academic Misconduct Report, the Office of Student Rights and Responsibilities will review the case to determine if the Student has any previously reported cases of academic misconduct and notify the instructor. The Office of Student Rights and Responsibilities will determine if the matter can be disposed of administratively by mutual consent of the Accused Student and the Instructor, or if a Faculty Hearing Board shall be convened (per item 5a) and the Director or his/her representative will preside over such hearings.

b. The Office of Student Rights and Responsibilities will require students to attend an Academic Integrity Workshop for their first academic misconduct incident. The Office of Student Rights and Responsibilities may require additional sanction(s) based on disciplinary history and will keep records of sanction completion.

#### Faculty Hearing Board

#### 5. Faculty Hearing Board's Role and Responsibilities:

a. The Faculty Hearing Board shall be convened by the Director of the Office of Student Rights and Responsibilities in cases where (i) the student has evidence that may demonstrate that they have been incorrectly accused of academic misconduct, (ii) the student has any prior cases of academic misconduct, or (iii) the student rejects additional disciplinary sanctions determined by the Office of Student Rights and Responsibilities.

The Faculty Hearing Board shall be responsible for determining whether there is sufficient evidence to find the student responsible for academic misconduct and determine the appropriate sanctions.

b. An Office of Student Rights and Responsibilities representative shall convene the board and preside over the hearing, but will be a non-voting member.

c. The Faculty Hearing Board shall be composed of three (3) faculty members of the Academic Integrity Committee. The Academic Integrity Committee Member cannot serve if they have a conflict of interest.

d. The student may request that a substitute faculty member be appointed if the student can demonstrate that the appointed faculty member may have bias.

#### Hearing Procedures

#### 6. Hearing Procedures:

The hearing procedures governing allegations of academic misconduct shall be as follows:

a. Notice of Hearing: Normally, a hearing will be conducted within ten (10) University calendar days of the receipt by the Office of Student Rights and Responsibilities of an Academic Misconduct Report and the Office of Student Rights and Responsibilities' determination that prior academic misconduct warrants a hearing and/or an Accused Student's request for a hearing. The notice of hearing shall advise the Accused Student of the specific allegation(s) of academic misconduct. The Accused Student shall be afforded a reasonable period of time to prepare for the hearing, which shall not be less than three (3) University calendar days.

b. Hearing: Hearings shall be closed, but the Faculty Hearing Board may, at its discretion, admit any person into the hearing room. The hearing board shall have the authority to discharge or to remove any person whose presence is deemed unnecessary or obstructive to the proceedings. The Accused Student and the Instructor shall have the right to be present at all stages of the hearing process except during the private deliberations of the hearing board.

- c. **Record of Hearing:** The University shall make a recording of the hearing. The recording shall be the property of the University. No other recordings shall be made by any person during the hearing. Upon request, the Accused Student may review the recording in a designated University office in order to prepare for an appeal of the decision rendered by the Faculty Hearing Board. Further disclosure of the recording shall be governed by applicable state and federal law.
- d. **Opportunity to Present Positions to the Board:** Both the Instructor and the Accused Student shall have the opportunity to fully present their positions to the Faculty Hearing Board, including the opportunity to present the testimony of witnesses and documents in support of their positions.
- e. **Support Persons:** During the hearing, the Accused Student shall have the right to be accompanied by a support person who may observe but not participate in the hearing. A support person should be a person whose schedule allows attendance at the scheduled date and time for the hearing because delays will not normally be allowed due to the scheduling conflicts of a support person.
- f. **Written Notice of Decision:** Within ten (10) University Calendar Days of the hearing, the Accused Student and the Instructor shall receive written notice of the Faculty Hearing Board's decision, which will indicate whether the Accused Student has been found to be "Responsible" or "Not Responsible." The notice shall also set forth any disciplinary sanctions imposed by the Board. The decision of the Faculty Hearing Board, as well as the disciplinary sanction(s) imposed, if any, generally will not be released to third parties without the prior written consent of the Accused Student. However, certain information may be released if and to the extent authorized by state or federal law.
- g. If the Faculty Hearing Board determines that the Accused Student is "Not Responsible," the Board shall not impose any sanctions. The Board shall so advise the Student's instructor and the instructor shall reevaluate the student's course grade in light of the Board's determination. If the Faculty Hearing Board determines that the Accused Student is "Responsible," the academic sanction imposed will be set forth by the instructor.
- The Faculty Hearing Board may make a recommendation to change the academic sanction imposed by the instructor on the basis of its hearing of the evidence of academic misconduct.

## Disciplinary Sanctions

### 7. Disciplinary Sanctions:

Upon determination by the Office of Student Rights and Responsibilities that the Accused Student has no prior record of academic misconduct, the Student will be required to attend an Academic Integrity Workshop provided by the Learning Center. If the Accused Student has a prior record of academic misconduct or has engaged in a severe act of misconduct, they may face disciplinary sanctions as determined the Faculty Hearing Board. The Faculty Hearing Board may impose one or more of the following disciplinary sanctions: warning, disciplinary probation, discretionary sanctions, suspension and/or expulsion, as described in II.D of the Student Code of Conduct.

### Appeal of the Faculty Hearing Board Ruling

#### 8. Appeal of the Faculty Hearing Board Ruling:

- a. The decision rendered by the Faculty Hearing Board may be appealed by the Accused Student to the Provost/Vice President of Academic Affairs, who shall review the record of the hearing, including any and all documents presented to the Faculty Hearing Board. An appeal shall be in writing and shall be delivered to the Provost/Vice President of Academic Affairs within three (3) University calendar days of receipt of the Faculty Hearing Board's written decision.
- b. An appeal may be brought on three grounds: (a) a claim that error in the hearing procedure substantially affected the decision; (b) a claim that new evidence or information material to the case was not known at the time of the hearing; or (c) a claim that the academic and/or disciplinary sanction(s) imposed were not appropriate for the violation of the Code for which the accused student was found responsible. The Provost/Vice President of Academic Affairs shall have the right to deny an appeal not brought on any of the foregoing grounds.
- c. The decision rendered by the Provost/Vice President of Academic Affairs shall be final and there shall be no further right of appeal.

### Annual Reporting

#### 9. Annual Reporting:

At the end of each academic year, the Office of Student Rights and Responsibilities shall notify the Academic Integrity Committee of the total number of academic misconduct cases reported for the year, including the number of appeals, and the number and type of disciplinary sanctions recommended by the Faculty

Hearing Board. No individual case decisions or outcomes will be identified in this report. Where necessary, the report will aggregate data over several years in order to maintain confidentiality. The Academic Integrity Committee will include this information in its annual report to the Senate.

### Attendance

Regular attendance for classes is expected of all graduate students by the University and may be a course requirement. Frequent absences can result in a lowered grade or possible course failure. The following regulations are in effect:

- A student is responsible for class attendance, although each instructor should establish his/her policy and inform the class.
- A student absent from class for five (5) consecutive days or less should, upon return, explain the absence to the instructor.
- A student absent from class for more than five (5) days, who has not been seen as a patient in the University Health Service for the evaluation of the illness, should submit verification of the absence from his/her physician to the Office of Student Affairs. Notification of a student's absence will be relayed to the appropriate professor only if a physician's verification is submitted at the time of the request for notification.
- Students are expected to notify instructors in advance for absences related to official University trips, conferences, intercollegiate athletic events, musical performances, and other events.
- Make-up work is the responsibility of the student.

### Weather-Related Cancellations/Closing Information

Based on information from the state's meteorologist and local weather forecasts, the University determines when classes are canceled and/or delayed, in addition to when the campus hours of operation change.

In most situations, employees who are identified as "Level One" are expected to report to work as instructed by their supervisor.

Staff (other than Level One employees) are not required to work remotely when campus is closed.

### When Decisions are Made

- Morning issues - We will communicate decisions about a delayed opening or a closed campus by 6:15 a.m.
- Evening issues – Classes that begin at 4:30 p.m. or later are considered "evening" classes. We will announce decisions about evening classes by 2:30 p.m.

### Where to Find the Latest Info

- [ccsu.edu](https://ccsu.edu) - notification at the top of the page
- [ccsu.edu/cancel](https://ccsu.edu/cancel) - additional details about campus operations related to weather conditions
- CCSU Storm Phone (860) 832-3333
- Check your CCSU email account
- WFSB-TV, WTNH-TV, NBC CT, and Fox CT storm closing sites
- Our Emergency Notification System may be deployed if severe weather rapidly develops.

### Campus Parking Ban

Anytime snow or icy conditions are forecasted, CCSU's Parking Ban automatically goes into effect.

- All vehicles must be removed from surface parking lots or the owner risks being ticketed and towed.
- Parking is allowed in the garages, but avoid the top floors.
- In the event staff and faculty are required to report to work during inclement weather, they should also park in the garages.

### Travel Decision Is Yours

Please keep in mind that only *you* can determine whether it is safe enough for you to travel to campus. Our decision to cancel, close, or delay is based on many factors, but not all individual situations can be taken into account. For example, the New Britain roads may be fine while another part of the state may be experiencing severe conditions.

Upon making your decision, we ask that you share that information in a timely manner:

- Faculty deciding that conditions are not sufficiently safe for their travel are expected to make every effort to notify their students via University e-mail or voice mail.



- Students who elect not to travel to campus should inform their instructors at their first opportunity.
- Staff who decide they are unable to travel should alert their supervisor and charge that time to accrued leave.

We urge all parties to make allowances for the diversity of situations and the various levels of driving confidence.

### **Catalog Disclaimer**

The content of this catalog is provided for the information of the student. It is accurate at the time of posting but subject to change from time to time as deemed appropriate by Central Connecticut State University in order to fulfill its role and mission or to accommodate circumstances beyond its control. Any such changes may be implemented without prior notice and without obligation and, unless specified otherwise, are effective when made. This catalog does not constitute a contract; either expressed or implied, and is subject to revision at the University's discretion.

### **Computer Use Policy**

The campus computing facilities are available to graduate students to facilitate educational objectives, research, and study. In exercising computer privileges, graduate students are expected to follow University rules and regulations governing the use of computer accounts and equipment. These regulations are found in the Student Handbook from Student Affairs.

### **Email Policy**

Email is our primary means for official communication to students. Students have a responsibility to check their email on a regular basis. For the full email policy, <https://www.ccsu.edu/hr/files/CSUSPolicyEmailOfficialCorrespondance.pdf>

Assignment of email addresses:

The information technology department will assign each employee and student an official email address. It is to this official address that the Universities will send email communications. This official address will be the address listed in the University's Global Address List found in the Exchange/Outlook Address Directory and will be the official email address included with personal information within the administrative computing system.

Educational uses of email:

Faculty members may determine how email will be used in their classes. It is strongly recommended that if faculty members have email requirements and expectations, they specify these requirements in their course syllabi.

### **Graduation Rate Statistics**

Students may request information on completion and graduation rates from the Office of Institutional Research and Assessment or by going to the Fact Book on their website.

### **Transcript Policy**

A transcript is the complete, unabridged academic record, without deletions or omissions, compiled while at Central Connecticut State University. Upon the granting of a degree or completion of a program, a student's transcript is considered officially sealed, meaning no changes in grades or alteration in courses will be made unless that student believes that the information in his or her transcript is inaccurate, misleading, or in violation of his or her rights of privacy. It is a student's responsibility to review and confirm the accuracy of his or her academic record. A student may view his or her transcript at any time on the Web to verify its content. It is recommended that the degree recipient confirm the accuracy of all grades, terms, and cumulative GPA notations at the time final grades are posted to their academic record upon graduation.

It is a student's responsibility to notify the Office of the Registrar, in writing, of the information in the transcript that he or she believes is inaccurate, misleading, or in violation of his or her rights of privacy. A student who believes that his or her transcript is inaccurate,

misleading, or in violation of his or her rights of privacy has the right to request an amendment to the transcript and, if this request is denied, the right to an opportunity for a hearing to challenge the content of the transcript on the ground that it is inaccurate, misleading, or in violation of his or her rights of privacy. If, as a result of the hearing, the student's request is denied, the University shall inform the student of the right to place a statement with the transcript, commenting on the contested information in the record or stating why he or she disagrees with the decision of the University, or both.

Transcripts may be obtained from the Office of Registrar. Please refer to the Registrar's Website, for further information.

### **Veterans Benefits**

U.S. Department of Veterans Affairs (VA) regulations require that all students receiving VA educational benefits meet the College's satisfactory academic progress (SAP) standard and the College's academic standing policy as stated in the college catalog. Students failing to make SAP will have their VA educational benefits discontinued in accordance with the institution's policy found here. Students who are academically dismissed for failing to meet the college's academic standing policy will be reported to the VA. Students may appeal their academic dismissal in accordance with the undergraduate policy found here or the graduate policy found here. Should the appeal be successful, the student's enrollment will be reported retroactively to VA for the enrollment period to which the appeal applies.

## UNDERGRADUATE MAJORS

### ACCOUNTING, B.S.

A minor is not required with this major.

School of Business Admission Requirements

#### REQUIREMENTS:

##### Required Courses:

AC 300	Intermediate Accounting I	3
AC 301	Cost Management Systems	3
AC 302	Introduction to Income Taxation	3
AC 350	Intermediate Accounting II	3
AC 400	Intermediate Accounting III	3
AC 335	Accounting Analytics and Professional Competencies	3
AC 340	Accounting Information Systems	3
AC 445	Auditing	3

##### Common Business Core:

AC 211	Introduction to Financial Accounting	3
AC 212	Introduction to Managerial Accounting	3
BUS 480	Capstone Seminar	0
FIN 295	Managerial Finance	3
LAW 250	The Legal and Ethical Environment of Business	3
MC 207	Managerial Communication I	3
MGT 295	Fundamentals of Management and Organizational Behavior	3
MGT 480	Strategic Management	3
MIS 201	Introduction to Management Information Systems	3
MKT 295	Fundamentals of Marketing	3

##### Directed Accounting Electives:

Select two courses (6 credits) from the following:

AC 311	Accounting Applications	3
AC 402	Fundamentals of Corporate Taxation	3
AC 410	Fraud Examination	3
AC 420	Managerial Analysis & Cost Control	3
AC 490	Current Accounting Topics	3
AC 497	Independent Study in Accounting	3
AC 398	Internship in Accounting	3
LAW 400	Advanced Business Law	3
FIN 301	Intermediate Managerial Finance	3
AC 455	Internal Auditing	3

AC 305	Personal Financial Planning	3
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##### Additional Requirements

BUS 250	Introduction to Business Analytics and Skills	3
STAT 201	Business Statistics II	3

##### Accelerate Central B.S. / M.S. Program in Accounting

##### Eligibility

Students typically apply during their junior year of study and must meet the requirements specified below:

1. Have at least a 3.3 cumulative grade point average.
2. Completed 60 earned credit hours by the end of the Fall semester of their junior year. At least 30 credits must have been earned at CCSU.
3. Admission to School of Business Accounting major.
4. Meet the M.S. Accounting program admission criteria.

Eligible students can apply to the **Accelerate Central B.S. / M.S. Program in Accounting** during their junior year of study. Selected students will be able to complete a B.S. in Accounting and a M.S. in Accounting in as few as five years on a full-time basis.

For students who are officially admitted to the **Accelerate Central B.S. / M.S. Program in Accounting**, two three (3)-credit graduate Accounting courses will replace two three (3)-credit undergraduate Accounting elective courses. In addition, up to two three (3)-credit graduate courses may be taken before matriculation as a graduate student; these 2 courses will be excluded from the student's B.S. program and transferred into the student's M.S. program.

Students who are accepted into **Accelerate Central B.S. / M.S. Program in Accounting** will officially matriculate into the School of Graduate Studies the semester immediately following conferral of their Bachelor's degree, even if they have already taken graduate-level courses while completing their Bachelor's degree. Students wishing to defer their graduate studies must notify Graduate Recruitment & Admissions of this decision prior to the start of the term following the conferral of their Bachelor's degree.

**How to Apply**

Students will submit **Change of Major form** and one recommendation letter from a CCSU Accounting professor to their undergraduate advisor by March 1st of their junior year. The documents will go through the proper parties for review and approval, including the Graduate Program Director. Once the form has been approved by all required parties, the Registrar's Office will change the student's undergraduate curriculum to note the Accelerate Central program.

It is highly recommended to apply early for admission to this program to receive dedicated advising.

**Accelerate Central B.S.- Accounting / M.B.A Program****Eligibility**

Students typically apply during their junior year of study and must meet the requirements specified below:

1. Have at least a 3.3 cumulative grade point average.
2. Completed 60 earned credit hours by the end of the Fall semester of their junior year. At least 30 credits must have been earned at CCSU.
3. Admission to School of Business Accounting major.
4. Meet the M.B.A. program admission criteria.

Eligible students can apply to the **Accelerate Central B.S. Accounting / M.B.A. Program** during their junior year of study. Selected students will be able to complete a B.S. in Accounting and a M.B.A. in Accounting in as few as five years on a full-time basis.

For students who are officially admitted to the **Accelerate Central B.S. Accounting / M.B.A. Program**, two three (3)-credit graduate Accounting courses will replace two three (3)-credit undergraduate Accounting elective courses. . In addition, up to two three (3)-credit graduate courses may be taken before matriculation as a graduate student; these 2 courses will be excluded from the student's B.S. program and transferred into the student's M.B.A. program.

Students who are accepted into **Accelerate Central B.S. Accounting / M.B.A. Program** will officially matriculate into the School of Graduate Studies the semester immediately following conferral of their Bachelor's degree, even if they have already taken graduate-level courses while completing their Bachelor's degree. Students wishing to defer their graduate studies must notify Graduate Recruitment & Admissions of this decision

prior to the start of the term following the conferral of their Bachelor's degree.

**How to Apply**

Students will submit **Change of Major form** and one recommendation letter from a CCSU Accounting professor to their undergraduate advisor by March 1st of their junior year. The documents will go through the proper parties for review and approval, including the Graduate Program Director. Once the form has been approved by all required parties, the Registrar's Office will change the student's undergraduate curriculum to note the Accelerate Central program.

It is highly recommended to apply early for admission to this program to receive dedicated advising.

**Total Credit Hours: 30**

**ANTHROPOLOGY, B.A.**

A minor is required with this major.

**MAJOR REQUIREMENTS (38-39 CREDITS):****Required Courses:**

ANTH 150	Introduction to Archaeology	3
ANTH 160	Introduction to Biological Anthropology	3
ANTH 170	Introduction to Cultural Anthropology	3
ANTH 340	Theories of Culture	4
ANTH 375	Anthropological Data Analysis	4
ANTH 329	Experimental Archaeology	4
	or	
ANTH 373	Methods in Biological Anthropology	4
	or	
ANTH 374	Field Research Methods	4
<b>and 4 credits from the following:</b>		
ANTH 401	City Life & Culture	4
ANTH 416	Archaeology of Africa	4
ANTH 418	New England Archaeology	4
ANTH 420	African Diaspora Archaeology	4
ANTH 423	Vietnam, A Country, Not a War	4
ANTH 424	Peoples and Cultures of Africa	4
ANTH 428/LAS 428	Cultures of Latin America	4

**and one course from the following:**

ANTH 437	Internship in Anthropology	3
ANTH 450	Archaeological Field School	3 TO 6

ANTH 451	Field School in Cultural Anthropology	3 TO 6
ANTH 452	Field School in Biological Anthropology	3-6

**Senior Capstone**

ANTH 490	Senior Thesis	3
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**and 6-7 credits from elective courses in Anthropology:**

One course must be a biological anthropology course.

**Total Credit Hours: 0**

**ART, B.A.**

A minor is not required with this major.

**REQUIREMENTS: (60 CREDITS)**

**Required Courses:**

ART 112	History of Art I	3
ART 113	History of Art II	3
ART 120	Design I	3
ART 124	Three-Dimensional Design	3
ART 130	Drawing I	3
ART 216	Modern Art	3
ART 261	Sculpture I	3
ART 230	Drawing II	3

**Subtotal: 24**

**Individual Planned Program of Study:**

To be developed in conjunction with departmental advisor and includes a minimum of 9 sequential credits in one area. Art majors must complete 15 credits in courses at the 300-level or above.

**Subtotal: 18**

**Directed Electives or a Minor in a field outside of the Department of Art:**

Major-related electives, selected in consultation with advisor, or a minor in another department

**Subtotal: 18**

**Capstone:**

ART 499	Capstone in Art	3
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**Subtotal: 3**

**Portfolio Requirement (ART 099):**

All art majors must submit a portfolio of works for consideration by the art faculty. Students whose portfolios do not meet standards will be required to take supplemental courses. No student will be allowed to proceed on to a 300-level (or higher) studio course without a successful portfolio review.

**Total Credit Hours: 60**

**ATHLETIC TRAINING, B.S.**

**The BS in Athletic Training has been closed; no further students will be admitted to the program.**

minor is not required with this major.

**MAJOR REQUIREMENTS (74 CREDITS):**

**Lecture Courses (59 credits):**

EXS 109	Intro to Human Performance	3
EXS 112	Foundations of Athletic Training	3
EXS 207	Anatomy and Physiology in Exercise Science I	3
EXS 211	Anatomy and Physiology in Exercise Science I Laboratory	1
EXS 208	Anatomy and Physiology in Exercise Science II	3
EXS 212	Anatomy and Physiology in Exercise Science II Laboratory	1
EXS 216	Biomechanics	3
EXS 218	Clinical Examination and Diagnosis of Injuries and Illnesses	4
EXS 240	Therapeutic Modalities	4
EXS 307	Human Nutrition	3
EXS 317	Therapeutic Exercise	4
EXS 408	Physiology of Sport and Exercise	3
EXS 409	Clinical Exercise Physiology	3
EXS 411	Research Methods in Exercise Science	3
EXS 413	Administration and Management in Athletic Training	3
BMS 380	Emergency Medical Technician (EMT)	6

**Subtotal: 59**

EXS 218, EXS 240, EXS 317, EXS 408, EXS 409, EXS 411, EXS 413, EXS 421: Require admission to the professional program prior to enrollment

**Practicum Courses (15 credits):**

EXS 275	Training for Sport Performance	3
EXS 315	Practicum in Athletic Training I	2
EXS 316	Practicum in Athletic Training II	2
EXS 319	Practicum in Athletic Training III	2
EXS 445	Internship in Athletic Training	6

**Subtotal: 15**

EXS 315, EXS 316, EXS 319, and EXS 445: Require admission to the professional program prior to enrollment  
Subtotal: 74

**RELATED REQUIREMENTS:**

BIO 111 or BIO 121 or BMS 102 or BMS 111, CHEM 161, and PHYS 111 (all with C- or better); ENG 105 and 105P, or ENG 110; any HIST; COMM 140, PSY 236, and STAT 104 or STAT 200 or STAT 215.

**Clinical Experience**

All students in the athletic training education program are required to complete four semesters of clinical experience in CCSU's athletic training facility, one pre-season experience at CCSU that typically runs from early August to the first day of classes, and a fifth semester in an off-campus affiliation. The BOC and CAATE require a minimum of two years (four semesters) of clinical rotation, which will be under the direct supervision of a preceptor. Emphasis is placed on mastery of the educational competencies over the five semesters of clinical experience.

**Applying for Admission into the Athletic Training Education Program**

Undergraduate applicants seeking admission to the athletic training education program are required to submit a file of materials for review by the Department of Physical Education and Human Performance. The applicant's completed file should be submitted prior to September 10 for fall candidates and February 10 (second semester sophomore year) for spring candidates. Applications for admission may be obtained in the Department of Physical Education and Human Performance, Kaiser Hall, Room 0180.

**Requirements for Admission**

1. Completion of application to the professional program for Athletic Training.
2. Successful completion of 50-80 hours of observation in the athletic training facility and sport coverage at CCSU.
3. Completion of 30 credits of which a minimum of 15 credits have been earned at CCSU.
4. Successful completion of 4 credits of Human Anatomy & Physiology I with lab (C- or better grade in lecture and lab).
5. Successful completion of EXS 112 and EXS 217 at CCSU (C- or higher grade in both courses).
6. Successful completion of BMS 380: EMERGENCY MEDICAL TECHNICIAN course or verification of equivalent course.

7. University Grade Point average (GPA) of 2.50.

8. Departmental grade point average (GPA) of 2.70.

9. Two letters of recommendation: one from a CCSU faculty preceptor and the second from a Department of PE & HP faculty member

using the required forms.

10. The presentation of an essay demonstrating command of the English language, citing reasons for wanting to enroll in the program, and emphasizing

experiences related to athletic training (500-700 words).

11. An interview with Screening Committee of the Department of Physical Education and Human Performance, including

at least one core ATEP faculty member.

**Application Deadline**

Fall Semester: September 10

Spring Semester: February 10

or next regular day of classes if the date falls on a weekend or holiday

**Technical Standards for Admission**

The technical standards set forth by the athletic training educational program establish the essential qualities considered necessary for students admitted to this program to achieve the knowledge, skills, and competencies of an entry-level athletic trainer, as well as meet the expectations of the program's accrediting agency, the Commission on Accreditation of Athletic Training Education (CAATE). All students admitted to the professional program in athletic training must meet the expectations and display the abilities outlined below. In the event a student is unable to fulfill these technical standards, the student will not be admitted into the program. Further, compliance with the program's technical standards does not guarantee a student's eligibility for the BOC certification exam.

Candidates for admission to the professional program in athletic training at CCSU must show:

- Demonstrated ability to assimilate, analyze, synthesize, integrate concepts and problem solve to formulate assessment and therapeutic judgments, and to be able to distinguish deviations from the norm;
- Evidence of sufficient postural and neuromuscular control, sensory function, and coordination to perform appropriate physical examinations using accepted techniques; and the demonstrated ability to accurately, safely, and efficiently use equipment and materials during the assessment and treatment of patients;
- Demonstrated ability to communicate effectively and sensitively with patients and colleagues, including individuals from different cultural and social backgrounds; this includes, but is not limited to, ability to maintain a professional demeanor, establish rapport with patients, and communicate judgments and treatment information effectively. Students must be able to understand and speak the English language at a level consistent with competent professional practice;
- Demonstrated ability to record the physical examination results and a treatment plan clearly and accurately;
- Demonstrated ability to maintain composure and continue to function effectively during periods of high stress;
- Perseverance, diligence, and commitment to complete the athletic training education program as outlined and sequenced;
- Demonstration of flexibility and ability to adjust to changing situations and uncertainty in clinical situations; and
- Demonstrated ability to perform the affective skills that relate to professional education and quality patient care.

Candidates for admission to the professional program in athletic training will be required to verify they understand and meet these technical standards or that they believe that, with certain accommodations, they can meet the standards.

A student who believes that they have a disability that may impact admission to or successful completion of this program should contact the Student Disability Services in Copernicus, Room 241, 860-832-1900, TTY 860-832-1954. Student Disability Services will evaluate the student's documentation to determine if the stated condition

qualifies as a disability under applicable laws and so notify the program director of the athletic training education program and the chair of the Department of Physical Education and Human Performance.

If a student with a qualified disability states he/she can meet the technical standards with accommodation, then the student and appropriate University personnel will discuss what accommodation(s) may be effective and whether the accommodations requested are reasonable, taking into account clinician/patient safety, and whether the requested accommodations would fundamentally alter the nature of the program, including academic standards.

### **Retention Policy**

Once admitted to the professional program in Athletic Training, the following requirements must be maintained in order to remain in "**Good Standing**" within the Athletic Training Education Program.

1. Maintain a University cumulative grade point average (GPA) of 2.50.
2. Maintain a Departmental grade point average (GPA) of 2.70.
3. Successfully demonstrate required clinical skill proficiencies in EXS 218, EXS 240, EXS 315, EXS 317, EXS 316, EXS 319, EXS 445.
4. A letter grade of C or higher is required in all professional program courses.
4. Maintain current State of Connecticut or National Registry EMT-B Certification or higher throughout EXS 315, EXS 316, EXS 319, EXS 445.

If a candidate drops below the required GPA levels; and/or fails to complete the skill competencies; and/or fails to maintain EMT certification, he or she may be denied enrollment to professional program courses, practicum courses and

internship assignments until the GPA and/or competencies reach the appropriate level; and/or EMT certification is valid.

Candidates who fail to meet the GPA requirement needed for application to the professional program for two consecutive semesters after completing EXS 217 will no longer be allowed to apply to the Athletic Training Professional Program.

**Please Note:** Revisions to the athletic training education program may occur in order to maintain compliance with national accreditation standards. Students should check

with the program director and/or the CCSU athletic training education

website regarding the possibility of new requirements. Physical Education and Human Performance

### Transfer Students Policy

Transfer students must meet the same course requirements and application procedures. Transfer students are required to complete a minimum of 15 credits "in residence" at CCSU prior to applying to the professional program. The 15 credits for transfer students may be in General Education and/or within the Athletic Training Education Program and must include EXS 112 and EXS 217 at CCSU. Currently, all requests for transfer into the Athletic Training Education Program either by students from other universities or by CCSU students looking to change majors are handled on a case-by-case basis. The number of students accepted in this manner depends on the number of openings available in that year. For acceptance into the Athletic Training Education Program, transfer students must complete 50-80 hours of observation in the athletic training facility and sport coverage at CCSU.

**Note:** Revisions to the athletic training education program may occur in order to maintain compliance with national accreditation standards. Students should check with the program director and/or the CCSU athletic training education website regarding the possibility of new requirements. All practicum courses and internship assignments require the student to be in "good standing" in addition to having a current state of Connecticut or National Registry EMT-B Certification.

### BIOCHEMISTRY, B.S.

A minor is not required with this major.

The BS program in biochemistry provides a strong foundation in both molecular biology and chemistry and is based on faculty, facilities, and research resources in both the Department of Biomolecular Sciences and the

Department of Chemistry and Biochemistry. In addition to in-class laboratory instruction, this interdepartmental program emphasizes independent student research carried out under the guidance of a faculty member from either department. This program is designed to prepare students for careers or advanced study in molecular biology, biochemistry, or health-related fields.

### **BS IN BIOCHEMISTRY (AMERICAN CHEMICAL SOCIETY CERTIFIED)**

#### **Biochemistry Core Requirements**

BMS 102	Introduction to Biomolecular Science	3
BMS 103	Introduction to Biomolecular Science Laboratory	1
BMS 190	Friday Seminar in Biomolecular Sciences I	.5
BMS 201	Principles of Cell and Molecular Biology	4
BMS 290	Friday Seminar in Biomolecular Sciences II	.5
CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 200	Foundations of Analytical Chemistry	3
CHEM 201	Foundations of Analytical Chemistry Laboratory	1
CHEM 210	Organic Chemistry I - Foundations	3
CHEM 211	Organic Chemistry I Laboratory - Foundations	1
CHEM 212	Organic Synthesis	3
CHEM 213	Organic Chemistry II Laboratory - Synthesis	1
CHEM 260	Foundations of Inorganic Chemistry	3
CHEM 316	Spectrometric Identification of Organic Compounds	3
CHEM 320	Biophysical Chemistry	3
CHEM 332	Chemical Literature	1
CHEM 432	Chemistry Seminar	1

**Subtotal: 36**

#### **Biochemistry Core plus an additional 8 credits in Chemistry**

CHEM 322	Physical Chemistry of Quantum & Statistical Mechanics	3
CHEM 323	Physical Chemistry Laboratory	1
CHEM 402	Instrumental Methods in Analytical Chemistry	4

#### **Directed Electives**

One course chosen from:		
BMS 306	Genetics	3



BMS 307	Genomics	4
BMS 311	Cell Biology	4
BMS 316	Microbiology	4

**Subtotal: 4****Research Requirements**

CHEM 238	Introduction to Research	1-6
CHEM 438	Undergraduate Research	1-6

**Subtotal: 2**

CHEM 238: BMS 390 may be substituted

CHEM 438: BMS 491 may be substituted

**Capstone Courses**

CHEM 354	Foundations of Biochemistry	3
CHEM 458	Advanced Biochemistry	3
CHEM 455	Biochemistry Laboratory	1

**Subtotal: 7****Related Requirements**

MATH 152	Calculus I	4
MATH 221	Calculus II	4
PHYS 125	University Physics I	4
PHYS 126	University Physics II	4

**Subtotal: 16**

Students must also maintain a student portfolio (see below). These related requirement courses may also be counted to fulfill appropriate portions of the student's general education program.

No minor is required for this major.

**Portfolio Requirement**

The portfolio requirement will be formally introduced to students during the BMS 190 and BMS 290 introductory courses. Minimally, the student portfolio must include a current resume, a current Student Graduation Evaluation or transcript, a planned program of academic study, a narrative describing the student's goals for undergraduate education and graduate educational or career plans, abstracts of all completed independent study projects, and writing samples from CHEM 432. To fulfill the portfolio requirement, the student portfolio must be reviewed with one or more faculty members:

As a course requirement in BMS 190 and BMS 290;

As a required component of independent student research projects; and

Prior to graduation, as evidenced by submission of a Portfolio Requirement Completed form to the chair of the Department of Chemistry.

**500-Level Course Options**

Undergraduate students who use the form, Enrollment in 500 Level Courses by Undergraduates, and who have at least 90 credits and a cumulative GPA of 3.00 or higher may (with the approval of the advisor, instructor, appropriate department chair and dean, School of Graduate Studies, and with appropriate prerequisites) substitute either of the following 500-level BMS courses for BMS courses listed in the directed elective portion of the major program, and the following CHEM course in place of one of the 400-level CHEM courses listed in the directed elective portion of the major program:

BMS 562	Advanced Developmental Biology	3
CHEM 590	Topics in Advanced Chemistry	3
Subtotal: 57		

**MAJOR IN BIOCHEMISTRY, BS (NON-TEACHING)****Biochemistry Core Requirements**

BMS 102	Introduction to Biomolecular Science	3
BMS 103	Introduction to Biomolecular Science Laboratory	1
BMS 190	Friday Seminar in Biomolecular Sciences I	.5
BMS 201	Principles of Cell and Molecular Biology	4
BMS 290	Friday Seminar in Biomolecular Sciences II	.5
CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 200	Foundations of Analytical Chemistry	3
CHEM 201	Foundations of Analytical Chemistry Laboratory	1
CHEM 210	Organic Chemistry I - Foundations	3
CHEM 211	Organic Chemistry I Laboratory - Foundations	1
CHEM 212	Organic Synthesis	3
CHEM 213	Organic Chemistry II Laboratory - Synthesis	1
CHEM 260	Foundations of Inorganic Chemistry	3
CHEM 316	Spectrometric Identification of Organic Compounds	3
CHEM 320	Biophysical Chemistry	3
CHEM 332	Chemical Literature	1
CHEM 432	Chemistry Seminar	1

**Subtotal: 36****Directed Electives**

One course chosen from:

BMS 306	Genetics	3
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BMS 307	Genomics	4
BMS 311	Cell Biology	4
BMS 316	Microbiology	4

**Subtotal: 10-12****and 6-8 additional credits chosen from the 300-level BMS courses listed above or from the following:**

BMS 490	Topics in Biomolecular Sciences	1 to 4
BMS 495	Capstone in Molecular Biology	4
CHEM 456	Toxicology	3

**Research Requirements**

Two credits of research chosen from any of BMS 390, BMS 491, CHEM 238, or CHEM 438 (although a two-semester sequence of BMS 390 and BMS 491, or CHEM 238 and CHEM 438 is strongly encouraged). BMS 391 (Internship in biomolecular sciences, 1-3 credits) may be used as a substitution for part or all of the independent research requirement.

**Subtotal: 2****Capstone Courses**

CHEM 458	Advanced Biochemistry	3
CHEM 455	Biochemistry Laboratory	1

**Subtotal: 7****and one of the following courses:**

BMS 496	Capstone in Cellular Metabolism and Energetics	3
	or	
CHEM 354	Foundations of Biochemistry	3

**Related Requirements**

MATH 152	Calculus I	4
PHYS 121	General Physics I	4
	or	
PHYS 125	University Physics I	4
PHYS 122	General Physics II	4
	or	
PHYS 126	University Physics II	4

**Subtotal: 12**

Students must also maintain a student portfolio (see below). These related requirement courses may also be counted to fulfill appropriate portions of the student's general education program. No minor is required for this major.

**Portfolio Requirement**

The portfolio requirement will be formally introduced to students during the BMS 190 and 290 introductory courses. Minimally, the student portfolio must include a

current resume, a current Student Graduation Evaluation or transcript, a planned program of academic study, a narrative describing the student's goals for undergraduate education and graduate educational or career plans, abstracts of all completed independent study projects, and writing samples from CHEM 432. To fulfill the portfolio requirement, the student portfolio must be reviewed with one or more faculty members:

As a course requirement in BMS 190 and BMS 290;

As a required component of independent student research projects; and

Prior to graduation, as evidenced by submission of a Portfolio Requirement Completed form to the chair of the Department of Biomolecular Sciences or Chemistry.

**500-Level Course Options**

Undergraduate students who use the form, Enrollment in 500 Level Courses by Undergraduates, and who have at least 90 credits and a cumulative GPA of 3.00 or higher may (with the approval of the advisor, instructor, appropriate department chair and dean, School of Graduate Studies, and with appropriate prerequisites) substitute either of the following 500-level BMS courses for BMS courses listed in the directed elective portion of the major program, and the following CHEM course in place of one of the 400-level CHEM courses listed in the directed elective portion of the major program:

BMS 562	Advanced Developmental Biology	3
CHEM 590	Topics in Advanced Chemistry	3

Subtotal: 55-57

**BIOLOGY, B.S.**

A minor is not required with this major.

**REQUIREMENTS**

**Specialization: General Biology:** The specialization in General Biology allows the most flexibility within the Biology BS degree. This pathway is appropriate for those who wish to take a broad approach to their biological education, for students who are interested in multiple areas of biology and would like to keep their post-graduate educational and career options open, and for students who want to customize their degree to have a focus that is not offered in the other specializations. Core requirements are the same for all Biology specializations, but the selection of Biology electives is unrestricted in the General Biology Specialization.

**Biology Core**

BIO 121	General Biology I	4
BIO 122	General Biology II	4
BIO 200	Integrative Biology	3
BIO 290	Biology Research Experience I	3
BIO 390	Biology Research Experience II or	1
BIO 391	Internship in Biology	1 TO 6

**General Biology**

Biology core, plus 12-17 credits of any other 200-level or higher BIO or BMS courses (except for BIO 211). Please note that upper-level BMS courses require BMS 201, which can count as an elective in the general biology major. Other electives may be approved at the discretion of the department chair.

**Related Requirements**

MATH 124	Applied Calculus with Trigonometry or	4
MATH 152	Calculus I or	4
MATH 115	Trigonometry and	3
MATH 125	Applied Calculus	3
PHYS 121	General Physics I and	4
PHYS 122	General Physics II or	4
PHYS 125	University Physics I and	4
PHYS 126	University Physics II	4
CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 210	Organic Chemistry I - Foundations	3
CHEM 211	Organic Chemistry I Laboratory - Foundations	1

**And one of the following:**

CHEM 200	Foundations of Analytical Chemistry	3
CHEM 212	Organic Synthesis	3
CHEM 260	Foundations of Inorganic Chemistry	3
CHEM 354	Foundations of Biochemistry	3

**ECOLOGY, BIODIVERSITY, AND EVOLUTIONARY BIOLOGY SPECIALIZATION**

A minor is not required for this major.

The Ecology, Biodiversity, and Evolutionary Biology specialization emphasizes ecological and evolutionary processes integrated with study of organismal diversity. Students will develop an understanding of the processes that influence relationships among organisms and interactions with their environments through selected courses and individual research projects. This program will prepare students for careers with government agencies (e.g., conservation, fisheries, wildlife management, forestry), nongovernmental organizations, environmental education groups, and the environmental industry. In addition, students will be prepared for graduate studies in fields such as ecology, evolution, animal behavior, natural resources management, or marine and aquatic biology.

**Biology core, plus 12-17 credits as follows:**

**One of the following:**

BIO 305	Ecology	4
BIO 434	Ecology of Inland Waters	4
BIO 440	Evolution	3
BIO 480	Animal Behavior	4

**And one of the following:**

BIO 315	Microbial Ecology	4
BIO 322	Vertebrate Zoology	4
BIO 326	Mushrooms, Mosses, & More	4
BIO 327	Vascular Plants	4
BIO 420	Ornithology	4
BIO 421	Marine Invertebrate Biology	4
BIO 425/BIO 516	Biology of Marine and Freshwater Algae	4
BIO 444	Plant Taxonomy	3
BIO 469	Entomology	4

**And any advanced courses in the E/B/E Group**

**E/B/E Group:**

BIO 230	Natural History	3
BIO 315	Microbial Ecology	4
BIO 322	Vertebrate Zoology	4
BIO 326	Mushrooms, Mosses, & More	4
BIO 327	Vascular Plants	4
BIO 305	Ecology	4
BIO 420	Ornithology	4
BIO 421	Marine Invertebrate Biology	4
BIO 425/BIO 516	Biology of Marine and Freshwater Algae	4
BIO 434	Ecology of Inland Waters	4
BIO 436	Environmental Resources and Management	3
BIO 438/BIO 538	Aquatic Pollution	4
BIO 440	Evolution	3

BIO 444	Plant Taxonomy	3
BIO 469	Entomology	4
BIO 470	Field Studies in Biology	1 TO 4
BIO 471	International Field Studies in Biology	1 TO 4
BIO 480	Animal Behavior	4
BIO 489	Vertebrate Dissection	2
BIO 490	Topics in Biology	3 TO 4
BIO 491	Advanced Studies in Biology	1 TO 3
BIO 499	Undergraduate Thesis in Biology	1

BIO 490, BIO 491, and BIO 499: with a topic focus approved by the E/B/E faculty advisor

#### Related Requirements

MATH 124	Applied Calculus with Trigonometry or	4
MATH 152	Calculus I or	4
MATH 115	Trigonometry and	3
MATH 125	Applied Calculus	3
PHYS 121	General Physics I and	4
PHYS 122	General Physics II or	4
PHYS 125	University Physics I and	4
PHYS 126	University Physics II	4
CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 210	Organic Chemistry I - Foundations	3
CHEM 211	Organic Chemistry I Laboratory - Foundations	1

#### And one of the following:

CHEM 200	Foundations of Analytical Chemistry	3
CHEM 212	Organic Synthesis	3
CHEM 260	Foundations of Inorganic Chemistry	3
CHEM 354	Foundations of Biochemistry	3

#### ENVIRONMENTAL SCIENCE SPECIALIZATION (32 TOTAL CREDITS IN BIOLOGY REQUIRED)

A minor is not required for this major.

The Environmental Science specialization offers students a strong biology core curriculum and added multidisciplinary strengths in environmental science. The

program provides students with a foundation in organismal biology, ecology, environmental chemistry, earth science, and environmental management in order to give an understanding of environmental issues from a multidisciplinary perspective. The program has particular strengths in plant and animal organismal biology and aquatic (freshwater and estuarine) ecology. The specialization prepares students for careers in environmental science and natural resource management with government agencies, nongovernmental organizations, and the environmental industry, or for graduate studies in these areas.

#### Biology core, plus 12-17 credits as follows:

One course in environmental management.

BIO 436	Environmental Resources and Management or	3
BIO 438/BIO 538	Aquatic Pollution	4

#### One of the following:

One course in organismal biology.

BIO 315	Microbial Ecology	4
BIO 322	Vertebrate Zoology	4
BIO 326	Mushrooms, Mosses, & More	4
BIO 327	Vascular Plants	4
BIO 420	Ornithology	4
BIO 421	Marine Invertebrate Biology	4
BIO 425/BIO 516	Biology of Marine and Freshwater Algae	4
BIO 444	Plant Taxonomy	3
BIO 469	Entomology	4
BIO 482	Mammalogy	4

#### One of the following:

One course in physiology.

BIO 318/BMS 318	Anatomy and Physiology I	4
BIO 319/BMS 319	Anatomy and Physiology II	4
BIO 331	Neurobiology	4
BIO 333	Endocrinology	3
BIO 403	Human Reproductive Biology	3
BIO 404	Epigenetics in Development and Disease	4
BIO 412/BMS 412	Human Physiology	3
BIO 412/BMS 412	Human Physiology Laboratory	1

413/BMS 413				Laboratory or		
BIO 449	Plant Physiology	3	ESCI 141	Earth and Life History and	3	
<b>One of the following:</b>			ESCI 145	Earth and Life History Laboratory	1	
One course in ecology.			<b>Human Biology Specialization</b>			
BIO 305	Ecology	4	A minor is not required for this major.			
BIO 407	Stream Ecology	4	The <i>Human Biology</i> specialization is designed for students who want to focus their biological studies on the structure and function of the human body. In addition to basic coursework focused on anatomy and physiology, there are specialized courses that deal with such topics as reproduction, neurobiology, endocrinology, genetics, embryology, nutrition, and metabolism. Several courses within the specialization also address the causes and vectors of disease.			
BIO 434	Ecology of Inland Waters	4				
	BIO electives to complete 32 credits					
<b>Related Requirements</b>			<b>Biology core, plus:</b>			
MATH 124	Applied Calculus with Trigonometry	4	BIO 318/BMS 318	Anatomy and Physiology I	4	
MATH 152	Calculus I	4	BIO 319/BMS 319	Anatomy and Physiology II	4	
MATH 115	Trigonometry and	3	<b>Human Biology group electives (as needed to reach the 32 credit minimum in the major):</b>			
MATH 125	Applied Calculus	3	BIO 331	Neurobiology	4	
PHYS 121	General Physics I and	4	BIO 333	Endocrinology	3	
PHYS 122	General Physics II	4	BIO 401	Human Nutrition and Metabolism	3	
PHYS 125	University Physics I and	4	BIO 403	Human Reproductive Biology	3	
PHYS 126	University Physics II	4	BIO 404	Epigenetics in Development and Disease	4	
CHEM 161	General Chemistry	3	BIO 406/BIO 512	Personalized Medicine	3	
CHEM 162	General Chemistry Laboratory	1	BIO 411/BIO 511	Embryo Biotechnology	3	
CHEM 200	Foundations of Analytical Chemistry	3	BIO 412/BMS 412	Human Physiology	3	
CHEM 201	Foundations of Analytical Chemistry Laboratory	1	BIO 413/BMS 413	Human Physiology Laboratory	1	
CHEM 210	Organic Chemistry I - Foundations	3	BIO 414/BIO 518	Human Disease	3	
CHEM 211	Organic Chemistry I Laboratory - Foundations	1	BIO 463	Parasites and Human Disease	3	
CHEM 212	Organic Synthesis	3	BIO 490	Topics in Biology	3 TO 4	
CHEM 260	Foundations of Inorganic Chemistry	3	BMS 306	Genetics	3	
CHEM 354	Foundations of Biochemistry	3	BMS 316	Microbiology	4	
CHEM 406	Environmental Chemistry	3				
CHEM 456	Toxicology	3				
ESCI 121	The Dynamic Earth and	3				
ESCI 125	The Dynamic Earth Laboratory	1				
ESCI 131	Environmental Earth Science and	3				
ESCI 135	Environmental Earth Science	1				

Note: Microbiology (BMS 316) at CCSU requires BMS 201 as an extra prerequisite.

**Related Requirements (27-30 credits)**

MATH 124	Applied Calculus with Trigonometry or	4
MATH 152	Calculus I or	4
MATH 115	Trigonometry and	3
MATH 125	Applied Calculus	3
PHYS 121	General Physics I and	4
PHYS 122	General Physics II or	4
PHYS 125	University Physics I and	4
PHYS 126	University Physics II	4
CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 200	Foundations of Analytical Chemistry or	3
CHEM 260	Foundations of Inorganic Chemistry	3
CHEM 201	Foundations of Analytical Chemistry Laboratory	1
CHEM 210	Organic Chemistry I - Foundations	3
CHEM 211	Organic Chemistry I Laboratory - Foundations	1
CHEM 212	Organic Synthesis and	3
CHEM 213	Organic Chemistry II Laboratory - Synthesis or	1
CHEM 354	Foundations of Biochemistry	3

Note: Foundations of Analytical Chemistry Laboratory (CHEM 201) can be taken with either CHEM 200 or CHEM 260.

**BIOMOLECULAR SCIENCES, B.S.**

This program offers a curricular focus on molecular and cellular mechanisms that is integrated with organismal physiology and emphasizes hands-on learning through laboratory instruction and independent student research. This degree is appropriate for students wishing to prepare for professional training in medicine and for graduate study or direct entry into careers in such areas as genetics, genomics, microbiology, molecular biology, cell, or developmental biology.

**REQUIREMENTS**

**Biomolecular Sciences Core**

BMS 102	Introduction to Biomolecular Science	3
BMS 103	Introduction to Biomolecular Science Laboratory	1
BMS 190	Friday Seminar in Biomolecular Sciences I	.5
BMS 201	Principles of Cell and Molecular Biology	4
BMS 290	Friday Seminar in Biomolecular Sciences II	.5
BMS 306	Genetics or	3
BMS 307	Genomics	4
BMS 311	Cell Biology	4
BMS 316	Microbiology	4
BMS 390	Independent Research in Biomolecular Science	1
BMS 491	Advanced Independent Research in Biomolecular Science	1-3

BIO 121 may be substituted for BMS 102/BMS 103.

**REQUIREMENTS**

**Electives**

In addition to the Biomolecular Sciences Core requirements, students must take elective credits to equal 35 credits in the major.

Elective courses may include: any 300-level or above BMS course, CHEM 320, CHEM 354, CHEM 455, CHEM 456, CHEM 458, BIO 449.

BMS 380: 3 credits only of this 6-credit course

**REQUIREMENTS**

In addition to the 35 credits in the major, the student must take:

**Related Requirements**

MATH 115	Trigonometry or	3
MATH 119	Pre-Calculus with Trigonometry	4
MATH 125	Applied Calculus or	3
MATH 152	Calculus I	4
CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 200	Foundations of Analytical Chemistry	3
CHEM 201	Foundations of Analytical Chemistry Laboratory	1

CHEM 210	Organic Chemistry I - Foundations	3
CHEM 211	Organic Chemistry I Laboratory - Foundations	1
CHEM 212	Organic Synthesis	3
CHEM 213	Organic Chemistry II Laboratory - Synthesis	1
PHYS 121	General Physics I and	4
PHYS 122	General Physics II or	4
PHYS 125	University Physics I and	4
PHYS 126	University Physics II	4

Students must also maintain a student portfolio.

**Cross-listed Courses**

BMS 318, BMS 319, BMS 412, and BMS 413 are also listed in the course description section of the catalog with a BIO designator. These double- or cross-listed courses (i.e., BMS 318 and BIO 318) are considered fully equivalent.

**500-Level Course Options**

Undergraduate students who are not enrolled in the accelerated program and who wish to take 500 level courses should use the form titled "Enrollment in 500 Level Courses by Undergraduates". These students must have at least 90 credits and a cumulative GPA of 3.00 or higher. They may (with the approval of the appropriate department chair and dean, School of Graduate Studies, and with appropriate prerequisites) choose any of the following 500-level courses in the directed elective portion of the advanced component of their major program:

**Total Credit Hours: 35**

**BUSINESS, B.S.**

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**Pending May 2024 Board of Regents approval.**

A minor is not required with this major.

School of Business Admission Requirements

**COMMON BUSINESS CORE (27 CREDITS)**

**Common Business**

AC 211	Introduction to Financial Accounting	3
AC 212	Introduction to Managerial Accounting	3
FIN 295	Managerial Finance	3
LAW 250	The Legal and Ethical Environment of Business	3
MC 207	Managerial Communication I	3

MGT 295	Fundamentals of Management and Organizational Behavior	3
MIS 201	Introduction to Management Information Systems	3
MKT 295	Fundamentals of Marketing	3
MGT 480	Strategic Management	3
BUS 480	Capstone Seminar	0

Students must complete

The 27-credit common business core requirements

**BUSINESS ADMINISTRATION CORE (15 CREDITS) - ONE COURSE FROM EACH OF THE MAJOR'S CORE COURSES (AC, FIN, MGT, MIS, AND MKT)**

**Accounting Discipline: Select one course (3 credits) from the following:**

AC 300	Intermediate Accounting I	3
AC 301	Cost Management Systems	3
AC 302	Introduction to Income Taxation	3
AC 335	Accounting Analytics and Professional Competencies	3

**Finance Discipline: Select one course (3 credits) from the following:**

FIN 301	Intermediate Managerial Finance	3
FIN 310	Principles of Investments	3
FIN 320	Financial Markets and Institutions	3
FIN 330	International Finance	3

**Management Discipline: Select one course (3 credits) from the following:**

MGT 326	Business Organizational Behavior	3
MGT 333	Operations Management	3
MGT 345	Organizational Analysis & Change Management	3
MGT 348	Management Systems	3

**Management Information Systems Discipline: Select one course (3 credits) from the following:**

MIS 300	IT Project Management I	3
MIS 310	Contemporary Business Applications Development I	3
MIS 315	Database Management Systems	3

**Marketing Discipline: Select one course (3 credits) from the following:**

MKT 305	Consumer Behavior	3
MKT 373	Marketing Research	3
MKT 380	Market Data Analysis	3

Students must complete

The 15 -credit Business Administration Core - One course from each of the major's core courses (AC,FIN, MKT,MIS, and MKT)

**BUSINESS ADMINISTRATION ELECTIVES (15 CREDITS)**

**At most 3 courses from one of the disciplines in the School of Business.**

Students must complete

The 15 -credit Business Administration Electives - At most 3 courses from one of the following disciplines

1. AC
2. FIN
3. MGT
4. MIS
5. MKT
6. ENT
7. Or any other related discipline approved by the Business Studies Program Director

**Additional Requirements**

BUS 250	Introduction to Business Analytics and Skills	3
STAT 201	Business Statistics II	3

**Accelerate Central B.S. Business / M.B.A. Program**

## Eligibility

Students typically apply during their junior year of study and must meet the requirements specified below:

1. Have at least a 3.3 cumulative grade point average.
2. Completed 60 earned credit hours by the end of the Fall semester of their junior year. At least 30 credits must have been earned at CCSU.
3. Admission to School of Business Business major.
4. Meet the M.B.A. program admission criteria.

Eligible students can apply to the **Accelerate Central B.S. Business / M.B.A. Program** during their junior year of study. Selected students will be able to complete a B.S. in Business and a M.B.A. in Business in as few as five years on a full-time basis.

For students who are officially admitted to the **Accelerate Central B.S. Business / M.B.A. Program**, two three (3)-credit graduate Business courses will replace two three (3)-credit undergraduate Business elective courses. In addition, up to two three (3)-credit graduate courses may be taken before matriculation as a graduate student; these 2 courses will be excluded from the student's B.S. program and transferred into the student's M.B.A. program.

Students who are accepted into **Accelerate Central B.S. Business / M.B.A. Program** will officially matriculate into the School of Graduate Studies the semester immediately following the conferral of their Bachelor's degree, even if they have already taken graduate-level courses while completing their Bachelor's degree. Students wishing to defer their graduate studies must notify Graduate Recruitment & Admissions of this decision prior to the start of the term following the conferral of their Bachelor's degree.

**How to Apply**

Students will submit Change of Major form and one recommendation letter from a CCSU Business professor to their undergraduate advisor by March 1st of their junior year. The documents will go through the proper parties for review and approval, including the Graduate Program Director. Once the form has been approved by all required parties, the Registrar's Office will change the student's undergraduate curriculum to note the Accelerate Central program.

It is highly recommended to apply early for admission to this program to receive dedicated advising.

**Total Credit Hours: 120**

**BACHELOR OF SCIENCE IN BUSINESS ANALYTICS****Pending May 2024 Board of Regents approval.**

B.S. in Business Analytics Program is designed to fulfill the educational needs of students who want to pursue a career in business analytics. The program offers the same high-quality business education as the other specialized business degrees (Accounting, Business, Finance, Management of Information Systems, Management, and Marketing) while providing students with a broader education in business and preparing them for business analytics-related positions in organizations.

The B.S. in Business Analytics degree program includes:

- Common Business Core (27 credits)
- Business Analytics Core (12 credits)
- Business Analytics Electives (12 credits)
- Business Electives (6 credits)
- School of Business Additional Requirements (6 credits)

This is an interdisciplinary program. In addition to the standard business analytics elective courses, six elective courses are from Data Science (DATA 101, 102, 202, 301, 311, 471). The courses that make up the program are



offered in multiple formats, including on-ground, hybrid, and online, to provide scheduling flexibility.

A minor is not required.

**MAJOR REQUIREMENTS (57 CREDITS)**

**Common Business Core (27 credits)**

AC 211	Introduction to Financial Accounting	3
AC 212	Introduction to Managerial Accounting	3
FIN 295	Managerial Finance	3
LAW 250	The Legal and Ethical Environment of Business	3
MC 207	Managerial Communication I	3
MGT 295	Fundamentals of Management and Organizational Behavior	3
MIS 201	Introduction to Management Information Systems	3
MKT 295	Fundamentals of Marketing	3
BUS 480	Capstone Seminar	0
MGT 480	Strategic Management	3

**Business Analytics Core(12 credits)**

BUS 270	Data Visualization	3
BUS 370/MIS 399	Business Analytics and Decision Support	3
BUS 470	Business Analytics Capstone	3
MIS 315	Database Management Systems	3

**Business Analytics Electives (12 credits)**

DATA 101	Fundamentals of Data Science	4
DATA 201	Classification Analytics	4
DATA 202	Estimation and Clustering Analytics	4
DATA 301	Data Science Using Python	4
DATA 311	Information Visualization	4
DATA 471	Big Data and Cloud Computing	3
AC 335	Accounting Analytics and Professional Competencies	3
AC 340	Accounting Information Systems	3
FIN 310	Principles of Investments	3
FIN 440	Financial Modeling and Analytics	3
MGT 333	Operations Management	3
MKT 373	Marketing Research	3
MKT 380	Market Data Analysis	3
MKT 482	Marketing Analytics	3
MIS 310	Contemporary Business Applications Development I	3
MIS 463	Analytics Applications	3

**Business Electives (6 credits) -- Students must select 6 credits of 300- or 400-level School of Business courses from: AC, ENT, FIN, LAW, MGT, MIS, and MKT**

These credits can be used to complete prerequisites required by Business Analytics Electives

**Additional Requirements**

BUS 250	Introduction to Business Analytics and Skills	3
STAT 201	Business Statistics II	3

**Accelerate Central B.S. Business Analytics / M.B.A. Program**

For students who are officially admitted to the **Accelerate Central B.S. Business Analytics / M.B.A. Program**, two three (3)-credit graduate Business Analytics courses will replace two three (3)-credit undergraduate Business Analytics elective courses. In addition, up to two three (3)-credit graduate courses may be taken before matriculation as a graduate student; these 2 courses will be excluded from the student’s B.S. program and transferred into the student’s M.B.A. program.

Eligible students can apply to the **Accelerate Central B.S. Business Analytics / M.B.A. Program** during their junior year of study. Selected students will be able to complete a B.S. in Business Analytics and a M.B.A. in Business Analytics in as few as five years on a full-time basis.

Students who are accepted into **Accelerate Central B.S. Business Analytics / M.B.A. Program** will officially matriculate into the School of Graduate Studies the semester immediately following conferral of their Bachelor's degree, even if they have already taken graduate-level courses while completing their Bachelor's degree. Students wishing to defer their graduate studies must notify Graduate Recruitment Admissions of this decision prior to the start of the term following the conferral of their Bachelor's degree.

**Eligibility**

Students typically apply during their junior year of study and must meet the requirements specified below:

1. Have at least a 3.3 cumulative grade point average.
2. Completed 60 earned credit hours by the end of the Fall semester of their junior year. At least 30 credits must have been earned at CCSU.
3. Admission to School of Business Business Analytics major.
4. Meet the M.B.A. program admission criteria.

**How to Apply**

Students will submit Change of Major form and one recommendation letter from a CCSU Business Analytics professor to their undergraduate advisor by March 1st of their junior year. The documents will go through the proper parties for review and approval, including the Graduate Program Director. Once the form has been approved by all required parties, the Registrar's Office will change the student's undergraduate curriculum to note the Accelerate Central program.

It is highly recommended to apply early for admission to this program to receive dedicated advising.

**Total Credit Hours: 120**

## CHEMISTRY, B.S.

A minor is not required with this major.

### REQUIREMENTS

#### Chemistry Core

CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 200	Foundations of Analytical Chemistry	3
CHEM 201	Foundations of Analytical Chemistry Laboratory	1
CHEM 210	Organic Chemistry I - Foundations	3
CHEM 211	Organic Chemistry I Laboratory - Foundations	1
CHEM 212	Organic Synthesis	3
CHEM 213	Organic Chemistry II Laboratory - Synthesis	1
CHEM 238	Introduction to Research	1-6
CHEM 260	Foundations of Inorganic Chemistry	3
CHEM 316	Spectrometric Identification of Organic Compounds	3
CHEM 332	Chemical Literature	1
CHEM 432	Chemistry Seminar	1
CHEM 438	Undergraduate Research	1-6

**Subtotal: 26**

### BS IN CHEMISTRY

A minor is not required for this major.

**Chemistry core plus 10 credits selected from the following.**

#### Choose 3 credits from:

CHEM 354	Foundations of Biochemistry	3
CHEM 406	Environmental Chemistry	3
CHEM 456	Toxicology	3
CHEM 485	Topics in Chemistry	3

**Subtotal: 3**

#### Choose 3 credits from:

CHEM 320	Biophysical Chemistry	3
CHEM 321	Physical Chemistry of Thermodynamics & Kinetics	3
CHEM 322	Physical Chemistry of Quantum & Statistical Mechanics	3

**Subtotal: 3**

#### Choose 4 credits from:

CHEM 402	Instrumental Methods in Analytical Chemistry	4
	or	

#### Choose 3 credits from:

CHEM 460	Inorganic Symmetry & Spectroscopy with	3
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#### 1 additional credit from:

CHEM 323	Physical Chemistry Laboratory	1
	or	
CHEM 455	Biochemistry Laboratory	1
	or	
CHEM 462	Inorganic Chemistry Laboratory	1

#### Related Requirements

PHYS 121	General Physics I	4
	or	
PHYS 125	University Physics I	4
PHYS 122	General Physics II	4
	or	
PHYS 126	University Physics II	4
MATH 152	Calculus I	4

**Subtotal: 16**

### BS IN CHEMISTRY (AMERICAN CHEMICAL SOCIETY CERTIFIED)

**This program is designed for students wishing to go on to graduate-level studies in chemistry.**

#### Chemistry Core plus 19 credits as follows:

CHEM 321	Physical Chemistry of Thermodynamics & Kinetics	3
CHEM 322	Physical Chemistry of Quantum & Statistical Mechanics	3
CHEM 323	Physical Chemistry Laboratory	1
CHEM 354	Foundations of Biochemistry	3
CHEM 402	Instrumental Methods in Analytical Chemistry	4
CHEM 455	Biochemistry Laboratory	1
CHEM 460	Inorganic Symmetry & Spectroscopy	3

CHEM 462 Inorganic Chemistry Laboratory 1

**Related Requirements**

PHYS 125 University Physics I 4  
 PHYS 126 University Physics II 4  
 MATH 152 Calculus I 4  
 MATH 221 Calculus II 4

**Subtotal: 16**

**The student must also complete one additional course from the following approved list:**

MATH 218 Discrete Mathematics 4  
 MATH 222 Calculus III 4  
 MATH 226 Linear Algebra and Probability for Engineers 4  
 MATH 228 Introduction to Linear Algebra 4  
 CS 151 Computer Science I 3

**Subtotal: 3-4**

**CIVIL ENGINEERING, B.S.**

**Civil Engineering Program Educational Objectives**

Guided by the Mission of the University, the Civil Engineering program is committed to preparing students who will be thoughtful, responsible, and successful citizens. Within three to five years of graduation, the program expects that Civil Engineering graduates will have:

1. Become competent and engaged engineering professionals, applying their technical and managerial skills in the planning, design, construction, operation or maintenance of the build environment and global infrastructure, and utilizing their skills to analyze and design systems, specify project methods and materials, perform cost estimates and analyses, and manage technical activities in support of civil engineering projects.
2. Initiated an active program of life-long learning, including studies leading to professional licensure or an advanced degree in engineering, that provides for continued development of their technical abilities and management skills, and attainment of professional expertise.
3. Developed their communication skills in oral, written, visual and graphic modes when working as team members or leaders, so they can actively participate in their communities and their profession.
4. Established an understanding of professionalism, ethics, quality performance, public policy, safety, and sustainability that allows them to be professional leaders and contributors to society when solving

engineering problems and producing civil engineering solutions.

In addition to CCSU admissions standards, admission to the undergraduate Civil Engineering (CE) and Mechanical Engineering (ME) programs requires completion of, or eligibility to enroll in, MATH 152 (Calculus I).

The Bachelor of Science in Civil Engineering is a program of study requiring 127-136 credits of undergraduate work, including a two-term senior project capstone requirement completed with oral and written reports. Registration to take the NCEES FE exam is required for completion of the senior project capstone course.

Required coursework can also be grouped into three categories: General Education, Major Requirements, and Additional Requirements.

**For all majors a minimum grade of C- is required in all courses in the major, all additional course requirements as well as courses in Study Area IV, Skill Area I, and Skill Area II**

**GENERAL EDUCATION REQUIREMENTS (42-49 CREDITS)**

**Study Area I: Arts and Humanities**

Literature (3) 3  
 Philosophy or Fine Arts (3) 3  
 Literature, Philosophy or Fine Arts (3) 3

**Study Area II: Social Sciences**

History (3) 3  
 Economics 3  
 or  
 ET 399 Engineering Economy 3

**Study Area III: Behavioral Sciences**

Anthropology, Psychology, or Sociology 3

**Study Area IV: Natural Sciences**

PHYS 125 University Physics I 4  
 PHYS 126 University Physics II 4

**Skill Area I: Communication Skills**

WRT 110 Introduction to College Writing 3  
 ENGR 290 Engineering Technical Writing and Presentation 3

WRT 110: A placement exam may be required before enrolling in English or Mathematics courses.

**Skill Area II: Mathematics**

MATH 152 Calculus I 4

MATH 221 Calculus II 4

MATH 152: A placement exam may be required before enrolling in English or Mathematics courses.

**Skill Area III: Foreign Language Proficiency**

**Skill Area IV: University Requirement**

PE 144 College Wellness 2

or for transfer students

ENGR 150 Introduction to Engineering 3

**International Requirement**

**Major Requirements (64 credits, 61 for transfer students taking ENGR 150 as Skill Area IV)**

ENGR 150 Introduction to Engineering 3

ENGR 240 Computational Methods for Engineering 3

ENGR 251 Engineering Mechanics I - Statics 3

ENGR 252 Engineering Mechanics II - Dynamics 3

ENGR 357 Mechanics of Materials 3

CE 222 CAD Applications in Civil Engineering 2

CE 253 Introduction to Engineering Surveying 3

CE 354/ME 354 Fluid Mechanics 3

CE 356 Civil Engineering Materials 3

CE 360 Traffic Engineering 3

CE 375 Hydraulic Engineering 3

CE 376 Environmental Engineering 3

CE 407 Structural Analysis II 3

CE 451 Soil Mechanics 3

CE 452 Foundation Engineering 3

CE 460 Highway Design and Construction 3

CE 397 Structural Analysis I 3

CE 470 Structural Steel Design 3

CE 471 Reinforced Concrete Design 3

CE 475 Hydrology & Storm Drainage 3

CE 497 CE Professional Practice and Senior Project Research 2

CE 498 Civil Engineering Senior Design Project (Capstone) 3

CE 498: Completion of CE 498 requires that students take the NCEES Fundamentals of Engineering (FE) Exam.

**Additional Requirements**

22 credits

CHEM 161 General Chemistry 3

CHEM 162 General Chemistry Laboratory 1

MATH 226 Linear Algebra and Probability for Engineers 4

MATH 355 Introduction to Differential 4

Equations with Applications

CE Directed Technical Electives - 6 credits

**Four credits from the following:**

BIO or BMS or GSCI Additional Science Elective w/ Lab.

BIO 121 General Biology I 4

or

BMS 102 Introduction to Biomolecular Science and

BMS 103 Introduction to Biomolecular Science Laboratory 1

or

ESCI 121 The Dynamic Earth and

ESCI 125 The Dynamic Earth Laboratory 1

**Additional Requirements CE Directed Technical Electives (6 credits) include:**

CE 357 Advanced Surveying 3

CE 402 Inquiry and Research in Civil Engineering 1

CE 458 Introduction to GPS for Engineering 3

CE 472 Timber Structures 3

CE 473 Reinforced Concrete Design II 3

CE 474 Prestressed Concrete Design 3

CE 477 Environmental Engineering Treatment Processes 3

CE 490 NCEES Fundamental Civil Engineering Subjects 2

CE 491 NCEES Advanced Civil Engineering Subjects 1

CE 495 Topics in Civil Engineering 3

**Total Credit Hours: 0**

**COMPUTER ENGINEERING TECHNOLOGY, B.S.**

A minor is not required with this major.

The Bachelor of Science (BS) Computer Engineering Technology (CET) program offers students in-depth knowledge and skills with computer related systems and devices based on the foundation of physics and applied mathematics. This bachelor's degree focuses on providing students with hardware and software skills for design, implementation, integration, and support of systems involving microprocessors, computers, and networks. CET graduates are prepared for positions in computer programming, system software projects, digital logic design, computer interfacing, digital systems design and trouble-shooting, circuit design and trouble-shooting, or

as computer and network administrators. The BS in Computer Engineering Technology is accredited by ETAC/ABET.

**REQUIREMENTS**

**Major Requirements**

CET 201	Photonics Principles	3
CET 229	Computer Hardware Architecture	3
CET 236	Circuit Analysis	3
CET 243	Analog Electronics I	3
CET 249	Introduction to Networking Technology	3
CET 323	Analog Electronics II	3
CET 339	Computer System Administration	3
CET 346	Electrical System Analysis	3
CET 349	Network Design and Implementation	3
CET 363	Digital Circuits	3
CET 449	Advanced Networking	3
CET 453	Microcomputers	3
CET 466	Logic Design	3
CET 497	Capstone Project I	2
CET 498	Capstone Project II	2

**Related Major Requirements**

CET 113	Introduction to Information Processing	3
CET 246	Electronic Design Automation	3
CEGT 200	Seminar	1
CHEM 161	General Chemistry	3
CS 121	C Programming Practicum for Engineers	3
CS 122	C++ Programming Practicum for Engineers	3
ENGR 150	Introduction to Engineering	3
STAT 104	Elementary Statistics	3

**Directed Electives**

Suggested directed electives. Other courses may be selected in consultation with an advisor.

CET 239	Introduction to Internet of Things and Embedded Systems	3
CET 301	Fiber-Optics Communications	3
CET 402	Topics in Computer Electronics Technology	1-3
CET 405	Applied Topics in Computer Electronics Technology	3
CET 407/CYS 407	IT Topics in Cybersecurity	3
CET 439	Enterprise Messaging Systems	3
CET 443	Electronic Communications	3
CET 459/CYS 459	Network Security Technologies	3

CET 463	Advanced Microcomputers	3
CET 479	Network Administration	3
CEGT 400	Internship and Senior Seminar	3
ET 251	Applied Mechanics I - Statics	3
ET 357	Strength of Materials	3
ETM 356	Materials Analysis	3
TM 362	Leading Project Teams	3
TM 464	Six Sigma Quality	3
TM 490	Advanced Six Sigma Quality	3

Note: MATH 152 and MATH 221 required for CS 153

**General Education Requirements**

Computer Engineering Technology majors are required to complete the following courses as part of their general education for all baccalaureate degree programs:

ENG 110	Introduction to College Writing	3
ENGR 290	Engineering Technical Writing and Presentation	3
MATH 135	Applied Engineering Calculus I and	3
MATH 136	Applied Engineering Calculus II or	3
MATH 152	Calculus I and	4
MATH 221	Calculus II	4
PE 144	College Wellness	2
PHYS 121	General Physics I and	4
PHYS 122	General Physics II or	4
PHYS 125	University Physics I and	4
PHYS 126	University Physics II	4

**Total Credit Hours: 120**

**COMPUTER SCIENCE, B.S. (ALTERNATIVE)**

A minor is required for this major.

**REQUIREMENTS**

This alternative major may be completed in as few as four semesters.

**30 credits of computer science courses, including:**

CS 151	Computer Science I	3
CS 152	Computer Science II	3
CS 253	Data Structures and Introduction to Algorithms	3
CS 254	Computer Organization and Assembly Language Programming	3
CS 355	Systems Programming	3

and  
15 credits of computer science  
courses numbered CS 225 or  
higher.

15 credits of computer science courses numbered CS 225  
or higher, with at least 12 of those credits at the 300 level  
of higher

#### 8 credits in mathematics:

MATH 152 and either MATH 217 or MATH 218		
MATH 152	Calculus I	4
MATH 217	Discrete Mathematics for Computer Science	4
MATH 218	Discrete Mathematics	4

#### CONCENTRATION OPTIONS

There are three optional concentrations. Courses taken  
for a concentration also count as CS electives.

##### 1. Concentration in Cybersecurity (12 credits)

CS 492 is required, and the remaining 9 credits must be  
selected from the following courses.

CS 291/CYS	Introduction to Computer 291 Forensics	3
CS 409/CYS	Advanced CS Topics in 409 Cybersecurity	3
CS 419/CYS	Usable Security and Privacy 419	3
CS 455/CYS	Principles of Secure Software 455 Development	3
CS 493/CYS	Secure Software Designs 493	3
CS 494/CYS	Cryptographic Systems 494	3

#### Required

CS 492/CYS	Computer Security 492	3
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##### 2. Concentration in Software Engineering (12 credits)

CS 410 and CS 417 are required, and the remaining 6  
credits must be selected from the following courses.

CS 414	Mobile App Development	3
CS 415	Computer Game Development	3
CS 416	Web Programming	3
CS 418/CS	Principles of Software Testing and 506 Quality Assurance	3
CS 455/CYS	Principles of Secure Software 455 Development	3
CS 498	Senior Project	3

#### Required:

CS 410/CS	Software Engineering	3
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510		
CS 417	Design Patterns	3

##### 3. Concentration in Artificial Intelligence (12 credits)

CS 462 is required, and the remaining 9 credits must be  
selected from the following courses.

CS 445	Machine Learning	3
CS 446/CYS	Introduction to Machine learning 446 for Cybersecurity	3
CS 474	Semantic Web	3
CS 475	Linked Data Engineering	3

#### Required:

CS 462	Artificial Intelligence	3
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##### 1. Accelerate Central Program in Computer Science to Software Engineering MS

**Pending May 2024 Board of Regents approval.**

#### Eligibility

Students apply in the Spring of their third year of full-time  
study and must meet the requirements specified below:

1. Successful completion of 60 or more credit hours; of  
which, at least 12 credit hours must be completed at  
CCSU.
2. Completed CS 253 and two 400 level CS classes with at  
least a B.
3. Have at least a 2.7 cumulative grade point average.
4. Have at least a 2.7 grade point average in Computer  
Science courses.
- 5.

Eligible students can apply for admission to the Accelerate  
Central B.S./M.S. in their third year of full-time study.

Students admitted to this program may complete both the  
B.S. and M.S. in Software Engineering in as few as five  
years on a full-time basis. For students who are officially  
admitted to the **Accelerate Central B.S. / M.S. Software  
Engineering Program**, two graduate courses will double-  
count as courses in the undergraduate program for a total  
of 6 credits double-counted. In addition, students may  
take two additional courses before matriculation as a  
graduate student; these courses will be excluded from the  
student's B.S. program and transferred into the student's  
M.S. program.

#### How to Apply

Students will submit Change of Major form, a resume, and  
the name of two professors from the Computer Science  
department who could serve as a references to the Chair  
of the Computer Science Department by February 10 (for

Fall) or October 1 (for Spring). The documents will go through the proper parties for review and approval, including the Graduate Program Director. Once the form has been approved by all required parties, the Registrar's Office will change the student's undergraduate curriculum to note the Accelerate Central program.

After acceptance, students must maintain a 3.0 cumulative grade point average.

**2. Accelerate Central Program in Computer Science to Computer Information Technology MS**

**Pending May 2024 Board of Regents approval.**

**Eligibility**

Students apply in the Spring of their third year of full-time study and must meet the requirements specified below:

1. Successful completion of 60 or more credit hours; of which, at least 12 credit hours must be completed at CCSU.
2. Completed CS 253 and two 400 level CS classes with at least a B.
3. Have at least a 2.7 cumulative grade point average.
4. Have at least a 2.7 grade point average in Computer Science courses.

Eligible students can apply for admission to the Accelerate Central B.S./M.S. in their third year of full-time study. Students admitted to this program may complete both the B.S. and M.S. in Computer Information Technology in as few as five years on a full-time basis. For students who are officially admitted to the **Accelerate Central B.S. / M.S. Computer Information Technology Program**, two graduate courses will double-count as courses in the undergraduate program for a total of 6 credits double-counted. In addition, students may take two additional courses before matriculation as a graduate student; these courses will be excluded from the student's B.S. program and transferred into the student's M.S. program.

**How to Apply**

Students will submit Change of Major form, a resume, and the name of two professors from the Computer Science department who could serve as a references to the Chair of the Computer Science Department by February 10 (for Fall) or October 1 (for Spring). The documents will go through the proper parties for review and approval, including the Graduate Program Director. Once the form has been approved by all required parties, the Registrar's Office will change the student's undergraduate curriculum to note the Accelerate Central program.

After acceptance, students must maintain a 3.0 cumulative grade point average.

**Total Credit Hours: 38**

**COMPUTER SCIENCE, B.S. (HONORS)**

A minor is not required with this major.

**REQUIREMENTS**

**Core Courses**

CS 151	Computer Science I	3
CS 152	Computer Science II	3
CS 253	Data Structures and Introduction to Algorithms	3
CS 254	Computer Organization and Assembly Language Programming	3
CS 354	Digital Systems Design	3
CS 355	Systems Programming	3
CS 385	Computer Architecture	3
CS 463	Algorithms	3
CS 464	Programming Languages	3
CS 483	Theory of Computation	3
CS 492/CYS 492	Computer Security	3

**Electives (12 credits):**

12 credits of computer science courses numbered CS 225 or higher, with at least 9 of those credits at the 400 level or higher outside of the core or capstone.

**Capstone Requirement**

CS 410/CS 510	Software Engineering	3
CS 498	Senior Project	3

**Related Requirement**

**MATH**

MATH 152, (MATH 217 or MATH 218), MATH 221, and MATH 226		
MATH 152	Calculus I	4
MATH 217	Discrete Mathematics for Computer Science	4
MATH 221	Calculus II	4
MATH 226	Linear Algebra and Probability for Engineers	4

**Science- A choice of one of the following sequences**

BIO 121	General Biology I	4
BIO 122	General Biology II	4
	or	
CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 200	Foundations of Analytical	3

CHEM 201	Chemistry Foundations of Analytical Chemistry Laboratory or	1
GSCI 121	The Dynamic Earth	3
GSCI 125	The Dynamic Earth Laboratory	1
GSCI 141	Earth and Life History	3
GSCI 145	Earth and Life History Laboratory or	1
PHYS 125	University Physics I	4
PHYS 126	University Physics II	4

### CONCENTRATION OPTIONS

There are three optional concentrations. Courses taken for a concentration also count as CS electives.

#### 1. Concentration in Cybersecurity (9 credits)

9 credits must be selected from the following courses.

CS 291/CYS 291	Introduction to Computer Forensics	3
CS 409/CYS 409	Advanced CS Topics in Cybersecurity	3
CS 419/CYS 419	Usable Security and Privacy	3
CS 455/CYS 455	Principles of Secure Software Development	3
CS 493/CYS 493	Secure Software Designs	3
CS 494/CYS 494	Cryptographic Systems	3

#### 2. Concentration in Software Engineering (9 credits)

CS 417 is required, and 6 credits must be selected from the following courses.

CS 414	Mobile App Development	3
CS 415	Computer Game Development	3
CS 416	Web Programming	3
CS 418/CS 506	Principles of Software Testing and Quality Assurance	3

#### Required:

CS 417	Design Patterns	3
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#### 3. Concentration in Artificial Intelligence (12 credits)

CS 462 is required, and 9 credits must be selected from the following courses.

CS 445	Machine Learning	3
CS 446/CYS 446	Introduction to Machine learning for Cybersecurity	3
CS 474	Semantic Web	3
CS 475	Linked Data Engineering	3

#### Required:

CS 462	Artificial Intelligence	3
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### 1. Accelerate Central Program in Computer Science to Software Engineering MS

Pending May 2024 Board of Regents approval.

#### Eligibility

Students apply in the Spring of their third year of full-time study and must meet the requirements specified below:

1. Successful completion of 60 or more credit hours; of which, at least 12 credit hours must be completed at CCSU.
2. Completed CS 253 and two 400 level CS classes with at least a B.
3. Have at least a 2.7 cumulative grade point average.
4. Have at least a 2.7 grade point average in Computer Science courses.
- 5.

Eligible students can apply for admission to the Accelerate Central B.S./M.S. in their third year of full-time study. Students admitted to this program may complete both the B.S. and M.S. in Software Engineering in as few as five years on a full-time basis. For students who are officially admitted to the **Accelerate Central B.S. / M.S. Software Engineering Program**, two graduate courses will double-count as courses in the undergraduate program for a total of 6 credits double-counted. In addition, students may take two additional courses before matriculation as a graduate student; these courses will be excluded from the student's B.S. program and transferred into the student's M.S. program.

#### How to Apply

Students will submit Change of Major form, a resume, and the name of two professors from the Computer Science department who could serve as a references to the Chair of the Computer Science Department by February 10 (for Fall) or October 1 (for Spring). The documents will go through the proper parties for review and approval, including the Graduate Program Director. Once the form has been approved by all required parties, the Registrar's Office will change the student's undergraduate curriculum to note the Accelerate Central program.

After acceptance, students must maintain a 3.0 cumulative grade point average.

### 2. Accelerate Central Program in Computer Science to Computer Information Technology MS

Pending May 2024 Board of Regents approval.

#### Eligibility



Students apply in the Spring of their third year of full-time study and must meet the requirements specified below:

1. Successful completion of 60 or more credit hours; of which, at least 12 credit hours must be completed at CCSU.
2. Completed CS 253 and two 400 level CS classes with at least a B.
3. Have at least a 2.7 cumulative grade point average.
4. Have at least a 2.7 grade point average in Computer Science courses.

Eligible students can apply for admission to the Accelerate Central B.S./M.S. in their third year of full-time study. Students admitted to this program may complete both the B.S. and M.S. in Computer Information Technology in as few as five years on a full-time basis. For students who are officially admitted to the **Accelerate Central B.S. / M.S. Computer Information Technology Program**, two graduate courses will double-count as courses in the undergraduate program for a total of 6 credits double-counted. In addition, students may take two additional courses before matriculation as a graduate student; these courses will be excluded from the student's B.S. program and transferred into the student's M.S. program.

**How to Apply**

Students will submit Change of Major form, a resume, and the name of two professors from the Computer Science department who could serve as a references to the Chair of the Computer Science Department by February 10 (for Fall) or October 1 (for Spring). The documents will go through the proper parties for review and approval, including the Graduate Program Director. Once the form has been approved by all required parties, the Registrar's Office will change the student's undergraduate curriculum to note the Accelerate Central program.

After acceptance, students must maintain a 3.0 cumulative grade point average.

**Total Credit Hours: 110**

Students in this honors program are required to take a proficiency test specified by the department during their senior year.

**CONSTRUCTION MANAGEMENT, B.S.**

A minor is not required with is major.

Accredited by ACCE

This sequence of courses is designed to supply the student with knowledge and experiences that will enable him/her to operate effectively in a supervisory position in the construction industries. The emphasis is not on specialized skills, but rather on a broad spectrum of subjects pertinent to the field of construction management. Total number of credits required is 120.

**MAJOR REQUIREMENTS (59 CREDITS)**

**Program Requirements**

CM 145	CAD and BIM Tools for Construction	4
CM 155	Construction Documents	3
CM 165	Building Construction Systems	3
CM 245	Heavy/Highway Construction Systems	3
CM 265	Print Reading/Quantity Take-Off	3
CM 275	Introduction of MEP Systems	3
CM 325	Building Construction Estimating	3
CM 335	Construction Safety	3
CM 345	Heavy/Highway Construction Estimating	3
CM 353	Introduction to Surveying	4
CM 355	Construction Planning	3
CM 356	Materials of Construction	4
CM 425	Applied Structural Systems	3
CM 435	Construction Superintendency	3
CM 455	Construction Project Management	3
CM 475	Construction Business Principles	3
CM 465	Construction Internship	3
CM 485	Construction Management Senior Lab	2
ET 241	Applied Statics and Strength of Materials	3
CM 485	Construction Management Senior Lab	2

**Related Business Requirements (15 credits)**

AC 211	Introduction to Financial Accounting	3
LAW 250	The Legal and Ethical Environment of Business	3
MGT 295	Fundamentals of Management and Organizational Behavior	3
MKT 295	Fundamentals of Marketing	3
MATH 125	Applied Calculus	3

**Free Electives (3 Credits)**

**GENERAL EDUCATION REQUIREMENTS**

**Study Area I: Arts and Humanities**

6 credits of arts and humanities and

	Literature (3)	3
<b>Study Area II: Social Sciences</b>		
	History (3)	3
ECON 200	Principles of Macroeconomics	3
ECON 201	Principles of Microeconomics	3
<b>Study Area III: Behavioral Sciences</b>		
<b>Study Area IV: Natural Sciences</b>		
CHEM 161	General Chemistry and	3
CHEM 162	General Chemistry Laboratory or	1
ESCI 121	The Dynamic Earth and	3
ESCI 125	The Dynamic Earth Laboratory and	1
PHYS 121	General Physics I	4
<b>Skill Area I: Communications Skills</b>		
WRT 110	Introduction to College Writing	3
ENGR 290	Engineering Technical Writing and Presentation	3
<b>Skill Area II: Mathematics</b>		
MATH 119	Pre-Calculus with Trigonometry or	4
MATH 115	Trigonometry and	3
STAT 200	Business Statistics	3
<b>Skill Area III: Foreign Language Proficiency</b>		
<b>Skill Area IV: University Requirement</b>		
PE 144	College Wellness	2

**Total Credit Hours: 120**

**CRIMINOLOGY, B.A.**

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A minor is required with this major.

**REQUIREMENTS: (39 CREDITS)**

**Required Courses:**

CRM 110	Introduction to the Criminal Justice System	3
CRM 230	Law Enforcement & Society	3
CRM 231	Criminal Procedure and the Courts	3
CRM 238	Corrections	3
CRM 260	Criminology	3
CRM 322	Research Methods in Criminal Justice	4
CRM 435	Supervised Field Studies in Criminal Justice I and	3
	3 credits of 200-level CRM elective	

**Related Requirements:**

PHIL 144	Moral Issues and	3
STAT 104	Elementary Statistics or	3
STAT 200	Business Statistics or	3
STAT 215	Statistics for Behavioral Sciences I	3

All related requirements courses must have a grade of C- or higher

Requirements for 300-level and 400-level electives

6 credits of 300-499 CRM elective

8 credits of 400-479 CRM elective

**CYBERSECURITY B.S.**

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**Pending May 2024 Board of Regents approval.**

The BS program in cybersecurity provides a strong foundation in both networking and computer science and is based on faculty, facilities, and research resources in both the Department of Computer Electronics and Graphics Technology and the Department of Computer Science, as well as, support by the Department of Political Science and the Department of Criminology and Criminal Justice. Students can choose the general option which requires a minor, or pursue one of the in depth concentrations aligned with the content focus areas recommended by the National Security Agency (NSA). This interdepartmental program is designed to prepare students for careers as cybersecurity experts in identifying system vulnerabilities, detecting cyber-attacks, and securing information assets. Students in the program are expected to

1. Understand the up-to-date concepts, technologies, design issues, and tools in cybersecurity
2. Understand cybersecurity policies and laws and exhibit ethical and legal responsibilities
3. Demonstrate the capability of software tools utilization and development including operating system, database, and application. Be able to analyze threats, identify vulnerabilities, and develop security solutions.
4. Demonstrate the capability of hardware development and system administration to design, implement, and analyze electronic, network and server systems. Be able to assess, implement, and manage security needs to defend the systems.

5. Apply the knowledge and skills of information assurance and penetration testing to conduct risk and liability assessments and test the effectiveness of security measures.

6. Apply the knowledge and skills of digital investigation to identify and preserve the digital evidence.

7. Recognize the need for and demonstrate the ability to engage in lifelong learning in cybersecurity careers.

This program requires 6 credits in Study Area II.

**GENERAL EDUCATION RELATED REQUIREMENTS**

**Study Area II (6 credits)**

PS 110	American Government & Politics	3
	or	
PS 210	The International and Domestic Legal Environment of Cybersecurity	3

**Skill Area II (6 credits)**

MATH 152	Calculus I	4
MATH 217	Discrete Mathematics for Computer Science	4

**CYBERSECURITY CORE**

**Cybersecurity Core (51-52 credits)**

CET 229	Computer Hardware Architecture	3
CET 249	Introduction to Networking Technology	3
CYS 227	Introduction to Cybersecurity	3
CET 339	Computer System Administration	3
CET 349	Network Design and Implementation	3
CYS 459/CET 459	Network Security Technologies	3
CYS 467	Security System Management	3
CYS 477	Ethical Hacking and Penetration Testing	3
CS 151	Computer Science I	3
CS 152	Computer Science II	3
CS 253	Data Structures and Introduction to Algorithms	3
CS 355	Systems Programming	3
CYS 492/CS 492	Computer Security	3
CYS 493/CS 493	Secure Software Designs	3
CYS 494/CS 494	Cryptographic Systems	3
CRM 414	Cybercrime	4
	or	
PS 210	The International and Domestic	3

Legal Environment of Cybersecurity

CYS 400	Internship & Senior Seminar	1-3
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**CONCENTRATIONS (STUDENTS SELECT ONE FROM THREE CONCENTRATIONS)**

**General Concentration (25-26 credits)**

Cybersecurity Core and free electives to meet 120 credits, including a required minor.

**Cyber Defense Concentration (25-26 credits)**

CET 113	Introduction to Information Processing	3
CET 439	Enterprise Messaging Systems	3
CET 449	Advanced Networking	3
CET 479	Network Administration	3
CS 460	Database Concepts	3
CS 481	Operating Systems Design	3

Free electives to meet 120 credits

**Cyber Operations Concentration (25-26 credits)**

CET 223	Basic Electrical Circuits	3
CET 363	Digital Circuits	3
CET 466	Logic Design	3
CS 254	Computer Organization and Assembly Language Programming	3
CS 481	Operating Systems Design	3
CET 469	Wireless Networks and Security	3
CYS 291/CS 291	Introduction to Computer Forensics	3
	or	
CYS 487	Network Forensics	3
CYS 419/CS 419	Usable Security and Privacy	3
	or	
CYS 455/CS 455	Principles of Secure Software Development	3

Free electives to meet 120 credits

**1. Accelerate Central Program in Cybersecurity to Software Engineering MS**

**Eligibility**

Students apply in the Spring of their third year of full-time study and must meet the requirements specified below:

1. Successful completion of 60 or more credit hours; of which, at least 12 credit hours must be completed at CCSU.
2. Completed CS 253 and two 400 level CS classes with at least a B.
3. Have at least a 2.7 cumulative grade point average.

4. Have at least a 2.7 grade point average in Computer Science courses.

Eligible students can apply for admission to the Accelerate Central B.S./M.S. in their third year of full-time study. Students admitted to this program may complete both the B.S. and M.S. in Software Engineering in as few as five years on a full-time basis. For students who are officially admitted to the **Accelerate Central B.S. / M.S. Software Engineering Program**, two graduate courses will double-count as courses in the undergraduate program for a total of 6 credits double-counted. In addition, students may take two additional courses before matriculation as a graduate student; these courses will be excluded from the student's B.S. program and transferred into the student's M.S. program.

#### How to Apply

Students will submit Change of Major form, a resume, and the name of two professors from the Computer Science department who could serve as a references to the Chair of the Computer Science department by February 10 (for Fall) or October 1 (for Spring). The documents will go through the proper parties for review and approval, including the Graduate Program Director. Once the form has been approved by all required parties, the Registrar's Office will change the student's undergraduate curriculum to note the Accelerate Central program.

After acceptance, students must maintain a 3.0 cumulative grade point average.

**Total Credit Hours: 120**

### DANCE EDUCATION WITH SPECIALIZATION IN ENTREPRENEURSHIP BS

Students in the CCSU Dance Education Entrepreneurship program develop the knowledge, skills, and dispositions needed to pursue a business-based dance career. Graduates will be prepared to teach dance at the highest level and have the knowledge and skills to handle the marketing and managerial side of running a successful business. Students will show evidence of possessing a strong, well-rounded background in dance pedagogy, history, research, learning theory and practicum to become "highly qualified" as a Teaching Artist.

A minor is not required with this major.

#### CORE REQUIREMENTS

This 75-credit program consists of 41 credits in core lecture and skills classes, and 34 credits in the entrepreneurship dance specialization.

#### Core Courses (41 credits)

DAN 110	Introduction to Dance Education	2
EXS 207	Anatomy and Physiology in Exercise Science I	3
EXS 216	Biomechanics	3
DAN 151	Beginning Modern Dance	2
DAN 152	Beginning Ballet	2
DAN 157	Beginning Jazz Dance	1
DAN 200	Dance Practicum	1
DAN 200	Dance Practicum	1
DAN 230	Afro-Caribbean Dance and Culture	2
DAN 252	Intermediate Ballet	2
DAN 257	Intermediate Jazz Dance	1
DAN 299	Dance History	3
DAN 377	Modern Dance and Theory	2
DAN 234	Ballroom Dance	1
DAN 235	Movement for Performers	2
DAN 236	Principles of Choreography	2
DAN 272	Creative Dance in Education	2
DAN 398	Contemporary Dance Technique	2
DAN 477	Secondary Methods in Dance Education	3
DAN 480	Project: Dance	1
PE 416	Program Development in Physical Education, Dance Education and Health Education	3

*Note:* DAN 200 is taken twice for a total of 2 credits

#### Specialization in Entrepreneurship in Dance (34 credits)

Specialization includes 11 credits of required courses, plus 6 credits of business electives, and 17 credits of electives approved by a faculty advisor.

#### Required Courses

*Note:* DAN 200 is taken twice in the Core above and twice in this specialization for a total of 4 times.

ENT 296	Main Street Business Ownership and Management	3
ENT 350/MGT 350	Financing Entrepreneurial Ventures	3
MKT 295	Fundamentals of Marketing	3
DAN 200	Dance Practicum	1
DAN 200	Dance Practicum	1

#### Business Electives (6 credits)

Business electives must be chosen from the list.

ENT	Entrepreneurship and New	3
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330/MGT 330	Venture Creation	
ENT 355/MGT 355	Managing a Growing Business	3
MKT 301	Creativity in Marketing	3
MKT 306	Advertising and Promotion	3
MKT 350	Social Media Marketing	3
MKT 359	Special Events Marketing	3

**An additional 17 credits of specialization electives are required and selected in consultation with a faculty advisor.**

**Required General Education courses**

MUS 109	Fundamentals of Music	3
HIST 161	American History to 1877 or	3
HIST 162	American History from 1877 to Present	3
ANTH 170	Introduction to Cultural Anthropology	3
PSY 136	Life-Span Development	3
PHYS 111	Introductory Physics I	3
COMM 115	Fundamentals of Communication or	3
COMM 140	Public Speaking	3
STAT 104	Elementary Statistics or	3
STAT 200	Business Statistics or	3
STAT 215	Statistics for Behavioral Sciences I	3
BIO 111	Introductory Biology or	3
BMS 102	Introduction to Biomolecular Science or	3
BIO 121	General Biology I	4
WRT 110	Introduction to College Writing or	3
WRT 105	Enhanced Introduction to College Writing and	3
WRT 105P	Enhanced Introduction to College Writing Workshop	2

**Total Credit Hours: 120**

Note: For more information on admission to the professional program see the page linked here.

**EARLY CHILDHOOD STUDIES AND INFANT/TODDLER MENTAL HEALTH, B.S.**

A minor is not required with this major.

Graduates of the Bachelor of Science in Early Childhood Studies and Infant/Toddler Mental Health will be well-trained and qualified practitioners who will become part of the early childhood and infant/ toddler mental health workforce, in publicly funded and private infant/toddler and preschool programs and service agencies. Graduates will be eligible to apply for a LEVEL I (Infant Family Associate) Endorsement to the Connecticut Infant Mental Health Association (CT-AIMH).

**PROGRAM GOALS**

To produce new professionals who have the requisite knowledge, competencies, and dispositions to become a highly qualified practitioner in the field of early childhood and infant/toddler mental health. Specifically, graduates of the **Bachelor of Science in Early Childhood Studies and Infant/Toddler Mental Health** will be:

1. Knowledgeable and competent in executing the values and skills necessary to serve and care for infants and toddlers and their families to meet **Level I** of the Infant Mental Health Levels of Endorsement competencies in eight areas: Theoretical Foundations; Law, Regulation & Agency Policy; Systems Expertise; Direct Service Skills; Working With Others; Communicating; Thinking; and Reflection;
2. Knowledgeable and competent in executing the values, roles and responsibilities of a professional working with preschool children in state private and public agencies, including non-profit community-based agencies that are state- and/or federally funded;
3. Knowledgeable and competent in promoting child development and learning, especially infants, toddlers, and preschool children with and without exceptionalities;
4. Knowledgeable and competent in building family and community relationships, especially with families whose members include infants, toddlers and/or preschool children with and without exceptionalities;
5. Knowledgeable and competent in assessing and supporting families with infants, toddlers, and preschool children with and without exceptionalities;
6. Knowledgeable and competent in using developmentally effective approaches to advance the development and learning of infants, toddlers, and preschool children with and without exceptionalities.

7. Knowledgeable and competent in using content knowledge to build meaningful curriculum and learning activities that are appropriate for infants, toddlers, and preschool children with and without exceptionalities; and

8. Reflective, ethical, and committed to professional behavior and practices, i.e., program graduates will continue to engage in ongoing professional learning and use evidence to evaluate their practice to better meet the needs of children in these populations: infants, toddlers, and preschool children with and without exceptionalities.

### REQUIREMENTS (68 CREDITS)

#### Major Courses (68 credits)

EDEC 101	Introduction to Early Childhood Studies	3
EDEC 103	Health, Safety & Nutrition for Infants, Toddlers, and Preschoolers	3
EDEC 105	Arts, Aesthetics, and Play for Infants, Toddlers, and Preschool Children	3
EDEC 202	Child, Family, and the Community	3
EDEC 204	Observing, Documenting, and Assessing to Support Infants, Toddlers, Preschool Children & Their Families	3
EDEC 206	Fieldwork in Early Childhood & Infant Toddler Mental Health	1
EDEC 306	Design and Management of Infant/Toddler and Preschool Programs	3
EDEC 300	Curriculum and Instruction for Diverse Learners: Infants, Toddlers, and Preschool Children	3
EDEC 304	Pre-Practicum in Early Childhood and Infant/Toddler Mental Health I	3
EDEC 305	STEM for Infants, Toddlers, and Preschool Children	3
EDEC 308	Pre-Practicum in Early Childhood and Infant/Toddler Mental Health II	3
EDEC 403	Practicum in Early Childhood and Infant/Toddler Mental Health I	6
EDEC 404	Practicum in Early Childhood and Infant/ Toddler Mental Health II	6
EDEC 200	Introduction to Infant/Toddler Development and Infant Mental Health: Foundations for Home Visiting and Early Care and Education	3
EDT 101	Basic Instructional Design & Production	1
LLA 201	Language & Literacy for Infants,	3

LLA 309	Toddlers, and Preschool Children Literacy & Literature for Infants, Toddlers, and Preschool Children	3
SPED 301	Assessment, Instruction & Curriculum Adaptations for Early Childhood	3
SPED 321	Establishing Learning Environments for Young Children	3
EDEC 208	History & Foundations of Early Childhood Education	3
EDEC 207	Positive Relationships & Equity in Early Childhood Education	3

#### Related Requirement (3 credits)

PSY 136	Life-Span Development	3
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**Total Credit Hours: 120**

### EARTH SCIENCE B.S.: GENERAL EARTH SCIENCE SPECIALIZATION

The General Earth Science Specialization is designed for students who want to study geological sciences, but who are not intending to work as professional geologists. This Specialization is appropriate for students planning a career in public policy relating to earth science issues, earth-science education, resource management, museum/observatory management, science journalism, library science, technical writing, or business.

A minor is not required.

#### MAJOR REQUIREMENTS

36 credits in Earth Science/Astronomy courses and 22-24 credits of related requirements.

#### Earth Sciences Core (19 credits)

GSCI 121	The Dynamic Earth	3
	or	
GSCI 131	Environmental Geoscience	3
GSCI 125	The Dynamic Earth Laboratory	1
	or	
GSCI 135	Environmental Geoscience Laboratory	1
GSCI 141	Earth and Life History	3
GSCI 145	Earth and Life History Laboratory	1
GSCI 221	Mineralogy	4
GSCI 223	Stratigraphy and Sedimentology	4
GSCI 260	Communicating the Geological Sciences	1
GSCI 290	Field Methods in Geology	2

**General Earth Science Specialization (17 credits)**

Required Courses (4 credits):

GSCI 129 Introduction to Meteorology 4

**Electives (13 credits)**

AST or ESCI courses at the 200 level or above, selected in consultation with the student's advisor.

**Related Requirements (22-24 credits)**

CHEM 161 General Chemistry 3

CHEM 162 General Chemistry Laboratory 1

CHEM 201 Foundations of Analytical Chemistry Laboratory 1

CHEM 260 Foundations of Inorganic Chemistry 3

or

BIO 121 General Biology I 4

MATH 152 Calculus I 4

or

MATH 119 Pre-Calculus with Trigonometry 4

or

MATH 124 Applied Calculus with Trigonometry 4

or

MATH 115 Trigonometry 3

MATH 221 Calculus II 4

or

MATH 125 Applied Calculus 3

or

MATH 116 Pre-Calculus Mathematics 3

or

STAT 104 Elementary Statistics 3

PHYS 125 University Physics I 4

or

PHYS 121 General Physics I 4

PHYS 126 University Physics II 4

or

PHYS 122 General Physics II 4

**Total Credit Hours: 0**

**EARTH SCIENCE B.S.: ENVIRONMENTAL EARTH SCIENCE SPECIALIZATION B.S.**

The Environmental Earth Science Specialization is designed for students who want to study geological sciences with an environmental focus but who are not intending to work as professional geologists. This Specialization is appropriate for students planning a career in public policy relating to environmental issues, environmental education, resource management,

business (environmental consulting), environmental hazards, environmental law, or environmental medicine.

A minor is not required.

**MAJOR REQUIREMENTS**

36 credits in Earth Science and related courses, and 22-24 credits of related requirements.

**Earth Sciences Core (19 credits)**

GSCI 121 The Dynamic Earth 3

or

GSCI 131 Environmental Geoscience 3

GSCI 125 The Dynamic Earth Laboratory 1

or

GSCI 135 Environmental Geoscience Laboratory 1

GSCI 141 Earth and Life History 3

GSCI 145 Earth and Life History Laboratory 1

GSCI 221 Mineralogy 4

GSCI 223 Stratigraphy and Sedimentology 4

GSCI 260 Communicating the Geological Sciences 1

GSCI 290 Field Methods in Geology 2

**Environmental Earth Science Specialization (17 credits)**

Required Courses (4 credits):

GSCI 129 Introduction to Meteorology 4

**Electives (13 credits)**

selected from the following:

GSCI 350 Computer Methods in the Geological Sciences 3

GSCI 424 Geomorphology 4

GSCI 425 Glacial and Quaternary Geology 3

GSCI 431 Introduction to Hydrogeology 4

GSCI 441 Environmental Geochemistry 3

GSCI 442 Introduction to the Principles of Soil Science 4

GSCI 455 Energy Science and Technology 3

GSCI 490 Topics in Geological Sciences 3-4

BIO 132 Introductory Ecology 3

BIO 434 Ecology of Inland Waters 4

BIO 436 Environmental Resources and Management 3

BIO 438/BIO 538 Aquatic Pollution 4

CHEM 406 Environmental Chemistry 3

CHEM 456 Toxicology 3

or additional courses as approved by the student's advisor.

**Related Requirements (22-24 credits)**

CHEM 161	General Chemistry	3	GSCI 125	The Dynamic Earth Laboratory	1
CHEM 162	General Chemistry Laboratory	1		or	
CHEM 201	Foundations of Analytical Chemistry Laboratory and	1	GSCI 135	Environmental Geoscience Laboratory	1
CHEM 260	Foundations of Inorganic Chemistry	3	GSCI 141	Earth and Life History	3
	or		GSCI 145	Earth and Life History Laboratory	1
BIO 121	General Biology I	4	GSCI 221	Mineralogy	4
MATH 152	Calculus I	4	GSCI 223	Stratigraphy and Sedimentology	4
	or		GSCI 260	Communicating the Geological Sciences	1
MATH 124	Applied Calculus with Trigonometry	4	GSCI 290	Field Methods in Geology	2
	or				
MATH 119	Pre-Calculus with Trigonometry	4			
	or				
MATH 115	Trigonometry	3			
MATH 221	Calculus II	4			
	or				
MATH 125	Applied Calculus	3			
	or				
MATH 116	Pre-Calculus Mathematics	3			
	or				
STAT 104	Elementary Statistics	3			
PHYS 125	University Physics I	4			
	or				
PHYS 121	General Physics I	4			
PHYS 126	University Physics II	4			
	or				
PHYS 122	General Physics II	4			

**Total Credit Hours: 0****EARTH SCIENCE B.S.: ENVIRONMENTAL GEOLOGY SPECIALIZATION**

The Environmental Geology Specialization is designed for students planning a career as a professional geologist with government agencies (e.g. environmental protection), and environmental industries. In addition, students will be prepared for graduate-level studies in geology or related fields.

A minor is not required.

**MAJOR REQUIREMENTS**

44 credits in Earth Science and related courses, and 24 credits of related requirements.

**Earth Sciences Core (19 credits)**

GSCI 121	The Dynamic Earth	3			
	or				
GSCI 131	Environmental Geoscience	3			

**Environmental Geology Specialization (25 credits)****Required Courses (19 credits)**

GSCI 321	Structural Geology	4			
GSCI 360	Research Methods in the Geological Sciences	1			
GSCI 424	Geomorphology	4			
GSCI 431	Introduction to Hydrogeology	4			
GSCI 441	Environmental Geochemistry	3			
BIO 436	Environmental Resources and Management	3			

**Electives (2-4 credits)**

selected from the following:

GSCI 350	Computer Methods in the Geological Sciences	3			
GSCI 425	Glacial and Quaternary Geology	3			
GSCI 442	Introduction to the Principles of Soil Science	4			
GSCI 455	Energy Science and Technology	3			
GSCI 490	Topics in Geological Sciences	3-4			

or additional courses as approved by the student's advisor.

**Capstone (2-4 credits)**

2-4 credits of ESCI 460 (Senior Project) or an approved external geology field camp

GSCI 460	Senior Project	1-3			
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**Related Requirements (24 credits)**

CHEM 161	General Chemistry	3			
CHEM 162	General Chemistry Laboratory	1			
CHEM 201	Foundations of Analytical Chemistry Laboratory	1			
CHEM 260	Foundations of Inorganic Chemistry	3			
MATH 152	Calculus I	4			
MATH 221	Calculus II	4			
PHYS 125	University Physics I	4			
PHYS 126	University Physics II	4			



**Total Credit Hours: 68**

**EARTH SCIENCE B.S.: GEOLOGY SPECIALIZATION**

The Geology Specialization is designed for students planning a career as a professional geologist with government agencies (e.g. geological surveys), and geotechnical, mining, and energy industries. In addition, students will be prepared for graduate-level studies in geology or related fields.

A minor is not required.

**MAJOR REQUIREMENTS**

44 credits in Earth Science courses and 24 credits of related requirements.

**Earth Sciences Core (19 credits)**

GSCI 121	The Dynamic Earth or	3
GSCI 131	Environmental Geoscience	3
GSCI 125	The Dynamic Earth Laboratory or	1
GSCI 135	Environmental Geoscience Laboratory	1
GSCI 141	Earth and Life History	3
GSCI 145	Earth and Life History Laboratory	1
GSCI 221	Mineralogy	4
GSCI 223	Stratigraphy and Sedimentology	4
GSCI 260	Communicating the Geological Sciences	1
GSCI 290	Field Methods in Geology	2

**Geology Specialization (25 credits)**

Required Courses (13 credits)

GSCI 321	Structural Geology	4
GSCI 322	Igneous and Metamorphic Petrology	4
GSCI 360	Research Methods in the Geological Sciences	1
GSCI 424	Geomorphology	4

**Electives (8-10 credits)**

selected from the following:

GSCI 350	Computer Methods in the Geological Sciences	3
GSCI 425	Glacial and Quaternary Geology	3
GSCI 431	Introduction to Hydrogeology	4
GSCI 441	Environmental Geochemistry	3
GSCI 442	Introduction to the Principles of Soil Science	4
GSCI 455	Energy Science and Technology	3

GSCI 490	Topics in Geological Sciences	3-4
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or additional courses as approved by the student's advisor

**Capstone (2-4 credits)**

2-4 credits of ESCI 460 (Senior Project) or an approved external geology field camp

GSCI 460	Senior Project	1-3
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**Related Requirements (24 credits)**

CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 201	Foundations of Analytical Chemistry Laboratory	1
CHEM 260	Foundations of Inorganic Chemistry	3
MATH 152	Calculus I	4
MATH 221	Calculus II	4
PHYS 125	University Physics I	4
PHYS 126	University Physics II	4

**Total Credit Hours: 68**

**EARTH SCIENCE B.S.: PLANETARY GEOLOGY SPECIALIZATION**

The Planetary Geology Specialization is designed for students planning a career as a professional geologist with government agencies (e.g. NASA) or the remote sensing industry. In addition, students will be prepared for graduate-level studies in geology or related fields.

A minor is not required.

**MAJOR REQUIREMENTS**

44 credits in Astronomy/Earth Science courses and 24 credits of related requirements.

**Earth Sciences Core (19 credits)**

GSCI 121	The Dynamic Earth or	3
GSCI 131	Environmental Geoscience	3
GSCI 125	The Dynamic Earth Laboratory or	1
GSCI 135	Environmental Geoscience Laboratory	1
GSCI 141	Earth and Life History	3
GSCI 145	Earth and Life History Laboratory	1
GSCI 221	Mineralogy	4
GSCI 223	Stratigraphy and Sedimentology	4
GSCI 260	Communicating the Geological Sciences	1
GSCI 290	Field Methods in Geology	2

**Planetary Geology Specialization (25 credits)**

## Required Courses (15 credits)

AST 208	Planetary Astronomy	4
	or	
AST 209	Stellar and Galactic Astronomy	4
AST 278	The Night Sky	3
AST 378	Comparative Planetology	3
GSCI 360	Research Methods in the Geological Sciences	1
GSCI 424	Geomorphology	4

**Electives (6-8 credits)**

selected from the following:

AST 418	Stellar Astrophysics	3
AST 470	Exoplanets and Astrobiology	3
AST 490	Topics in Astronomy	1-3
AST 495	Seminar in Astronomy	1
GSCI 321	Structural Geology	4
GSCI 322	Igneous and Metamorphic Petrology	4
GSCI 350	Computer Methods in the Geological Sciences	3
GSCI 490	Topics in Geological Sciences	3-4

or additional courses as approved by the student's advisor.

**Capstone (2-4 credits)**

2-4 credits of AST or ESCI 460 (Senior Project) or an approved external geology field camp

AST 460	Independent Research in Astronomy	1-3
	or	
GSCI 460	Senior Project	1-3

**Related Requirements (24 credits)**

CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 201	Foundations of Analytical Chemistry Laboratory	1
CHEM 260	Foundations of Inorganic Chemistry	3
MATH 152	Calculus I	4
MATH 221	Calculus II	4
PHYS 125	University Physics I	4
PHYS 126	University Physics II	4

**Total Credit Hours: 68****ECONOMICS, B.A.**

A minor is required with this major.

**REQUIREMENTS: (30 CREDITS)****Major Core Requirements:**

ECON 200	Principles of Macroeconomics	3
ECON 201	Principles of Microeconomics	3
ECON 300	Macroeconomics	3
ECON 305	Microeconomics	3
ECON 308	Political Economy	3

**Subtotal: 15****15 credits of ECON electives:****Subtotal: 15****In addition, students must take the following:**

MATH 125	Applied Calculus	3
STAT 215	Statistics for Behavioral Sciences I	3

**ELECTRICAL ENGINEERING, B.S.**

The Bachelor of Science in Electrical Engineering degree (BSEE) will recruit students from within the State of Connecticut, and the geographical region. The affordability and accessibility of CCSU will allow a diverse population to gain greater earning potential that will in turn promote economic growth.

The core requirements of the proposed BS in Electrical Engineering are standard in the School of Engineering, Science, and Technology. The Electrical Engineering program will build upon two other engineering programs within the School of Engineering, Science, and Technology: Bachelor of Science in Mechanical Engineering and a Bachelor of Science in Civil Engineering.

The educational goals of any engineering field include the awareness of societal impacts and individual responsibility. The decisions made during the practice of engineering can have far-reaching effects on the safety, health, and welfare of the population served and its environment. Given the emphasis on ethical conduct and responsibility to the larger community, the proposed program will advance and extend the graduate's contribution to civic life in Connecticut's communities.

The BSEE Program will seek accreditation by the Engineering Accreditation Commission of Accreditation Board for Engineering and Technology (EAC of ABET).

Graduates of the Electrical Engineering Program:

1. are technically proficient in the theory and practice of electrical engineering.
2. are effective communicators.
3. collaborate as members of multidisciplinary teams.
4. understand and demonstrate the need to continue learning throughout their professional careers.

5. understand the responsibility an engineer bears to society and are characterized by high standards of ethics and professionalism.

The B.S. in Electrical Engineering Program has the following Learning Outcomes:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

**Admission Requirements:**

- **Students must be ready to enroll in Calculus I (MATH 152). This requirement can be met by any of the following:**
  - Earning both a Scholastic Aptitude Test (SAT) Mathematics score of 620 or higher and a grade of B or better in a two-semester high school pre-calculus or calculus course.
  - Earning a score of 3 or better on the Calculus AB or Calculus BC Advancement Placement exam.
  - Earning a sufficiently high score on CCSU's Mathematics Placement Exam
  - Credit transfer from an accredited two-year or four-year higher education institution of a Pre-Calculus course and a Trigonometry course with grades of C- or higher, or a combined Trigonometry/Pre-calculus course with a grade of C- or higher, or a Calculus

course with a grade of C- or higher. (subject to equivalency evaluation of the courses).

- CT Community College students who successfully complete the full "Engineering Science" program and earn their Associates Degree will be automatically admitted to the Electrical Engineering program.

**MAJOR REQUIREMENTS**

**Required Courses (58 credits)**

EE 101	Electric Circuits I	3
EE 201	Electric Circuits II	3
EE 212	Fundamentals of Logic Design	3
EE 301	Signals and Systems	3
EE 312	Computer Systems	3
EE 313	Electric Energy Engineering I	3
EE 323	Electric Energy Engineering II	3
EE 324	Control Systems I	3
EE 330	Electromagnetics	3
EE 331	Introduction to Semiconductors	3
EE 333	Electric Machines and Motors I	3
EE 343	Electric Machines and Motors II	3
EE 351	Analog Circuit Design	3
EE 352	Signal Processing and Pattern Analysis	3
EE 353	Energy Storage Systems	3
EE 363	Renewable Energy	3
EE 401	Random Signals and Systems	3
EE 430	RF Communications	3
EE 497	Capstone I	2
EE 498	Capstone II	2

**Related Major Requirements (22 credits)**

ENGR 150	Introduction to Engineering	3
ENGR 240	Computational Methods for Engineering	3
CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
MATH 222	Calculus III	4
MATH 226	Linear Algebra and Probability for Engineers	4
MATH 355	Introduction to Differential Equations with Applications	4

**Study Area I (6 credits)**

	Literature	
PHIL 144	Moral Issues	3

**Study Area II (6 credits)**

	History	
ECON 200	Principles of Macroeconomics or	3
ECON 201	Principles of Microeconomics	3

**Study Area III (6 credits)****Study Area IV (8 credits)**

PHYS 125	University Physics I	4
PHYS 126	University Physics II	4

**Skill Area I (6 credits)**

WRT 105	Enhanced Introduction to College Writing	3
	or	
WRT 110	Introduction to College Writing	3
ENGR 290	Engineering Technical Writing and Presentation	3

**Skill Area II (8 credits)**

MATH 152	Calculus I	4
MATH 221	Calculus II	4

**Skill Area III****Skill Area IV (2 credits)**

PE 144	College Wellness	2
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**Directed Electives**

EE 424	Control Systems II	3
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**Total Credit Hours: 125****ELECTRONICS TECHNOLOGY, B.S.**

A minor is not required with this major.

Accredited by ATMAE

This degree prepares students to work as a member of an engineering team in applied design, product development, manufacturing, maintenance, or technical support/sales services in the electrical and electronic industries, which include telecommunications, control systems, manufacturing of electromechanical devices and computer services. There is a graduation requirement of a capstone assessment during a student's final year of study.

**MAJOR REQUIREMENTS (63 CREDITS)****Major Core (27 Credits)**

CET 223	Basic Electrical Circuits	3
CET 233	Advanced Electrical Circuits	3
CET 243	Analog Electronics I	3
CET 323	Analog Electronics II	3
CET 363	Digital Circuits	3
CET 443	Electronic Communications	3
CET 453	Microcomputers	3
CET 463	Advanced Microcomputers	3
CS 121	C Programming Practicum for Engineers	3

**Related Major Requirements (22 credits)**

CET 113	Introduction to Information	3
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	Processing	
CEGT 200	Seminar	1
CEGT 400	Internship and Senior Seminar	3
TM 190	Global Quality Management Systems	3
TM 362	Leading Project Teams	3
AC 210	Accounting for Decision-Making	3
	or	
AC 211	Introduction to Financial Accounting	3
MGT 295	Fundamentals of Management and Organizational Behavior	3
MKT 295	Fundamentals of Marketing	3

**Directed Electives (14 credits)**

14 credits major related courses approved by academic advisor.

**GENERAL EDUCATION****Study Area I -Arts and Humanities (9 credits)**

	Literature (I)	3
	Elective	3
	Elective	3

Recommend an international course in Literature.

**Study Area II - Social Sciences (9 credits)**

ECON 200	Principles of Macroeconomics	3
	or	
ECON 201	Principles of Microeconomics	3
	History (I)	3
	Elective	3

Recommend an international course in History.

**Study Area III - Behavioral Sciences (6 credits)**

PSY 112	Introduction to Psychology	3
	Elective	3

PSY 112 is recommended.

**Study Area IV - Natural Scientific (6 credits)**

PHYS 111	Introductory Physics I	3
CHEM 161	General Chemistry	3

**Skill Area I - Communication Skills (6 credits)**

WRT 105	Enhanced Introduction to College Writing	3
	and	
	WRT 105P	
	Enhanced Introduction to College Writing Workshop	2
	or	
WRT 110	Introduction to College Writing	3
ENGR 290	Engineering Technical Writing and Presentation	3

WRT 105/105P/110 - Placement Exam

**Skill Area II - Mathematical (6 credits)**

STAT 104	Elementary Statistics	3
MATH 115	Trigonometry	3

Math 115 and STAT 104 - Placement Exam

**Skill Area III - Foreign Language**

See University Catalog.

**Skill Area IV - Univ. Requirements (2-3 credits)**

PE 144	College Wellness	2
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PE 144 is required of all students entering with fewer than 15 credits and required to be taken in a students' first year.

**FREE ELECTIVES**

To meet 120 credits degree requirement.

**Total Credit Hours: 120**

**ENGLISH, B.A.**

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A minor is required with this major.

**REQUIREMENTS: (42 CREDITS)**

**18 credits as follow:**

ENG 298	Introduction to Literary Studies	3
ENG 398	Topics in Literary Theory and Research	3

**200-level literature classes--12 credits--as follows:**

All majors must take 12 credits at the 200-level. Students must complete three of the four survey courses in the British and American traditions (205, 206, 210, and 211). For the fourth course, students may take the remaining British or American survey or any other 200-level literature course, excluding ENG 298.

**and three credits from the following:**

LING 200	Introduction to Linguistics	3
LING 230	The Study of Language	3
LING 400/LING 500	Linguistic Analysis	3
LING 430/LING 530	Topics in Applied Linguistics	3
LING 431/LING 531	The History of the English Language	3

**In addition, 24 credits on the 300-400 level as follows:**

- 6 credits in British literature, at least one in a period preceding 1798 and at least one in a period following 1798;
- 6 credits in American literature, one in a period preceding 1865 and one in a period following 1865;
- 3 credits in world literature; and
- 9 credits of 300/400-level electives drawn from English literature or film courses or selected writing courses (WRT 372, WRT 374, WRT 375, WRT 401, only one writing course may be used as an elective). ENG 220 may be used to satisfy the British pre-1798 requirement or as one of the literature electives.

Students' 24 credits in 300/400 level courses must include at least nine credits in literature courses at the 300 level and at least six credits in literature courses at the 400 level.

All variable-topic courses (ENG 348, ENG 358, ENG 388, ENG 448, ENG 458, ENG 449, and ENG 488) may be taken twice under different topics. Further substitutions within area requirements are permitted only with prior approval of the advisor and the department chair.

\*Depending on its topic, ENG 398 may count as one of the 300-400 level required or elective literature courses.

**Total Credit Hours: 42**

**EXERCISE SCIENCE, B.S.**

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This program consists of 56 credits in core lecture classes, 15-16 credits of Related Requirements, and either A) 14 credits in the Clinical Exercise Physiology Specialization, B) 15 credits in the Strength and Conditioning/Personal Fitness Training Specialization, or C) 22 credits in the Health Sciences Specialization.

A minor is not required with this major.

**MAJOR REQUIREMENTS (70-78 CREDITS)**

**Core Courses (56 credits)**

EXS 109	Intro to Human Performance	3
EXS 207	Anatomy and Physiology in Exercise Science I	3
EXS 208	Anatomy and Physiology in Exercise Science II	3

EXS 211	Anatomy and Physiology in Exercise Science I Laboratory	1
EXS 212	Anatomy and Physiology in Exercise Science II Laboratory	1
EXS 215	Physiological Aspects of the Human Performance of the Aging	3
EXS 216	Biomechanics	3
EXS 301	Applied Kinesiology	3
EXS 307	Human Nutrition	3
EXS 325	Organization and Management in Exercise Science	3
EXS 332	Sport-Exercise Psychology & Behavioral Coaching	3
EXS 408	Physiology of Sport and Exercise	3
EXS 409	Clinical Exercise Physiology	3
EXS 415	Fitness Assessment and Exercise Prescription	3
EXS 417/ATR 517	Prevention and Care in Sports Medicine	3
EXS 411	Research Methods in Exercise Science	3
PE 597	Research in Physical Education and Exercise Science I	3
EXS 421/ATR 521	Pharmacology in Sports Medicine	3
EXS 470	Internship in Exercise Science	6
EXS 450	Practicum in Exercise Science	3

Students will take either EXS 411 or PE 597.

#### Related Requirements (15-16 credits)

PHYS 111	Introductory Physics I	3
	or	
PHYS 121	General Physics I	4
STAT 104	Elementary Statistics	3
	or	
STAT 200	Business Statistics	3
	or	
STAT 215	Statistics for Behavioral Sciences I	3
PSY 112	Introduction to Psychology	3
PSY 136	Life-Span Development	3
CHEM 161	General Chemistry	3

#### SPECIALIZATIONS

All specialization courses require a C- or better

#### Clinical Exercise Physiology Specialization (14 credits)

This specialization is for students who are looking to pursue a Clinical Exercise Physiology career.

EXS 280	Leadership in Exercise & Wellness	3
EXS 405	Exercise and Sport Nutrition	3
EXS 416	Graded Exercise Testing	3
BMS 102	Introduction to Biomolecular Science	3
BMS 103	Introduction to Biomolecular Science Laboratory	1
CHEM 162	General Chemistry Laboratory	1

#### Strength and Conditioning/Personal Fitness Training Specialization (15 credits)

This specialization is for students looking to focus on a career in Strength and Conditioning/Personal Fitness Training

EXS 275	Training for Sport Performance	3
EXS 280	Leadership in Exercise & Wellness	3
EXS 376	Theories of Strength Training and Conditioning	3
EXS 405	Exercise and Sport Nutrition	3
BMS 102	Introduction to Biomolecular Science	3
	or	
BMS 111	Cells and the Human Body	3

#### Health Sciences Specialization (22 credits)

This specialization is for students who are looking to pursue a career in Health Sciences.

EXS 240	Therapeutic Modalities	4
	or	
EXS 317	Therapeutic Exercise	4
EXS 275	Training for Sport Performance	3
EXS 416	Graded Exercise Testing	3
BMS 102	Introduction to Biomolecular Science	3
BMS 103	Introduction to Biomolecular Science Laboratory	1
CHEM 162	General Chemistry Laboratory	1
CHEM 210	Organic Chemistry I - Foundations	3
CHEM 211	Organic Chemistry I Laboratory - Foundations	1
MATH 116	Pre-Calculus Mathematics	3
	or	
MATH 125	Applied Calculus	3

#### ADMISSION AND RETENTION POLICY:

**Applying for Admission into the Exercise Science Program:**

Undergraduate applicants seeking admission to the exercise science program are required to submit their materials online through Taskstream for review by the Department of Physical Education and Human Performance. The applicant's completed file should be submitted prior to September 10 for fall candidates and February 10 (second semester sophomore year) for spring candidates. Applications for admission may be obtained in the Department of Physical Education and Human Performance, Kaiser Hall, Room 0180.

**Requirements for Admission:**

The following are departmental requirements for admission to the exercise science program:

- Completion of application to the professional program for exercise science;
- Completion of 45 credits of academic work; of which 15 credits were completed at CCSU;
- Successful completion of the following courses: EXS 109 plus 7 additional credits of EXS courses. Courses must be completed before full admission is granted;
- University GPA of 2.50;
- Departmental GPA of 2.70;
- Two Letters of Recommendation (signed originals) from persons able to testify to candidate's suitability as a professional in the exercise science field. Avoid seeking letters from family or friends;
- Submit an essay demonstrating the command of the English language, describing in written narrative the reasons for wanting to enroll in the Professional Program, emphasizing experiences which are relevant to exercise science;
- An interview with the personnel committee of the Department of Physical Education and Human Performance, including at least one exercise science faculty member.

**Retention Policy:**

Once admitted to the professional program, the following requirements must be maintained in order to remain in "good standing" within the exercise science and health promotion program:

- Students must maintain a University GPA of 2.50;
- Students must maintain a departmental GPA of 2.70; and

- A letter grade of C or higher is required in all professional program courses.

Note: Internship assignments require the student to be in good standing by having a University GPA of 2.50 and a major GPA of 2.70.

If a candidate drops below the required GPA levels, and/or fails to get a C or higher in any professional program course, he or she may be denied admission to the professional program courses, practicum courses, and internship assignments until the GPA or grade reaches the appropriate level.

Note: Revisions to the exercise science education program may occur in order to maintain compliance with national accreditation standards. Students should check with the program director and/or the CCSU exercise science website regarding the possibility of new requirements. All practicum courses and internship assignments require the student to be in "good standing."

**FINANCE, B.S.**

A minor is not required with this major.

School of Business Admission Requirements

**REQUIREMENTS: (57 CREDITS)**

Majors in finance and majors in finance with concentration in personal financial planning must complete the 27-credit common business core requirements.

**Common Business Core: (27 credits)**

AC 211	Introduction to Financial Accounting	3
AC 212	Introduction to Managerial Accounting	3
FIN 295	Managerial Finance	3
LAW 250	The Legal and Ethical Environment of Business	3
MC 207	Managerial Communication I	3
MGT 295	Fundamentals of Management and Organizational Behavior	3
MKT 295	Fundamentals of Marketing	3
MIS 201	Introduction to Management Information Systems	3
MGT 480	Strategic Management	3
BUS 480	Capstone Seminar	0

**Finance Core:(12 credits)**

Majors in finance and majors in finance with concentration in personal financial planning must complete the 12-credit finance core requirements.

FIN 301	Intermediate Managerial Finance	3
FIN 310	Principles of Investments	3
FIN 320	Financial Markets and Institutions	3
FIN 330	International Finance	3

**Additional Requirements**

BUS 250	Introduction to Business Analytics and Skills	3
STAT 201	Business Statistics II	3

**Option 1: B.S. in Finance - Directed Finance Electives (12 credits)**

Majors in finance are required to complete 12 credits selected from Option 1: B.S. in Finance - Directed Finance Electives list of courses. Of those 12 credits at least 6 credits must be 400 level Finance courses. Consultation with an advisor is recommended if the student wishes to pursue a specific specialization or career goal.

FIN 300	Personal Financial Planning	3
FIN 321	Insurance	3
FIN 352	Finance Studies Abroad	3
FIN 356/AC 356	Retirement Planning and Estate Planning	3
FIN 400	Advanced Managerial Finance	3
FIN 410	Securities Analysis and Portfolio Management	3
FIN 411	Financial Statement Analysis	3
FIN 420	Bank Management	3
FIN 422	Risk Management	3
FIN 425	Financial Derivatives	3
FIN 433	Real Estate Finance	3
FIN 436	Introduction to Fintech	3
FIN 440	Financial Modeling and Analytics	3
FIN 498	Finance Seminar	3
FIN 499	CFA Seminar	3
FIN 450	Credit analysis	3

**Option 1: B.S. in Finance - Business Electives (6 credits)**

Majors in finance are required to complete 6 credits selected from Option 1: B.S. in Finance - Directed Finance Electives list of courses or/and Option 1: B.S. in Finance - Business Electives list of courses.

AC 300	Intermediate Accounting I	3
AC 301	Cost Management Systems	3
AC 302	Introduction to Income Taxation	3
AC 350	Intermediate Accounting II	3
AC 402	Fundamentals of Corporate Taxation	3
ECON 310	Mathematical Economics I	3
ECON 450	Money, Credit, and Banking	3
ECON 485	Econometrics	3
ENT 305	Financing Entrepreneurial Ventures	3

FIN 300/AC 305	Personal Financial Planning	3
FIN 305	Topics in Financial Institutions	3
FIN 321	Insurance	3
FIN 352	Finance Studies Abroad	3
FIN 356/AC 356	Retirement Planning and Estate Planning	3
FIN 400	Advanced Managerial Finance	3
FIN 410	Securities Analysis and Portfolio Management	3
FIN 411	Financial Statement Analysis	3
FIN 420	Bank Management	3
FIN 422	Risk Management	3
FIN 425	Financial Derivatives	3
FIN 433	Real Estate Finance	3
FIN 436	Introduction to Fintech	3
FIN 440	Financial Modeling and Analytics	3
FIN 496	Practicum in Finance	3
FIN 498	Finance Seminar	3
FIN 499	CFA Seminar	3
FIN 450	Credit analysis	3
LAW 400	Advanced Business Law	3

Courses cannot be double-counted as directed finance electives and business electives.

**Option 2: B.S. in Finance with Concentration in Personal Financial Planning - Directed Finance Electives (15 credits)**

FIN 210	Personal Finance	3
FIN 300	Personal Financial Planning	3
FIN 321	Insurance	3
FIN 356/AC 356	Retirement Planning and Estate Planning	3
FIN 440	Financial Modeling and Analytics	3

Majors in finance with concentration in personal financial planning are required to complete 15 credits selected from Option 2: B.S. in Finance with Concentration in Personal Financial Planning - Directed Finance Electives list of courses.

**Option 2: B.S. in Finance with Concentration in Personal Financial Planning- Business Electives (3 credits)**

Majors in finance with concentration in personal financial planning are required to complete 3 credits selected from Option 2: B.S. in Finance with Concentration in Personal Financial Planning- Business Electives list of courses.

AC 302	Introduction to Income Taxation	3
FIN 305	Topics in Financial Institutions	3
FIN 410	Securities Analysis and Portfolio Management	3
FIN 411	Financial Statement Analysis	3
FIN 420	Bank Management	3



FIN 422	Risk Management	3
FIN 436	Introduction to Fintech	3

**Five Year Accelerated B.S.- Finance/MBA Program**

Students typically apply during their junior year of study and must meet the requirements specified below:

1. Have at least a 3.3 cumulative grade point average.
2. Completed 60 earned credit hours by the end of the Fall semester of their junior year. At least 30 credits must have been earned at CCSU.
3. Admission to School of Business Finance major.
4. Meet the MBA program admission criteria.

Eligible students can apply for admission to the **Accelerated B.S.- Finance / MBA Program** their junior year of study. Selected students will be able to complete a B.S. in Finance and MBA in five years on a full-time basis.

For students who are officially admitted to the **Accelerated B.S.- Finance /MBA Program**, two three (3)-credit graduate Finance courses will replace two three (3)-credit undergraduate Finance courses.

Students who are accepted into **Accelerated B.S.- Finance /MBA Program** will officially matriculate into the School of Graduate Studies the semester immediately following conferral of their Bachelor’s degree, even if they have already taken graduate-level courses while completing their Bachelor’s degree. Students wishing to defer their graduate studies must notify Graduate Admissions of this decision prior to the start of the term following the conferral of their bachelor’s degree.

**How to Apply**

Apply online to the School of Graduate Studies at <https://www.ccsu.edu/grad/>. Students will submit a current resume and one recommendation letter from a CCSU Finance professor by March 1st of their junior year. Instruction for submitting the recommendation letter and for uploading the resume will be found within the online **Accelerated B.S.- Finance /MBA Program** application. CCSU transcripts will be obtained automatically by the Graduate Recruitment and Admissions Office.

It is highly recommended to apply early for admission to this program to receive dedicated advising.

**Five Year Accelerated B.S.- Finance/MS Program in Accounting**

Eligible students can apply for admission to the Five Year **Accelerated B.S.- Finance /MS Program in**

**Accounting** during their junior year of study. Full time students may be able to complete a **BS-Finance and a M.S. in Accounting** in 5 years. For accepted students, two three (3)-credit graduate Accounting courses will replace two three (3)-credit undergraduate business electives courses in the **B.S.- Finance**. Students typically apply during their junior year of study and must meet the requirements specified below:

1. Have at least a 3.3 cumulative grade point average.
2. Completed 60 earned credit hours by the end of the Fall semester of their junior year. At least 30 credits must have been earned at CCSU.
3. Admission to School of Business Finance major.
4. Meet the MSA program admission criteria.

Students who are accepted into **Accelerated B.S.- Finance /MS Program in Accounting** will officially matriculate into the School of Graduate Studies the semester immediately following conferral of their Bachelor’s degree, even if they have already taken graduate-level courses while completing their Bachelor’s degree. Students wishing to defer their graduate studies must notify Graduate Admissions of this decision prior to the start of the term following the conferral of their bachelor’s degree.

**How to Apply**

Apply online to the School of Graduate Studies at <https://www.ccsu.edu/grad/>. Students will submit a current resume and one recommendation letter from a CCSU Finance professor by March 1st of their junior year. Instruction for submitting the recommendation letter and for uploading the resume will be found within the online **B.S.- Finance /MS Program in Accounting** application. CCSU transcripts will be obtained automatically by the Graduate Recruitment and Admissions Office.

It is highly recommended to apply early for admission to this program to receive dedicated advising.

**FRENCH, B.A.**

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A minor is required with this major.

**REQUIREMENTS: (30 CREDITS)**

**Required Courses**

FR 125	Intermediate French I	3
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FR 126	Intermediate French II	3
FR 225	Intermediate French III	3
FR 226	Intermediate French IV	3
FR 304	Introduction to French Literature or	3
FR 305	Introduction to Francophone Literature	3
FR 315	Aspects of Francophone Cultures or	3
FR 316	Contemporary France	3
	Directed electives	12

**Total Credit Hours: 30**

**GENERAL STUDIES, B.G.S.**

The Bachelor of General Studies program is a flexible degree program for students who are unable or choose not to pursue a traditional major program.

**All students who graduate with a BGS will:**

Choose 1 theme either from the following list or with the coordination of faculty advisor:

- Social and Behavioral Sciences (CLASS)
- Arts and Humanities (CLASS)
- STEM (SEST)
- People and Industry (SOB)
- Professional Studies (SEPS)

Complete 15 credits in 300-400 level classes within the theme

Complete at least 30 credits in residency at CCSU

Complete CCSU's general education program

Students must meet all academic requirements of the University, as well as all course requirements, including prerequisites and have a cumulative grade-point average of at least 2.00 to graduate..

**Application Process:**

Students must have accumulated 60 credits or more and have completed the equivalent of one semester, full-time, before they can submit an application to the BGS program.

Students will submit their application for the BGS to the Dean or Dean’s representative of the chosen theme and

then students will be assigned an appropriate faculty advisor.

Students may elect to complete a minor, but a minor is not required. Students who apply with an Associate’s Degree do not need a minor.

**Total Credit Hours: 30**

**GEOGRAPHY WITH SPECIALIZATION IN ENVIRONMENTAL GEOGRAPHY AND SUSTAINABILITY, B.A.**

A minor is required with this major.

**REQUIREMENTS: (39 CREDITS)**

**Required Courses:**

GEOG 110	Introduction to Geography	3
GEOG 130	Introduction to Geographic Information Science	3
SUST 140	Introduction to Sustainability	3

**9 credits from the following:**

GEOG 270	Geography of Hazards	3
GEOG 272	Physical Geography	3
GEOG 275/SUST 275	Soils and Vegetation Sustainability	3

GEOG 374	Climatology	3
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**6 credits from the following with three of the credits at the 300 or 400 level:**

GEOG 266	Introduction to Remote Sensing	3
GEOG 276	Elementary Cartography	3
GEOG 378	Geographic Information Systems	3
GEOG 464	GIS Applications in Resource Assessment	3
GEOG 466	Advanced Remote Sensing	3
GEOG 476	Advanced Cartography	3
GEOG 478	GIS Design and Implementation	3
GEOG 479	Geographic Information Systems Applications	3
GEOG 480	Topics in GIS	3

**15 credits from the following:**

GEOG 430	Internship in Geography	3
	or	
SUST 430	Internship in Sustainability	3
GEOG 433	Issues in Environmental Protection	3
GEOG 442	Field Methods in Geography	3
	or	
SUST 442	Field Methods in Sustainability	3
GEOG 445	Environmental Planning	3
GEOG 459	Field Studies in Regional Geography	3-6

	or		
SUST 459	Field Studies in Sustainability	3	
GEOG 472	Topics in Physical Geography	3	
	or		
SUST 472	Topics in Sustainability	3	
GEOG 473	Geography of Natural Resources	3	
GEOG 475/SUST 475	Energy Resources and Climate Change	3	

3 additional credits of GEOG or SUST electives required.  
(Couldn't enter sust elective into course list above)

**Total Credit Hours: 39**

**GEOGRAPHY WITH SPECIALIZATION IN GENERAL/REGIONAL GEOGRAPHY, B.A.**

A minor is required with this major.

**REQUIREMENTS: (39 CREDITS)**

For the B.S. in Geography (Certifiable for elementary education) students must complete the following, but must take GEOG 414 as one of their 3-credit electives in Geography.

**Required Courses:**

GEOG 110	Introduction to Geography	3	
	or		
GEOG 120	World Regional Geography	3	
GEOG 130	Introduction to Geographic Information Science	3	
	and		
	15 credits of geography electives (at least 9 at the 400 level)		

**3 credits from the following:**

GEOG 270	Geography of Hazards	3	
GEOG 272	Physical Geography	3	
GEOG 275/SUST 275	Soils and Vegetation Sustainability	3	
GEOG 374	Climatology	3	
GEOG 433	Issues in Environmental Protection	3	
GEOG 472	Topics in Physical Geography	3	
	or		
SUST 472	Topics in Sustainability	3	
GEOG 473	Geography of Natural Resources	3	
GEOG 475/SUST 475	Energy Resources and Climate Change	3	

**3 credits from the following:**

GEOG 220	Human Geography	3	
GEOG 244	Economic Geography	3	

GEOG 290	Geography of Tourism	3	
GEOG 291	National Parks and World Heritage Sites	3	
GEOG 333	Political Geography	3	
GEOG 451	Tourism Development in Southern New England	3	
GEOG 453	Recreation and Resort Planning	3	
GEOG 454	Geography of Tourism Marketing	3	
GEOG 455	New Directions in Tourism	3	
GEOG 470	Geography of Health & Disease	3	

**3 credits from the following:**

GEOG 241	Introduction to Planning	3	
GEOG 439	Urban Geography	3	
GEOG 441	Community & Regional Planning	3	
GEOG 445	Environmental Planning	3	
GEOG 450	Tourism Planning	3	
GEOG 483	Topics in Planning	3	

**3 credits from the following:**

GEOG 266	Introduction to Remote Sensing	3	
GEOG 276	Elementary Cartography	3	
GEOG 378	Geographic Information Systems	3	
GEOG 442	Field Methods in Geography	3	
	or		
SUST 442	Field Methods in Sustainability	3	
GEOG 460	GIS Applications in Crime Mapping	3	
GEOG 463	GIS Applications in Public Health	3	
GEOG 464	GIS Applications in Resource Assessment	3	
GEOG 466	Advanced Remote Sensing	3	
GEOG 468	GIS Applications in Urban Planning	3	
GEOG 476	Advanced Cartography	3	
GEOG 478	GIS Design and Implementation	3	
GEOG 479	Geographic Information Systems Applications	3	
GEOG 480	Topics in GIS	3	

**6 credits from the following:**

GEOG 330	United States and Canada	3	
GEOG 434/LAS 434	Mexico, Central America, and the Caribbean	3	
GEOG 435	Japan and Korea	3	
GEOG 436/LAS 436	South America	3	
GEOG 437	China	3	
GEOG 446	Sub-Saharan Africa	3	
GEOG 448	Russia and Neighboring Regions	3	
GEOG 444	European Union	3	
GEOG 459	Field Studies in Regional Geography	3-6	
	or		
SUST 459	Field Studies in Sustainability	3	
GEOG 481	Topics in Regional Geography	3	

GEOG 447 Geographic Perspective on Israel/Palestine 3

**Total Credit Hours: 39**

All elementary education students selecting this program will take GEOG 414 as one of their 3-credit electives in geography.

Acceptable substitutes for GEOG 430 will be jointly determined by student and advisor. When approved in advance by the student's advisor, up to 6 credits of cognate courses in one or two other disciplines may be applied toward the major in geography.

**GEOGRAPHY WITH SPECIALIZATION IN GEOGRAPHIC INFORMATION SCIENCE, B.A.**

A minor is required with this major.

**REQUIREMENTS: (39 CREDITS)**

**Required Courses (15 cr)**

GEOG 110	Introduction to Geography	3
	or	
GEOG 120	World Regional Geography	3
GEOG 130	Introduction to Geographic Information Science	3
GEOG 276	Elementary Cartography	3
GEOG 378	Geographic Information Systems	3
GEOG 430	Internship in Geography	3

**Elective Courses (18 cr)**

GEOG 266	Introduction to Remote Sensing	3
GEOG 442	Field Methods in Geography	3
GEOG 460	GIS Applications in Crime Mapping	3
GEOG 463	GIS Applications in Public Health	3
GEOG 464	GIS Applications in Resource Assessment	3
GEOG 466	Advanced Remote Sensing	3
GEOG 468	GIS Applications in Urban Planning	3
GEOG 476	Advanced Cartography	3
GEOG 478	GIS Design and Implementation	3
GEOG 479	Geographic Information Systems Applications	3
GEOG 480	Topics in GIS	3
	6 credits in geography electives (at least 3 of which must be at 400 level).	

**Geography Electives (6 cr)**

6 credits in geography electives (at least 3 of which must be at 400 level).

**Total Credit Hours: 39**

**GEOGRAPHY WITH SPECIALIZATION IN PLANNING, B.A.**

A minor is required with this major.

**REQUIREMENTS: (39 CREDITS)**

**Required Courses:**

GEOG 110	Introduction to Geography	3
GEOG 130	Introduction to Geographic Information Science	3
GEOG 241	Introduction to Planning	3
GEOG 244	Economic Geography	3
GEOG 430	Internship in Geography	3
GEOG 441	Community & Regional Planning	3
GEOG 439	Urban Geography	3

**12 credits from the following:**

GEOG 433	Issues in Environmental Protection	3
GEOG 445	Environmental Planning	3
GEOG 450	Tourism Planning	3
GEOG 473	Geography of Natural Resources	3
GEOG 483	Topics in Planning	3
	Geography electives	6

STAT 104 or STAT 215 is also required.

**Total Credit Hours: 39**

Completion of a minor is required, except for elementary education students. Certain minors are especially recommended by the department, depending on the career track chosen by the student. We also encourage participation in CCSU's Cooperative Education program.

**GEOGRAPHY WITH SPECIALIZATION IN TOURISM, B.A.**

A minor is required with this major.

**REQUIREMENTS: (39 CREDITS)**

**Required Courses:**

GEOG 110	Introduction to Geography	3
GEOG 120	World Regional Geography	3
GEOG 130	Introduction to Geographic Information Science	3
GEOG 430	Internship in Geography	3
	3 credits of geography electives and 3 credits of THS electives	

**15 credits from the following:**

GEOG 290	Geography of Tourism	3
GEOG 291	National Parks and World Heritage Sites	3

GEOG 450	Tourism Planning	3
GEOG 451	Tourism Development in Southern New England	3
GEOG 453	Recreation and Resort Planning	3
GEOG 454	Geography of Tourism Marketing	3
GEOG 455	New Directions in Tourism	3
GEOG 456	Tourism Management	3
<b>3 credits from the following:</b>		
GEOG 330	United States and Canada	3
GEOG 434/LAS 434	Mexico, Central America, and the Caribbean	3
GEOG 435	Japan and Korea	3
GEOG 436/LAS 436	South America	3
GEOG 437	China	3
GEOG 438	Australia, New Zealand, and Oceania	3
GEOG 444	European Union	3
GEOG 446	Sub-Saharan Africa	3
GEOG 448	Russia and Neighboring Regions	3
GEOG 459	Field Studies in Regional Geography	3-6
SUST 459	Field Studies in Sustainability	3
GEOG 447	Geographic Perspective on Israel/Palestine	3

<b>3 credits from the following:</b>		
GEOG 270	Geography of Hazards	3
GEOG 272	Physical Geography	3
GEOG 275/SUST 275	Soils and Vegetation Sustainability	3
GEOG 374	Climatology	3
GEOG 472	Topics in Physical Geography	3
SUST 472	Topics in Sustainability	3
GEOG 473	Geography of Natural Resources	3
GEOG 475/SUST 475	Energy Resources and Climate Change	3

**Total Credit Hours: 39**

**GERMAN, B.A.**

**The BA in German has been closed; no further students will be admitted to the program.**

A minor is required with this major.

**REQUIREMENTS: (30 CREDITS)**

**Required Courses:**

GER 125	Intermediate German I	3
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GER 126	Intermediate German II	3
GER 225	Intermediate German III	3
GER 226	Intermediate German IV	3
GER 315	German Civilization to 1800 or	3
GER 316	German Civilization from 1800 to Present	3
Directed electives		12

**Total Credit Hours: 30**

**GRAPHIC/INFORMATION DESIGN, B.A.**

A minor is not required with this major.

The BA degree in Graphic/Information Design provides professional studies in the areas of graphic design, website design, interactive multimedia design, information design and digital and 3-D imaging.

**REQUIREMENTS: (36 CREDITS)**

**Required Courses:**

DES 222	Graphic/Information Design I	3
DES 225	History & Design of Typography	3
DES 322	Graphic/Information Design II	3
DES 325	Digital Imaging / Motion Graphics I	3
DES 326	Digital Imaging / Motion Graphics II	3
DES 419	History of Design	3
DES 425	3-D and AV/VR for Graphic/Information Design	3
DES 436	Graphic/Information Design III	3
DES 438	Graphic/Information Design IV	3
DES 499	Computer Applications for Graphic/Information Design	3
MKT 306	Advertising and Promotion	3
Directed Elective Approved by your Advisor (3 credits)		3

**Subtotal: 36**

**Additionally Required:**

ART 110	Introduction to Art History	3
or		
ART 112	History of Art I	3
or		
ART 113	History of Art II	3
ART 130	Drawing I	3
ART 224	Illustration I	3
MKT 295	Fundamentals of Marketing	3
Directed Elective Approved by your Advisor (3 credits)		3

Note: Students must complete a standard minor or 18 credits of major-related courses as approved by advisor. Students are limited to 6 credits of design-designated coursework per semester without approval of advisor and department chair.

## **GRAPHICS TECHNOLOGY, B.S.**

The Graphics Technology program covers digital graphics, print media, digital media workflow processes from design (pre-press) to production, including computer networking and information technology infrastructure which is becoming very important. Additionally, the degree focuses on the workflow core and workflow automation options for multiple forms of digital media production processes. Digital pre-media, digital printing, color reproduction, digital photography, graphic management information systems, press and post-press operations, as well as science and analytical mathematics, supplemental computer related courses, business and management courses, round out the curriculum. All of the courses allow digital media content to be created and shared via computer-based publications, printed materials, interactive formats, as well as emerging digital print/package media technologies.

### **GENERAL EDUCATION (44)**

#### **Study Area I -Arts and Humanities**

	Literature (I)	3
ART 120	Design I	3
	Elective	3

#### **Study Area II - Social Sciences**

	History (I)	3
ECON 200	Principles of Macroeconomics	3
	or	
ECON 201	Principles of Microeconomics	3
	Elective	3

#### **Study Area III - Behavioral Sciences**

TM 190	Global Quality Management Systems	3
	Elective	3

#### **Study Area IV - Natural Scientific**

PHYS 111	Introductory Physics I	3
CHEM 161	General Chemistry	3

#### **Skill Area I - Communication Skills**

WRT 105	Enhanced Introduction to College Writing	3
	or	
WRT 110	Introduction to College Writing	3

ENGR 290	Engineering Technical Writing and Presentation	3
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#### **Skill Area II - Mathematical**

STAT 104	Elementary Statistics	3
MATH 116	Pre-Calculus Mathematics	3
	or	
MATH 123	Applied Business Mathematics	3

#### **Skill Area III - Foreign Language**

See University Catalog

#### **Skill Area IV - Univ. Requirements**

PE 144	College Wellness	2
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### **MAJOR REQUIREMENTS (52)**

Student must complete 1 technical track of the 2 tracks = 15 credits

#### **Required Courses**

CS 110	Introduction to Web Programming	3
CET 113	Introduction to Information Processing	3
CEGT 200	Seminar	1
CEGT 400	Internship and Senior Seminar	3
TM 190	Global Quality Management Systems	3
TM 362	Leading Project Teams	3
AC 210	Accounting for Decision-Making	3
	or	
AC 211	Introduction to Financial Accounting	3
MGT 295	Fundamentals of Management and Organizational Behavior	3
MKT 295	Fundamentals of Marketing	3
GRT 112	Digital Imaging for Graphics Technology	3
GRT 212	Graphics Technology Systems	3
GRT 242	Creative Media Industries Experience I	3
GRT 272	Packaging Technology	3
GRT 342	Screen & Specialty Printing Manufacturing	3
GRT 352	Color Management & Analysis	3
GRT 362	Estimating & Scheduling for Graphics Technology	3
GRT 442	Print Production	3
GRT 422	Print and Package Distribution	3
GRT 462	Workflow Automation	3

#### **Networking Information Technology Track (15 credits)**

CET 179	Basic Network Administration	3
CET 229	Computer Hardware Architecture	3

CET 249	Introduction to Networking Technology	3
CET 339	Computer System Administration	3
CET 349	Network Design and Implementation	3

**Interactive Computer Graphics Technology Track (15 credits)**

CS 113	Introduction to Computer Programming	3
GRT 222	2D Animation for Graphics Technology	3
GRT 232	Introduction to 3D Animation Technology	3
GRT 332	Advanced 3D Modeling & Animation Technology	3
GRT 432	Customization & Development in Animation Technology	3

**Total Credit Hours: 120**

Electives to 9 credit hours to meet 120 credits for the program.

**HISTORY, B.A.**

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A minor is required with this major.

**REQUIREMENTS (39 CREDITS)**

12 credits must be completed in 400-level history courses.

**Core (9 credits)**

HIST 101	History Matters	1
HIST 301	The Historical Imagination	4
HIST 490	Senior Seminar	4

HIST 101: History Matters (1 credit)

HIST 301 taken prior to the first 400-level history course

HIST 490 taken after 24 credits of history courses, including HIST 301, and 6 credits of history courses at the 400-level

**100/200 Level Courses (6 credits)**

**Non-Western above 100 level (6 credits)**

**European above 100 level (6 credits)**

**U.S. above 100 level (6 credits)**

**Electives (6 credits)**

**Total Credit Hours: 39**

**INTERNATIONAL STUDIES, B.A.**

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International Studies is an interdisciplinary program designed to build student expertise in particular world

regions and/or about diverse international issues including globalization, diversity, migration, international law, conflict resolution, economic development, environmental policy, and the roles of gender, race, language, and class in international contexts.

The International Studies BA program is oriented to produce individuals competent to understand the interrelated nature of global phenomena and confident in their membership in a community of global citizens. At the same time, each undergraduate specializes in a particular world area or a global theme. Students enrolled in the International Studies BA program will:

1. describe histories, institutions, values, and norms of various cultures;
2. analyze issues from the perspectives of other cultural traditions;
3. apply theories in international studies to interpret current global issues;
4. defend views on international cultures or issues with clear and well-reasoned arguments.

A BA degree in International Studies prepares students for a range of career opportunities in education, government, in non-profit foundations and NGOs, in for-profit entities, and in a wide range of other institutions and enterprises offering services transnationally or otherwise working in global environments.

**MAJOR REQUIREMENTS (39 CREDITS):**

**1. CORE CURRICULUM (18 CREDITS)**

**Required Course:**

IS 225	The World as a Total System	3
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**and 6 credits from:**

IS 150	Introduction to International Studies	3
GEOG 120	World Regional Geography	3
HIST 122	World Civilization II	3
PS 104	The World's Political Systems	3

**Research Methods Course**

IS 400	Practicing International Studies	3
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**and at least 3 credits**

from community engagement (IS 300), an experience abroad (IS 360, IS 490, or other) or an internship (IS 450).

IS 300/CEN 300	Global Community Engagement	3
IS 360/HUM 360	International Studies Through Travel	3 OR 6

IS 450	Internship in International Studies	3
IS 490	Field Study Abroad	3-6

**Senior Capstone**

Students are required to take either IS 498 Research in International Studies or IS 499 International Studies Senior Project.

IS 498	Research In International Studies	3
IS 499	International Studies Senior Project	3

**2. GEOGRAPHICAL AREAS AND THEMES IN GLOBAL STUDIES (21 CREDITS)**

Students will select 21 credits from one of the programs below, in order to follow one of the following tracks: African Studies (2a), or Global Studies (2a), European Studies (2a), Latin American Studies (2a), Middle Eastern Studies (2a), or Global Studies (2b).

**2A. GEOGRAPHICAL AREA STUDIES:**

Students will take 15 credits in one regional specialization and 6 credits in one global theme, or as approved by the advisor. 9 credits must be at the 300- or 400-level. Not more than 9 credits may come from the same discipline (designator). Courses listed below are for advisory purposes only. Additional courses may be identified with the approval of the advisor.

**Africa**

ANTH 416	Archaeology of Africa	4
ANTH 424	Peoples and Cultures of Africa	4
FR 305	Introduction to Francophone Literature	3
FR 315	Aspects of Francophone Cultures	3
GEOG 446	Sub-Saharan Africa	3
HIST 271	Introduction to African History and Culture	3
HIST 376	History of Africa since 1800	3
HIST 432	History of South Africa	3
IS 461	Topics in African Studies	3
PHIL 260/AFAM 260	African Philosophy	3
PS 421	Government and Politics of Africa	3
PS 434	Government and Politics of the Middle East and North Africa	3

**East Asia**

ANTH 423	Vietnam, A Country, Not a War	4
ART 412	Asian Art	3
CHIN 304	Topics in Chinese Literature	3
CHIN 315	Topics in Chinese Culture	3
GEOG 435	Japan and Korea	3

GEOG 437	China	3
HIST 252	East Asia since 1800	3
HIST 353	History of Modern China	3
HIST 354	History of Modern Japan	3
HIST 422	Topics in Japanese History	3
IS 462	Topics in East Asian Studies	3
PHIL 250	Introduction to Asian Philosophy	3
PHIL 275	Chinese Philosophy	3
PHIL 350	Philosophy East & West	3
PHIL 375	Japanese Philosophy	3
PHIL 376	Buddhist Philosophy	3
PS 425	Asian Politics	3
REL 250	Japanese Religion	3

**Europe**

ENG 365	The Modern European Novel	3
FR 304	Introduction to French Literature	3
FR 305	Introduction to Francophone Literature	3
FR 315	Aspects of Francophone Cultures	3
FR 316	Contemporary France	3
GEOG 444	European Union	3
GEOG 448	Russia and Neighboring Regions	3
GER 304	Introduction to German Literature I	3
GER 305	Introduction to German Literature II	3
GER 316	German Civilization from 1800 to Present	3
HIST 234	Modern Europe	3
HIST 343	Modern Ireland: 1690-Present	3
HIST 344	History of Modern Germany	3
HIST 348	History of Russia II	3
HIST 356	History of East Central Europe since 1919	3
HIST 380	Modern Poland	3
HIST 415	The Cold War in the United States and Europe	3
HIST 442	Absolutism and Enlightenment in Europe	3
HIST 443	Revolution and Reformation in Europe	3
HIST 444	Mass Politics and Total War in Europe	3
HIST 447	History of the Soviet Union	3
HIST 448	Stalin and Stalinism	3
HIST 452	World War II in Europe	3
IS 463	Topics in European Studies	3
ITAL 304	Introduction to Italian Literature I	3
ITAL 305	Introduction to Italian Literature II	3
ITAL 316	Italian Civilization from 1861 to the Present	3



ITAL 488	Italian Life and Culture	3
PHIL 330	Early Modern Philosophy	3
PHIL 332	19th Century Philosophy	3
PHIL 366	Existentialism	3
PS 336	West European Governments	3
PS 435	Central and Eastern European Politics	3
SPAN 304	Introduction to Spanish Literature I	3
SPAN 305	Introduction to Spanish Literature II	3
SPAN 315	Spanish Civilization	3
SPAN 451	Introduction to Spanish Linguistics	3
<b>Latin America</b>		
ANTH 428/LAS 428	Cultures of Latin America	4
GEOG 434/LAS 434	Mexico, Central America, and the Caribbean	3
GEOG 436/LAS 436	South America	3
HIST 281/LAS 281	History of Latin America to 1823	3
HIST 282/LAS 282	History of Latin America since 1823	3
HIST 383	History of Brazil	3
HIST 384	Portugal in Brazil	3
HIST 455	Topics in Latin American History	3
HIST 460	African Enslavement in the Americas	3
IS 240	Caribbean Cultures	3
IS 245	Puerto Rico	3
IS 464	Topics in Latin American Studies	3
PS 420/LAS 420	Government and Politics of Latin America	3
SPAN 316/LAS 316	Latin American Civilization	3
SPAN 375/LAS 375	Introduction to Spanish American Literature I	3
SPAN 376/LAS 376	Spanish American Literature II	3
<b>Middle East</b>		
GEOG 447	Geographic Perspective on Israel/Palestine	3
HIST 231	Ancient Mediterranean World	3
IS 465	Topics in Middle East Studies	3
PS 345	Terrorism	3
PS 370	Arab Uprisings	3
PS 434	Government and Politics of the Middle East and North Africa	3
PS 439	U.S. Middle East Policy	3

**2B. GLOBAL STUDIES:**

Students will take 15 credits in a particular global theme, and 6 credits in one geographical area, or as approved by the advisor. 9 credits must be at the 300- or 400-level. Not more than 9 credits may come from the same discipline (designator). Courses listed below are for **advisory** purposes only. Additional courses may be identified with the approval of the advisor.

**Communication and Diversity in the Global Context**

ANTH 170	Introduction to Cultural Anthropology	3
ANTH 200/AFAM 200	Dimensions of Diversity and Inequality	3
ANTH 239	Economic Anthropology	3
ANTH 240	The Supernatural	3
ART 200	Introduction to Global Art	3
COMM 216	Introduction to Intercultural Communication	3
ENG 214	Studies in International Literature	3
ENG 367	Global Novel	3
ENG 465/CINE 465	Global Cinema	3
ENG 486	World Literature and Film	3
IS 470	Topics in Global Studies	3
JRN 370	Global News in Context	3
LING 230	The Study of Language	3
MUS 111	Music of the World's People	3
PHIL 350	Philosophy East & West	3
PSY 420	Cross-Cultural Psychology	3
REL 110	World Religions	3
SPAN 441	Cross-Cultural Communication	3

**Energy, Resources, and Environment**

COMM 451	Environmental Communication	3
GEOG 270	Geography of Hazards	3
GEOG 433	Issues in Environmental Protection	3
GEOG 445	Environmental Planning	3
GEOG 473	Geography of Natural Resources	3
GEOG 475/SUST 475	Energy Resources and Climate Change	3
ESCI 131	Environmental Earth Science	3
GSCI 450	Environmental and Engineering Geology	3
IS 470	Topics in Global Studies	3
PHIL 241	Environmental Ethics	3
SUST 140	Introduction to Sustainability	3

**Governance, Security, and Human Rights**

GEOG 333	Political Geography	3
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HIST 420	Imperialism	3
IS 470	Topics in Global Studies	3
PES 202/PSY 202	Peace Psychology	3
PES 345/PHIL 345	Philosophy of War and Peace	3
PHIL 211/PES 210	Philosophy & Global Justice	3
PHIL 344	Topics in Philosophical & Social Justice	3
PS 235	International Relations	3
PS 338	International Organization	3
PS 339	International Law	3
PS 345	Terrorism	3
PS 380	International Conflict and Security	3
PS 445	Public Policy Analysis and Evaluation	3
PS 450	Public Sector Ethics	3
SOC 424	Genocide and the Modern World	4
<b>Population, Mobility, and Development</b>		
ANTH 352	Ethnicity and Ethnic Identity	3
ANTH 401	City Life & Culture	4
ECON 320	Globalization Issues	3
ECON 430	International Economics	3
ECON 435	Economic Development	3
GEOG 160	Geography of Global Contemporary Migration	3
GEOG 220	Human Geography	3
GEOG 244	Economic Geography	3
GEOG 439	Urban Geography	3
IS 470	Topics in Global Studies	3
MKT 295	Fundamentals of Marketing	3
MKT 321	International Marketing	3
SOC 422	Sociology of U.S Immigration	4
SOC 428	Globalization and Its Discontents	4

**LANGUAGE REQUIREMENT:**

The International Studies BA program requires that all students have a level of proficiency in reading, writing, speaking, and understanding of a single world language relevant to the Concentration, equal to the completion of the 126-level (226-level for French, Italian, or Spanish). Fulfillment of this requirement will be determined by a CCSU instructor of the language, the Chair of the World Languages, Literatures, and Cultures Department, or a CCSU faculty member designated by the Director of International Studies.

**MINOR REQUIREMENT:**

A minor is required of this major. International Studies majors are encouraged to minor in a world

language relevant to their Concentration, however, any minor may be selected. Double majors are exempt from a minor.

**Total Credit Hours: 57**

**ITALIAN, B.A.**

A minor is required with this major.

**REQUIREMENTS: (30 CREDITS)****Required Courses:**

ITAL 125	Intermediate Italian I	3
ITAL 126	Intermediate Italian II	3
ITAL 225	Intermediate Italian III	3
ITAL 226	Intermediate Italian IV	3
ITAL 304	Introduction to Italian Literature I	3
	or	
ITAL 305	Introduction to Italian Literature II	3
ITAL 315	Italian Civilization to 1861	3
	or	
ITAL 316	Italian Civilization from 1861 to the Present	3
	Directed electives	12

**Total Credit Hours: 30**

**JOURNALISM, B.A.**

A minor is required with this major.

The BA in Journalism is a 40-credit program that prepares students for entry into journalism and related fields where information-gathering, writing, editing, and awareness of public affairs are important. Students choose one of three tracks, print/digital, broadcast, or sports journalism, but all students receive training in multimedia reporting. Resources such as the Robert Vance Endowed Chair in Journalism and Mass Communication allow the program to bring in visiting professionals on a regular basis to supplement the curriculum. A PORTFOLIO IS REQUIRED.

**REQUIREMENTS: (40 CREDITS)****1. Common Core : 25 credits****Students must take**

JRN 200	Introduction to Journalism	3
JRN 235	News Writing and Reporting I	3
JRN 237	Introduction to the Profession	1
JRN 255	Multimedia Journalism	3
JRN 336	News Writing and Reporting II	3
JRN 383	Responsibilities of Journalism	3
JRN 384	Journalism History	3
JRN 412	Editing	3

**and three credits from the following:**

JRN 370	Global News in Context	3
JRN 400	Journalism Theory	3

**Important Notes:**

JRN 200: prereq. WRT 110

JRN 235: To be taken concurrently with JRN 255

JRN 255: To be taken concurrently with JRN 235

**2. Three Sequences: Print/Digital, Broadcast, Sports Journalism**

**Print /Digital sequence: 15 credits**

**a. Required: Two courses from the following:**

JRN 371	Reporting Cultural Diversity	3
JRN 380	Feature Writing	3
JRN 381	Opinion Writing	3
WRT 382	Travel Writing	3
JRN 385	Social Media and Mobile Journalism	3
JRN 416	Magazine Writing	3
JRN 418	Studies in Journalism	3

Students may take JRN 418 twice provided the courses are on different topics.

Students may take JRN 450 more than once for electives.

Students may take JRN 495 Internship twice if venue is different.

**b. Nine credits of directed electives chosen in consultation with a faculty advisor.**

Any JRN course numbered 200-499 may be taken as an elective in any of the sequences. Up to 6 credits of courses other than JRN may be taken as electives with an advisor's approval.

**Broadcast sequence: 15 credits**

**a. Required:**

JRN 340	Introduction to Broadcast News	3
JRN 385	Social Media and Mobile Journalism	3
JRN 440	TV News Practicum	4

**b. Five credits of directed electives chosen in consultant with a faculty advisor.**

Any JRN course numbered 200-499 may be taken as an elective in any of the sequences. Up to 6 credits of courses other than JRN may be taken as electives with an advisor's approval.

JRN 495	Internship in Journalism	3
JRN 350	Professional Seminar	1

JRN 385	Social Media and Mobile Journalism	3
JRN 498	Capstone Preparation	1
JRN 499	Capstone	3

**Sports Journalism: 15 credits**

**a. Required:**

JRN 360	Multimedia Sports Journalism	3
JRN 361	Data Analysis for Sports Journalism	3
JRN 462	Issues in Sports Journalism	3

**b. Six credits of directed electives in consultation with advisor.**

Any JRN course numbered 200-499 may be taken as an elective in any of the sequences. Up to 6 credits of courses other than JRN may be taken as electives with an advisor's approval.

**JOURNALISM MAJOR- GENERAL EDUCATION REQUIREMENTS**

**In Study Area 2:**

HIST 161	American History to 1877	3
	or	
HIST 162	American History from 1877 to Present	3

**In Study Area 3:**

PS 110	American Government & Politics	3
	or	
PS 230	American State and Local Government	3

**In Skill Area 2:**

STAT 104	Elementary Statistics	3
	or	
STAT 215	Statistics for Behavioral Sciences I	3

**To meet the EJI requirement**

JRN 371	Reporting Cultural Diversity	3
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JRN 371 or EJI designated course in another discipline.

**Total Credit Hours: 40**

Any JRN course numbered 200-499 may count toward the JRN Major.

**MANAGEMENT, B.S.**

A minor is not required with this major.

School of Business Admission Requirements

**REQUIREMENTS**

Students in the management major must complete the 27-credit common business core requirements and 30 credits of management major requirements:

**Common Business Core (27 Credits)**

AC 211	Introduction to Financial Accounting	3
AC 212	Introduction to Managerial Accounting	3
FIN 295	Managerial Finance	3
LAW 250	The Legal and Ethical Environment of Business	3
MC 207	Managerial Communication I	3
MGT 295	Fundamentals of Management and Organizational Behavior	3
MIS 201	Introduction to Management Information Systems	3
MKT 295	Fundamentals of Marketing	3
BUS 480	Capstone Seminar	0
MGT 480	Strategic Management	3

**Additional Requirements (6 Credits)**

BUS 250	Introduction to Business Analytics and Skills	3
STAT 201	Business Statistics II	3

**The management major includes four options:**

- Management major with a concentration in General Management
- Management major with a concentration in Human Resource Management
- Management major with a concentration in Small Business Management and Entrepreneurship
- Management major with a concentration in International Business (suspend concentration for 3 years)

Management majors select one of the four aforementioned options and complete requirements specified for the selected option.

**Management Common Core (9 Credits)**

MGT 305	Human Resource Management	3
MGT 326	Business Organizational Behavior	3
MGT 333	Operations Management	3

**MANAGEMENT MAJOR WITH A CONCENTRATION IN GENERAL MANAGEMENT:****General Management Concentration Core:**

MGT 321	International Management	3
MGT 330/ENT 330	Entrepreneurship and New Venture Creation	3
MGT 345	Organizational Analysis & Change Management	3
MGT 403	Ethical and Social Issues for the Manager	3

**Business Electives:**

Students must select 9 credits of 300- or 400-level School of Business courses in consultation with a Department of Management faculty advisor. These 9 credits are selected from courses in AC, ENT, FIN, LAW, MGT, MIS, and MKT courses. These courses are completed after satisfying all course prerequisites for each course.

**MANAGEMENT MAJOR WITH A CONCENTRATION IN HUMAN RESOURCE MANAGEMENT:**

For students interested in preparing for careers in human resource management or personnel administration in a variety of business and non-business settings.

All students who choose the human resource concentration may take courses only after meeting with a Department of Management faculty advisor and adopting a planned program.

**Human Resource Management Concentration Core:**

MGT 345	Organizational Analysis & Change Management	3
MGT 425	Labor/Management Relations	3
MGT 431	Compensation and Benefits	3
MGT 432	Human Resource Development and Training	3
MGT 460	Staffing	3

**Business Electives:**

Students must select 6 credits of 300- or 400-level School of Business courses in consultation with a Department of Management faculty advisor. These 6 credits are selected from AC, ENT, FIN, LAW, MGT, MIS, and MKT courses. Courses are completed after satisfying all course prerequisites for each course.

**MANAGEMENT MAJOR WITH A CONCENTRATION IN SMALL BUSINESS MANAGEMENT AND ENTREPRENEURSHIP:**

Prepares students for entrepreneurial careers in new venture creation, managing family-owned or other small business enterprises, or working in an entrepreneurial capacity (product development, business development, cross-discipline leadership, etc.) for existing firms. This concentration provides a basic foundation in the knowledge necessary to search for and evaluate new venture opportunities, and to finance, operate, and manage new or growing businesses. Students are required to complete a field study experience.

Students must complete the School of Business 27-credit common business core plus the following 30 credits.

Students should meet with a faculty advisor before declaring a Concentration or Minor in Entrepreneurship.

**Small Business Management and Entrepreneurship Concentration Core:**

ENT 330/MGT 330	Entrepreneurship and New Venture Creation	3
ENT 350/MGT 350	Financing Entrepreneurial Ventures	3
ENT 355/MGT 355	Managing a Growing Business	3
ENT 475	New Venture Challenge: Lean Launch Methodology	3
ENT 499	Field Study in Entrepreneurship	3

**Business Electives:**

Students must complete 6 credits of 300- or 400-level courses offered by the School of Business courses, to be determined in consultation with a Department of Management faculty advisor. These courses are selected from AC, ENT, FIN, LAW, MGT, MIS, and MKT courses.

**MANAGEMENT MAJOR WITH A CONCENTRATION IN INTERNATIONAL BUSINESS:**

**Concentration is suspended for 3 years**

The Management Major with a Concentration in International Business prepares its graduates for advanced graduate study and for entry-level positions in global and international business enterprises. The program provides students with a broad general education which includes language, culture and international courses and, at the same time, provides students with a core of international business courses and selected concentrations in the functional business areas. Students will be provided with study abroad opportunities.

Students are required to take the general education requirements, free elective requirements, and the business core requirements as all management majors. In addition, the students are required to complete:

**Required core courses:**

MGT 321	International Management	3
MKT 321	International Marketing	3
FIN 330	International Finance	3
MGT 495	Seminar in International Business	3
ECON 430	International Economics	3
	or	
ECON 435	Economic Development	3

MGT 395	Field Studies in International Business	3
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**Functional Specialization:**

Three courses (9 credits) from one of five functional specialization areas:

**Accounting:**

AC 300	Intermediate Accounting I	3
AC 301	Cost Management Systems	3
AC 312	Intermediate Accounting II	3

or  
AC 300 plus two additional courses selected after consulting a faculty advisor in accounting

**Finance:**

FIN 301	Intermediate Managerial Finance	3
FIN 310	Principles of Investments	3
FIN 320	Financial Markets and Institutions	3

**Management Information Systems:**

MIS 305	E-Business	3
MIS 315	Database Management Systems	3
MIS 361	Systems Analysis and Design for Business	3

or

MIS 400	Business Analytics and Decision Support	3
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**Marketing:**

MKT 305	Consumer Behavior	3
MKT 373	Marketing Research	3
	and any other MKT electives (3 cr)	3

**Management/Entrepreneurship:**

(From recommended. not required, lists)

**Business electives:**

Two courses from among upper-division Business School courses, or, with Management Department advisor's approval, I-designated courses.

**Total Credit Hours: 30**

**MANAGEMENT INFORMATION SYSTEMS, B.S.**

A minor is not required with this major.

School of Business Admission Requirements

**REQUIREMENTS (57 CREDITS)**

Students must complete the 27-credit common business core requirements plus the following 30 credits:

**Common Business Core (27 Credits):**

AC 211	Introduction to Financial Accounting	3
AC 212	Introduction to Managerial Accounting	3
BUS 480	Capstone Seminar	0
FIN 295	Managerial Finance	3
LAW 250	The Legal and Ethical Environment of Business	3
MC 207	Managerial Communication I	3
MGT 295	Fundamentals of Management and Organizational Behavior	3
MGT 480	Strategic Management	3
MIS 201	Introduction to Management Information Systems	3
MKT 295	Fundamentals of Marketing	3

**Management Information Systems Core (21 Credits)**

MIS 202	Introduction to the Application of Artificial Intelligence	3
MIS 300	IT Project Management I	3
MIS 310	Contemporary Business Applications Development I	3
MIS 315	Database Management Systems	3
MIS 361	Systems Analysis and Design for Business	3
MIS 395	Business-Driven Infrastructure Design	3
MIS 399/BUS 370	Business Analytics and Decision Support	3

All MIS majors must select 3 electives from the following list (9 credits). Please consult your academic advisor and select courses based on your career goals.

**Directed Electives**

MIS 412	Contemporary Business Applications Development II	3
MIS 416	Advanced Database Management Systems	3
MIS 450	IT Governance and Strategy	3
MIS 460	Emerging Technologies for Business	3
MIS 462	IT Project Management II	3
MIS 463	Analytics Applications	3
MIS 464	Information Systems Security and Assurance for Business	3
MIS 466	Enterprise Systems	3
MIS 494	Independent Study in Management Information Systems	3-6
MIS 496	Practicum in Management Information Systems	3
MIS 498	Information and Decision Sciences	3

Seminar

**Additional Requirements**

BUS 250	Introduction to Business Analytics and Skills	3
STAT 201	Business Statistics II	3

**Total Credit Hours: 57****MANUFACTURING ENGINEERING TECHNOLOGY, B.S.**

A minor is not required with this major.

Accredited by ETAC of ABET

This major develops concepts employed by manufacturing industries to increase productivity, reduce cost, and efficiently use tools and machinery. Emphasis is on the areas of manufacturing, process planning, CAD/CAM, production techniques, and the application of mathematics and computers. Students must complete the coursework in four categories: general education, major requirements, directed electives, and additional requirements.

**For all majors a minimum grade of C- is required in all courses in the major, all additional course requirements as well as courses in Study Area IV, Skill Area I, and Skill Area II**

**REQUIREMENTS****Core Requirements**

ENGR 150	Introduction to Engineering	3
ME 216	Manufacturing Engineering Processes	2
ME 217	Manufacturing Engineering Processes Lab	1
ET 251	Applied Mechanics I - Statics	3
ET 252	Applied Mechanics II - Dynamics	3
ET 357	Strength of Materials	3
ET 361	Engineering Technology Instrumentation	3
ET 399	Engineering Economy	3
ETM 260	Computer Aided Design and Integrated Manufacturing CAD/CAM/CIM	3
ETM 340	Geometric Dimensioning & Tolerancing	3
ETM 356	Materials Analysis	3
ETM 360	Computer Aided Planning (CAP)	3
ETM 461	Composites and Plastics Manufacturing Processes	3
ETM 462	Manufacturing Process Planning and Estimating	3

ETM 466	Design for Manufacture	3
ETM 497	Engineering Technology Senior Project Research	2
ETM 498	Engineering Technology Senior Project (Capstone)	2

**Directed Technical Electives (6 to 7 credits)**

The following courses, selected in consultation with an academic adviser, satisfy the directed technical electives requirement (6 to 7 credits):

ET 300	Ergonomics	3
ET 495	Topics in Engineering Technology	3
ETM 358	Applied Thermodynamics	3
ETM 367	Machine Design	3
ETM 463	Plastics and Composite Tool Design	3
ETM 467	Applied Finite Element Analysis	3
ETM 468	Composite Design & Analysis	3
ENGR 490	Fundamentals of Engineering (FE)	3
ETM 464	CAD Solid Modeling and Design	3
ME 217	Manufacturing Engineering Processes Lab	1
MM 390	Lean Operation Management	3

**Additional Requirements**

CET 236	Circuit Analysis	3
CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
ENGR 240	Computational Methods for Engineering	3
ET 354	Applied Fluid Mechanics	3
MM 121	Mechanical CAD	3
MM 226	Principles of Computer Numerical Control (CNC)	3
MM 236	Tool Design	3
MATH 119	Pre-Calculus with Trigonometry or	4
MATH 116	Pre-Calculus Mathematics	3
ROBO 420	Manufacturing Automation	3
STAT 104	Elementary Statistics	3
TM 464	Six Sigma Quality	3

**GENERAL EDUCATION REQUIREMENTS FOR ENGINEERING TECHNOLOGY (ET) MAJORS (44-49 CREDITS)**

**Study Area I: Arts and Humanities**

Literature (3)	3
Philosophy or Fine Arts (3)	3
Literature, Philosophy or Fine Arts (3)	3

**Study Area II: Social Sciences**

History (3)	3
ECON or GEOG or HIST or Pol. Sci. or ET 399 (3 credits)	3

**Study Area III: Behavioral Sciences**

Anthropology, Psychology, or Sociology	3
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**Study Area IV: Natural Sciences**

PHYS 121	General Physics I or	4
PHYS 125	University Physics I	4
PHYS 122	General Physics II or	4
PHYS 126	University Physics II	4
PHYS 121 and PHYS 122: Recommended		

**Skill Area I: Communication Skills**

ENG 110	Introduction to College Writing and	3
ENGR 290	Engineering Technical Writing and Presentation	3

ENG 110: Placement exam may be required before enrolling in English or Mathematics courses.

**Skill Area II: Mathematics**

Placement exam may be required before enrolling in English or Mathematics courses.

MATH 135	Applied Engineering Calculus I or	3
MATH 152	Calculus I	4
MATH 136	Applied Engineering Calculus II or	3
MATH 221	Calculus II	4

MATH 135 and MATH 136: Recommended

**Skill Area III: Foreign Language Proficiency**

**Skill Area IV: University Requirement**

PE 144	College Wellness or for transfer students	2
ENGR 150	Introduction to Engineering	3

**Total Credit Hours: 130**

**MANUFACTURING MANAGEMENT, B.S.**

The Manufacturing Management program is designed to prepare graduates to assume a range of important leadership roles in manufacturing organizations. This program includes study and practice in the areas of production systems, process improvement, lean management, six sigma, operations management, supply chain management, environmental health and safety, and advanced manufacturing technologies. The Bachelor of Science in Manufacturing Management program is

accredited by the Association of Technology, Management, and Applied Engineering (ATMAE). The curricular pattern is reviewed in terms of stated objectives, content, methods, supporting resources and evaluation systems.

A minor is not required with this major.

## MAJOR REQUIREMENTS

### Core Requirements

AC 210	Accounting for Decision-Making	3
CS 113	Introduction to Computer Programming	3
MGT 295	Fundamentals of Management and Organizational Behavior	3
MM 121	Mechanical CAD	3
	or	
ROBO 220	Parametric Modeling and Simulation	3
MM 216	Manufacturing Processes	3
TM 120	Introduction to Technology Management	3
TM 190	Global Quality Management Systems	3
TM 310	Environment, Health and Safety (EH&S)	3
TM 360	Production Systems	3
TM 362	Leading Project Teams	3
TM 366	Supply Chain and Purchasing Strategies	3
TM 390	Lean Operation Management	3
TM 401	Industrial Internship	3
TM 426	Applied Metrology	3
TM 463	Logistics Management	3
TM 464	Six Sigma Quality	3

### General Education Requirements

Required courses as part of General Education requirements:

ENGR 290	Engineering Technical Writing and Presentation	3
ECON 201	Principles of Microeconomics	3
CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
PSY 112	Introduction to Psychology	3
PHYS 111	Introductory Physics I	3
	or	
PHYS 121	General Physics I	4
	or	
PHYS 125	University Physics I	4
STAT 200	Business Statistics	3
MATH 123	Applied Business Mathematics	3

## DIRECTED TECHNOLOGY ELECTIVES

### Advanced Manufacturing Option or Environmental Health & Safety Option

Directed Technology Electives - Choose 12 Credits of Advanced Manufacturing/Industry 4.0 and/or Environment, Health and Safety courses.

	Directed electives	12
MM 226	Principles of Computer Numerical Control (CNC)	3
MM 236	Tool Design	3
MM 324	Fluid Power Systems	3
ROBO 420	Manufacturing Automation	3
ROBO 260	Programmable Controllers	4
ROBO 470	Robotics Systems Engineering and Analysis	3
ROBO 425	Advanced Programmable Logic Controllers	3
TM 436	Advanced Applied Metrology	3
TM 490	Advanced Six Sigma Quality	3
CM 335	Construction Safety	3
TM 411	Industrial Hygiene	3
TM 412	Safety Training Methods	3
TM 414	Accident Investigation & Loss Control	3
TM 456	Hazardous Material Management	3

**Total Credit Hours: 60**

## MARKETING, B.S.

A minor is not required with this major.

School of Business Admission Requirements

## REQUIREMENTS

### Common Business Core:

AC 211	Introduction to Financial Accounting	3
AC 212	Introduction to Managerial Accounting	3
BUS 480	Capstone Seminar	0
FIN 295	Managerial Finance	3
LAW 250	The Legal and Ethical Environment of Business	3
MC 207	Managerial Communication I	3
MGT 295	Fundamentals of Management and Organizational Behavior	3
MGT 480	Strategic Management	3
MIS 201	Introduction to Management Information Systems	3
MKT 295	Fundamentals of Marketing	3



**Marketing Core:**

MKT 305	Consumer Behavior	3
MKT 373	Marketing Research	3
MKT 380	Market Data Analysis	3
MKT 450	Marketing Strategy and Plan	3

**Directed Marketing Electives:**

Directed electives are selected with and approved by an advisor.

MKT 306	Advertising and Promotion	3
MKT 311	Retailing	3
MKT 321	International Marketing	3
MKT 350	Social Media Marketing	3
MKT 359	Special Events Marketing	3
MKT 360	Brand Marketing	3
MKT 375	Services Marketing	3
MKT 390	Product Development & Management	3
MKT 480	Marketing for Non-Profit Organizations	3
MKT 481	Consultative Selling Techniques	3
MKT 482	Marketing Analytics	3
MKT 494	Independent Study in Marketing	1-6
MKT 497	Marketing Internship	3
MKT 498	Marketing Seminar	3

**Business Electives:**

Students must complete 9 credits of 300- or 400-level courses offered by the School of Business, including marketing courses.

**Additional Requirements**

BUS 250	Introduction to Business Analytics and Skills	3
STAT 201	Business Statistics II	3

**ACCELERATE CENTRAL B.S.- MARKETING / M.B.A. PROGRAM**

**Eligibility**

Students typically apply during their junior year of study and must meet the requirements specified below:

1. Have at least a 3.3 cumulative grade point average.
2. Completed 60 earned credit hours by the end of the Fall semester of their junior year. At least 30 credits must have been earned at CCSU.
3. Admission to School of Business Marketing major.
4. Meet the M.B.A. program admission criteria.

Eligible students can apply for admission to the **Accelerate Central B.S. Marketing / M.B.A. Program** during their

junior year of study. Selected students may be able to complete a B.S. in Marketing and a M.B.A. in as few as five years on a full-time basis.

For students who are officially admitted to the **Accelerate Central B.S. Marketing / M.B.A. Program**, two three (3)-credit graduate Marketing courses will replace two three (3)-credit undergraduate Marketing courses. In addition, up to two three (3)-credit graduate courses may be taken before matriculation as a graduate student; these 2 courses will be excluded from the student’s B.S. program and transferred into the student’s M.B.A. program.

Students who are accepted into **Accelerate Central B.S. Marketing / M.B.A. Program** will officially matriculate into the School of Graduate Studies the semester immediately following conferral of their Bachelor’s degree, even if they have already taken graduate-level courses while completing their Bachelor’s degree. Students wishing to defer their graduate studies must notify Graduate Recruitment & Admissions of this decision prior to the start of the term following the conferral of their Bachelor’s degree.

**How to Apply**

Students will submit Change of Major form, a current resume, and one recommendation letter from a CCSU Marketing professor to their undergraduate advisor by March 1st of their junior year. The documents will go through the proper parties for review and approval, including the Graduate Program Director. Once the form has been approved by all required parties, the Registrar’s Office will change the student’s undergraduate curriculum to note the Accelerate Central program.

It is highly recommended to apply early for admission to this program to receive dedicated advising.

**MATHEMATICS, B.A.**

A minor is required with this major but is not required for the Mathematics Honors concentration. .

**REQUIREMENTS**

**Required Courses**

MATH 152	Calculus I	4
MATH 218	Discrete Mathematics	4
MATH 221	Calculus II	4
MATH 222	Calculus III	4
MATH 228	Introduction to Linear Algebra	4
MATH 366	Introduction to Abstract Algebra	4

MATH 377	Introduction to Real Analysis	4
MATH 450	Research Seminar	4
<b>and 6 credits selected from the following list of Electives:</b>		
MATH 300	Mathematics Internship	3
MATH 355	Introduction to Differential Equations with Applications	4
MATH 383	College Geometry	3
MATH 398	Independent Study in Mathematics	1-3
MATH 400	Introduction to Mathematica	4
MATH 421	History of Mathematics	3
MATH 440	Selected Topics in Mathematics	1-3
MATH 455	Introduction to Partial Differential Equations with Applications	4
MATH 468	Symbolic Logic	3
MATH 469	Number Theory	3
MATH 477	Numerical Analysis	3
MATH 491	Advanced Vector Calculus	3
STAT 315	Mathematical Statistics I	3
STAT 416	Mathematical Statistics II	3
STAT 425	Loss and Frequency Distributions and Credibility Theory	3
STAT 455	Experimental Design	3
STAT 456	Statistical Computation	3
STAT 465	Nonparametric Statistics	3
STAT 476	Topics in Statistics	3
ACTL 335	Financial Mathematics I	3
ACTL 465	Long Term Actuarial Models	4
ACTL 481	Review-SOA/CAS Course I	3
ACTL 482	Financial Mathematics II	3
MATH 422	Introduction to Mathematical Software	1
MATH 483	Introduction to Topology	4
MATH 485	Introduction to Differential Geometry	4

In addition, two laboratory science courses are required.

Note: CS 151 is strongly recommended.

#### Mathematics Honors Concentration

Mathematics Honors concentration does not require a minor. This concentration will provide preparation for graduate school or a career involving upper-level mathematics. It will expose students to more varied topics in mathematics.

In addition to the required courses for the major, this concentration requires MATH 355, STAT 315, and one of MATH 483 or MATH 485. Instead of 6 credits chosen from the list of Electives for the major this concentration requires 15 credits chosen from a slightly different list of Electives.

<b>Mathematics Honors Required Courses</b>		
MATH 152	Calculus I	4
MATH 218	Discrete Mathematics	4
MATH 221	Calculus II	4
MATH 222	Calculus III	4
MATH 228	Introduction to Linear Algebra	4
MATH 355	Introduction to Differential Equations with Applications	4
MATH 366	Introduction to Abstract Algebra	4
MATH 377	Introduction to Real Analysis	4
MATH 450	Research Seminar	4
STAT 315	Mathematical Statistics I and either	3
MATH 483	Introduction to Topology or	4
MATH 485	Introduction to Differential Geometry	4

#### and 15 credits selected from the following list of Electives

MATH 383	College Geometry	3
MATH 400	Introduction to Mathematica	4
MATH 421	History of Mathematics	3
MATH 422	Introduction to Mathematical Software	1
MATH 440	Selected Topics in Mathematics	1-3
MATH 455	Introduction to Partial Differential Equations with Applications	4
MATH 468	Symbolic Logic	3
MATH 469	Number Theory	3
MATH 477	Numerical Analysis	3
MATH 483	Introduction to Topology	4
MATH 485	Introduction to Differential Geometry	4
MATH 491	Advanced Vector Calculus	3
MATH 515	Abstract Algebra I	4
MATH 516	Abstract Algebra II	4
MATH 519	Principles of Real Analysis I	4
MATH 520	Principles of Real Analysis II	4
MATH 523	General Topology	4
MATH 526	Complex Variables	4
MATH 580	Directed Study in Mathematics	1-3
ACTL 335	Financial Mathematics I	3
STAT 416	Mathematical Statistics II	3

**Total Credit Hours: 0**

#### **MATHEMATICS WITH SPECIALIZATION IN ACTUARIAL SCIENCE, B.A.**

A minor is not required with this major.

**REQUIREMENTS**

**Core**

MATH 152	Calculus I	4
MATH 218	Discrete Mathematics	4
MATH 221	Calculus II	4
MATH 222	Calculus III	4
MATH 228	Introduction to Linear Algebra	4
STAT 315	Mathematical Statistics I	3
STAT 416	Mathematical Statistics II	3
STAT 425	Loss and Frequency Distributions and Credibility Theory	3
ACTL 335	Financial Mathematics I	3
ACTL 465	Long Term Actuarial Models	4
ACTL 466	Short Term Actuarial Models	4

**Subtotal: 40**

**Directed Electives (as approved by advisor)**

ACTL 480		
ACTL 481	Review-SOA/CAS Course I	3
ACTL 482	Financial Mathematics II	3
MATH 300	Mathematics Internship	3
MATH 355	Introduction to Differential Equations with Applications	4
MATH 366	Introduction to Abstract Algebra	4
MATH 377	Introduction to Real Analysis	4
AC 211	Introduction to Financial Accounting	3
AC 212	Introduction to Managerial Accounting	3
CS 151	Computer Science I	3
CS 152	Computer Science II	3
CS 213	Applications of Computing I	3
CS 473	Simulation Techniques	3
ECON 460	Economic Forecasting	3
FIN 295	Managerial Finance	3
FIN 301	Intermediate Managerial Finance	3
FIN 310	Principles of Investments	3
FIN 320	Financial Markets and Institutions	3
FIN 321	Insurance	3
LAW 250	The Legal and Ethical Environment of Business	3
MGT 295	Fundamentals of Management and Organizational Behavior	3

**Subtotal: 18**

Note: ECON 200 and ECON 201 are strongly recommended.

**Total Credit Hours: 58**

**MATHEMATICS WITH SPECIALIZATION IN STATISTICS, B.A.**

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A minor is not required with this major.

**REQUIREMENTS**

**Required Courses**

MATH 152	Calculus I	4
MATH 218	Discrete Mathematics	4
MATH 221	Calculus II	4
MATH 222	Calculus III	4
MATH 228	Introduction to Linear Algebra	4
MATH 366	Introduction to Abstract Algebra or	4
MATH 377	Introduction to Real Analysis	4
STAT 215	Statistics for Behavioral Sciences I	3
STAT 315	Mathematical Statistics I	3
STAT 416	Mathematical Statistics II	3

STAT 216	Statistics for Behavioral Sciences II or	3
STAT 453	Applied Statistical Inference	3

**2 courses chosen from:**

STAT 425	Loss and Frequency Distributions and Credibility Theory	3
STAT 455	Experimental Design	3
STAT 456	Statistical Computation	3
STAT 465	Nonparametric Statistics	3
STAT 476	Topics in Statistics	3

**16 credits selected from the courses listed above or from the following:**

MATH 300	Mathematics Internship	3
MATH 491	Advanced Vector Calculus	3
CS 151	Computer Science I	3
CS 152	Computer Science II	3
CS 253	Data Structures and Introduction to Algorithms	3
CS 473	Simulation Techniques	3
BIO 305	Ecology	4
ECON 460	Economic Forecasting	3
ECON 485	Econometrics	3
GEOG 276	Elementary Cartography	3
PSY 451	Psychological Evaluation	3
ACTL 335	Financial Mathematics I	3
ACTL 465	Long Term Actuarial Models	4
ACTL 466	Short Term Actuarial Models	4
ACTL 481	Review-SOA/CAS Course I	3

Note: CS 151 is strongly recommended.

**Total Credit Hours: 58**

**MECHANICAL ENGINEERING TECHNOLOGY, B.S.**

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A minor is not required with this major.

Accredited by ETAC of ABET

This major integrates the aspects of energy conversion, mechanism control, heat and mass transfer, machine dynamics, and design with computer design and analysis to prepare engineering support personnel to assist in the design of machinery and instrumentation for industrial, transportation, and utility applications. The mechanical engineering technologist makes significant contributions in supporting engineering design, testing, production, research, and development operations in a wide variety of industrial, aerospace, and government organizations. Students must complete the coursework in four categories: general education, major requirements, directed electives, and additional requirements.

**For all majors a minimum grade of C- is required in all courses in the major, all additional course requirements as well as courses in Study Area IV, Skill Area I, and Skill Area II.**

## REQUIREMENTS

### Core Requirements

ENGR 150	Introduction to Engineering	3
ME 216	Manufacturing Engineering Processes	2
ME 217	Manufacturing Engineering Processes Lab	1
ET 251	Applied Mechanics I - Statics	3
ET 252	Applied Mechanics II - Dynamics	3
ET 354	Applied Fluid Mechanics	3
ET 357	Strength of Materials	3
ET 361	Engineering Technology Instrumentation	3
ET 399	Engineering Economy	3
ETM 260	Computer Aided Design and Integrated Manufacturing CAD/CAM/CIM	3
ETM 340	Geometric Dimensioning & Tolerancing	3
ETM 356	Materials Analysis	3
ETM 358	Applied Thermodynamics	3
ETM 367	Machine Design	3
ETM 462	Manufacturing Process Planning and Estimating	3
ETM 464	CAD Solid Modeling and Design	3
ETM 466	Design for Manufacture	3
ETM 467	Applied Finite Element Analysis	3
ETM 497	Engineering Technology Senior Project Research	2
ETM 498	Engineering Technology Senior Project (Capstone)	2

ETM 454	Applied Heat Transfer	3
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### Additional Requirements

CET 236	Circuit Analysis	3
CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
ENGR 240	Computational Methods for Engineering	3
MM 121	Mechanical CAD	3
MATH 119	Pre-Calculus with Trigonometry or	4
MATH 116	Pre-Calculus Mathematics	3
STAT 104	Elementary Statistics	3

### Directed Electives (8-12 credits)

The following courses, selected in consultation with an academic adviser, satisfy the directed technical electives requirement (8 to 12 credits):

ET 495	Topics in Engineering Technology	3
ETM 360	Computer Aided Planning (CAP)	3
ETM 461	Composites and Plastics Manufacturing Processes	3
ETM 463	Plastics and Composite Tool Design	3
MM 226	Principles of Computer Numerical Control (CNC)	3
ENGR 490	Fundamentals of Engineering (FE)	3
MM 236	Tool Design	3
TM 390	Lean Operation Management	3
TM 464	Six Sigma Quality	3
ROBO 420	Manufacturing Automation	3
ENGR 392	Engineering Practicum (400 hours)	1

## GENERAL EDUCATION REQUIREMENTS FOR ENGINEERING TECHNOLOGY (ET) MAJORS

### Study Area I: Arts and Humanities

Literature (3)	3
Philosophy or Fine Arts (3)	3
Literature, Philosophy or Fine Arts (3)	3

No more than 6 credits from any one discipline.

### Study Area II: Social Sciences

History (3)	3
ECON or GEOG or HIST or Pol. Sci. or ET 399 (3 credits)	3

### Study Area III: Behavioral Sciences

Anthropology, Psychology, or Sociology	3
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### Study Area IV: Natural Sciences

PHYS 121	General Physics I or	4
PHYS 125	University Physics I	4

PHYS 122	General Physics II or	4
PHYS 126	University Physics II	4

PHYS 121 and PHYS 122: Recommended

**Skill Area I: Communication Skills**

WRT 110	Introduction to College Writing and	3
ENGR 290	Engineering Technical Writing and Presentation	3

WRT 110: Placement exam may be required before enrolling in English or mathematics courses.

**Skill Area II: Mathematics**

Placement exam may be required before enrolling in English or mathematics courses.

MATH 135	Applied Engineering Calculus I or	3
MATH 152	Calculus I	4
MATH 136	Applied Engineering Calculus II or	3
MATH 221	Calculus II	4

MATH 135 and MATH 136: Recommended

**Skill Area III: Foreign Language Proficiency**

**Skill Area IV: University Requirement**

PE 144	College Wellness or for transfer students	2
ENGR 150	Introduction to Engineering	3

**Equity, Justice, and Inclusion Requirement**

Equity, Justice, and Inclusion Requirement (p. 582)

**Total Credit Hours: 130**

**MECHANICAL ENGINEERING, B.S.**

The Bachelor of Science in Mechanical Engineering is a program of study requiring 128-136 credits of undergraduate work, including a two-term senior project capstone requirement completed through oral and written reports and a 400-hour internship. If desired, the candidate may also choose an appropriate sequence of elective courses for a concentration in Manufacturing or Aerospace.

Required coursework can be grouped in four categories: General Education, Major Requirements, Electives or Concentration Requirements, and Additional Requirements.

**REQUIREMENTS**

**I. General Education**

NOTE: Distribution requirements are similar to the existing Engineering Technology General Education requirements.

**Study Area I: Arts and Humanities**

Literature	
Philosophy or Fne Arts	
Literature, Philosophy or Fine Arts (3)	3

**Study Area II: Social Sciences**

History	
ECON or GEOG or HIST or PS or ET 399	

**Study Area III: Behavioral Sciences**

Anthropology, Psychology, or Sociology	3
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**Study Area IV: Natural Sciences**

PHYS 125	University Physics I	4
PHYS 126	University Physics II	4

**Skill Area I: Communication Skills**

WRT 110	Introduction to College Writing	3
ENGR 290	Engineering Technical Writing and Presentation	3

**Skill Area II: Mathematics**

MATH 152	Calculus I	4
MATH 221	Calculus II	4

**Skill Area III: Foreign Language Proficiency**

**Skill Area IV: University Requirement**

PE 144	College Wellness	2
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**II. Major Requirements**

ENGR 150	Introduction to Engineering	3
ENGR 251	Engineering Mechanics I - Statics	3
ENGR 252	Engineering Mechanics II - Dynamics	3
ENGR 357	Mechanics of Materials	3
ME 216	Manufacturing Engineering Processes	2
ME 217	Manufacturing Engineering Processes Lab	1
ME 258	Engineering Thermodynamics	3
ME 345	Engineering Statistical Analysis of Operations	3
ME 352	Modeling and Control of Dynamic Systems	3
ME 354/CE 354	Fluid Mechanics	3
ME 367	Machine Design I	3

ME 368	Machine Design II	3
ME 370	Instrumentation	3
ME 454	Heat Transfer	3
ME 497	Senior Project I: Project Research	2
ME 498	Senior Project II: Design Project	3
ME 467	Finite Element Analysis with Applications	3

### III. Electives or Concentration Requirements

#### General Electives:

ME 458	Heating, Ventilating and Air Conditioning Systems Design or	3
ME 459	Energy Conversion Systems	3
	ME Electives	6
	Tech Elective	3

#### Manufacturing:

ME 340	Geometric Dimensioning & Tolerancing for Mechanical Design	3
ME 360	Manufacturing Operations Analysis and Simulation	3
ME 460	Manufacturing System Design and	3
ME 461	Discrete Event Simulation for Manufacturing Systems or	3
ME 466	Inventive Engineering Design	3

#### Aerospace:

ME 480	Propulsion Systems	3
ME 483	Aerodynamics	3
ME 486	Aerospace Structures and Materials	3
ME 403	Aerospace Control Systems	3

### IV. Additional Requirements

CET 236	Circuit Analysis	3
CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
ENGR 392	Engineering Practicum (400 hours)	1
ENGR 240	Computational Methods for Engineering	3
ETM 260	Computer Aided Design and Integrated Manufacturing CAD/CAM/CIM	3
ETM 356	Materials Analysis	3
MATH 222	Calculus III	4
MATH 226	Linear Algebra and Probability for Engineers	4
MATH 355	Introduction to Differential Equations with Applications	4

**Total Credit Hours: 0**

### **MEDIA STUDIES, B.A.**

A minor is required with this major.

The major in Media Studies offers a balanced curriculum that integrates theory and practice. Students learn theoretical and critical approaches to media content, systems, and institutions that cultivate skills in critical thinking, analysis, and writing. The major also prepares students to create their own media content including films, documentaries, and multimedia products through traditional and emerging technologies. The curriculum encourages students to cultivate an appreciation for aesthetics and artistry in media production and content.

CCSU also has a major in Journalism with emphases in print/online and broadcast journalism. The BA in Journalism program prepares students for entry into journalism and related fields where information-gathering, writing, editing, and awareness of public affairs are important. Students choose one of two tracks, print/online or broadcast journalism, but all students receive training in multimedia reporting. Additional information on the Journalism major can be found at Journalism, B.A.

#### **REQUIREMENTS: (38 CREDITS)**

38 credits total, with 20 credits in core courses, 11 additional credits within a specified emphasis area, and at least 7 other credits of directed electives.

#### **Core Courses (20 Credits)**

COMM 230	Introduction to Mass Media	3
COMM 231	Communication Technologies	3
COMM 220/CINE 220	Introduction to History of Film	3
	or	
COMM 255	Visual Communication	3
COMM 228	Introduction to Digital Film Production	3
COMM 336	Media Literacy	4
COMM 327	TV Production	4

#### **Areas of Emphasis (11 Credits)**

Students must take at least 3 courses in one of these 3 areas.

#### **Media Analysis**

This emphasis area is designed for students who wish to focus primarily upon the critical, aesthetic and theoretical foundations of media and its institutions.

**Students should complete COMM 336 prior to taking any of these additional courses.**

COMM 301	Critical Thinking	4
COMM 315	Political Communication	4
COMM 319/CINE 319	Filmic Narrative	4
COMM 380/CINE 380/WGSS 380	Women and Film	4
COMM 382/CINE 382	American Cinema	4
COMM 410	Public Opinion	4
COMM 431	Mass Media and Society	4
COMM 432	Media In Film	4
COMM 435/WGSS 435	Images of Gender in the Media	4
COMM 455	Global Visual Communication	4
COMM 457	Converging Media	4
COMM 465	Sports and Media: Images and Representations	4
COMM 485	Topics in Media and Culture	3 to 4
COMM 490	Internship Study	1-6
COMM 493	Seminar in Communication	4
COMM 496	Field Studies in Communication	3

**Multimedia Production and New Technologies**

While existing media traditions have conditioned us to train students into specialized in specific areas (e.g.: radio, film and television), the demands of the new technologies, audiences and industries, require us to train the total student: One who can communicate across multi-media platforms. This emphasis area aims to train students to reach, first of all, a theoretical understanding of how digital technologies have impacted all the communication contexts (interpersonal, professional, mass communication). Furthermore, they acquire the practical skills to apply those technologies in desktop-publishing, digital photography, Web-publishing, and multimedia production. This emphasis area attempts to transform our students into a total communicator who can reach audiences across media platforms.

**Students should complete COMM 231 prior to taking any of these additional courses.**

COMM 329	Screenwriting	4
COMM 332	Web Publishing	4
COMM 345	Writing for the Electronic Media	4

COMM 420	Principles of Digital Photography for Convergent Media	4
COMM 436	Streaming Media in Web Publishing	4
COMM 457	Converging Media	4
COMM 485	Topics in Media and Culture	3 to 4
COMM 490	Internship Study	1-6
COMM 493	Seminar in Communication	4
COMM 496	Field Studies in Communication	3

**Digital Filmmaking and Studio Production**

This concentration focuses on independent film production and/or studio production.

Students enrolled in the film production sequence (COMM 228 and 328) regularly conceive ideas, develop scripts, and explore fictional/non-fictional characters through the production process. From originally scripted, short-filmmaking, to real-life film personal portraits, graduates of and current students in this program work in the entertainment industry, gain acceptance within film graduate programs, compete in festivals, produce media campaigns and commercials, and most importantly, obtain the foundations to create compelling film-works for traditional and non-traditional distribution.

Students enrolled in the studio production sequence (COMM 327 and COMM 427) receive hands-on experience producing original content in a professional studio environment. Graduate and current students enrolled in the sequence work in the areas of commercial television, narrative production, and video production houses. You will also develop skills to work in the field of media production in public relations and organizational communication.

COMM 328	Digital Film Production 1	4
COMM 329	Screenwriting	4
COMM 345	Writing for the Electronic Media	4
COMM 427	Studio Production	4
COMM 428	Digital Film Production II	4
COMM 485	Topics in Media and Culture	3 to 4
COMM 487	TV Documentary	4
COMM 490	Internship Study	1-6
COMM 493	Seminar in Communication	4
COMM 496	Field Studies in Communication	3

**Directed Electives (At least 7 Credits)**

Additional credits such that a student has at least 11 credits in 400-level classes and at least 18 credits in 300- and 400-level classes. Two courses from other departments and programs (e.g. Journalism, Cinema

Studies) can count as directed electives towards the major, upon advisor approval.

### Additional Requirements

All students must also take COMM 140 (Public Speaking) to fulfill Skill Area I requirement in General Education.

COMM 140 Public Speaking 3

Overall, the major in media studies prepares students for advanced study in media and communication and for employment in a wide variety of fields, including public relations, film, television, politics and campaigns, and education. Graduates of this major understand the history and changing nature of media technologies and environments.

## MUSIC, B.A.

The CCSU Department of Music is dedicated to the development of competent and aesthetically sensitive musicians, intellectually deepened by a broad liberal arts education. Within the context of our music degrees, we prepare musicians for careers as educators, performers, composers, music technology specialists, and scholars while providing all students with strategies to cultivate artistic leadership in their chosen fields. We strive to foster in all students life-long connection and involvement with the art of music. The performance and scholarship of our faculty serves as an artistic and intellectual resource for Connecticut.

A minor is not required for any student pursuing a concentration in the Music, B.A. (Exception: Music, B.A. Music with an External Minor)

### MAJOR REQUIREMENTS (60 CREDITS)

MUS 102 and three semesters of major ensemble are double counted in Study Area I.

#### Required Music Courses (42 credits)

MUS 090	Concert/Forum Attendance	0
MUS 102	Fundamentals of Musicianship	3
MUS 114	Introduction to Music Technology	1
MUS 237	Diatonic Harmony	2
MUS 115	Aural Skills I	1
MUS 318	Chromatic Harmony I	2
MUS 116	Aural Skills II	1
MUS 319	Chromatic Harmony II	2
MUS 215	Aural Skills III	1
MUS 178	Applied Music for Majors	1
MUS 278	Applied Music for Majors II	1
MUS 235	Music History I	3
MUS 334	Music History II	3
MUS 335	Music History III	3

MUS 250	Piano Class I	1
MUS 251	Piano Class II	1
MUS 350	Piano Class III	1
MUS 351	Piano Class IV	1
	Music Electives - 8 credits	

### Other Requirements

Ensembles required for all Music B.A. students: 4 credits in Ensembles from the course range MUS 141, MUS 142, MUS 143, or MUS 147A.

MUS 178 Applied Lessons for Majors I, and MUS 278 Applied Lessons for Majors, II (two semesters each; 1 credit, 1 contact hour)

8 credits of Music Electives required of all Music B.A. students.

Students in any Music B.A. concentration (Performance, Theory and Composition, Jazz Studies, Music Technology, Flexible Music) must take MUS 216 Aural Skills IV (1 credit, 2 contact hour) and MUS 408 Form and Analysis (2 credits; 3 contact hours) as part of those 8 elective credits. The B.A. option for Music with an External Minor is exempt from this requirement.

### Major Requirements, Ensembles

All Music B.A. students are required to take 4 credits of major ensembles, MUS 141, MUS 142, MUS 143, or MUS 147A.

Students with a primary instrument in woodwinds, brass, or percussion may take either MUS 142A (Wind Symphony) or MUS 142B (Wind Symphony + Marching Band) in the Fall; they are required to take MUS 142A (Wind Symphony) in the Spring.

MUS 141 Chorus is the required ensemble for students with voice, piano, or classical guitar as the primary instrument.

String students are required to take MUS 143 Sinfonietta when offered, or another approved ensemble as a substitute.

MUS 141	Chorus	1
	or	
MUS 142A	Band: Wind Symphony	1
	and/or	
MUS 142B	Wind Symphony & Marching Band	1
	or	
MUS 143	Sinfonietta	1
	or	
MUS 147A	Traditional Jazz Ensemble	1

MUS 142 is currently listed here as MUS 142 Wind Band. The new options should be listed here instead as MUS



142A Wind Symphony AND/OR MUS 142B Wind Symphony Marching Band (depending on the semester cycling).

**CONCENTRATIONS**

**Performance Concentration (18 credits)**

MUS 378	Applied Music for Majors III	1
MUS 478	Applied Music for Majors IV	1
MUS 177	Applied Music	.5
MUS 201	Listening to Western Art Music of the 20th and 21st Centuries	2
MUS 367	Choral Conducting	2
MUS 380	Advanced Notation, Sequencing, and Sound Synthesis	2
MUS 400	Project in Music	1-4
MUS 404	Topics in Performance	1-3

Performance students will take 2 semesters of MUS 177 Applied Music, lessons on a secondary instrument; .5 credit, 30 minutes contact.

Performance students will complete MUS 400 (senior recital) and MUS 404 (program notes), each for 2 credits.

2 credits of MUS 378, and 1 credit of MUS 478.

**Performance Concentration: Ensembles**

Students in the Performance Concentration will take 4 additional credits of ensembles, in MUS 140, MUS 141, MUS 142, MUS 143.

(See previous note re: MUS 142A, B, and C.)

MUS 140	Ensemble or	1
MUS 141	Chorus or	1
MUS 142A	Band: Wind Symphony and/or	1
MUS 142B	Wind Symphony & Marching Band or	1
MUS 143	Sinfonietta	1

**Jazz Studies Concentration (18 credits)**

MUS 378	Applied Music for Majors III	1
MUS 478	Applied Music for Majors IV	1
MUS 147A	Traditional Jazz Ensemble and/or	1
MUS 147B	Improvisatory Jazz Ensemble	1
MUS 213	Jazz Styles and Chronology	3
MUS 273	Jazz Improvisation I	2
MUS 274	Jazz Improvisation II	2
MUS 380	Advanced Notation, Sequencing, and Sound Synthesis	2
MUS 400	Project in Music	1-4

Students in the Jazz Studies Concentration will take:

2 credits of MUS 378, and 1 credit of MUS 478.

1 semester of MUS 400 (senior jazz recital), for 2 credits.

**Jazz Studies Concentration: Ensembles**

Students in the Jazz Studies Concentration will take 4 additional credits of Jazz Ensembles, MUS 147A or MUS 147B.

MUS 147A	Traditional Jazz Ensemble or	1
MUS 147B	Improvisatory Jazz Ensemble	1

**Theory and Composition Concentration (18 credits)**

MUS 201	Listening to Western Art Music of the 20th and 21st Centuries	2
MUS 295	Beginning Composition	2
MUS 395	Composition	2
MUS 378	Applied Music for Majors III	1
MUS 380	Advanced Notation, Sequencing, and Sound Synthesis	2
MUS 390	Orchestration	3
MUS 400	Project in Music	1-4

Theory and Composition students will take:

3 semesters of MUS 378, for 1 credit each.

1 semester of MUS 400 (composition), for 2 credits.

\*Requirement Type: Theory and Composition: Ensembles\*

Students in the Theory and Composition Concentration will take 2 additional credits of ensembles from the course range MUS 14X.

**Music with an External Minor (18 credits)**

Students pursuing the option of Music with an External Minor will complete 18 credits, as required by their selected Minor outside of the Music Department.

**Music Technology Concentration (18 credits)**

MUS 140	Ensemble	1
MUS 214	Electro-Acoustic Music and Sonic Art	3
MUS 380	Advanced Notation, Sequencing, and Sound Synthesis	2
MUS 400	Project in Music	1-4

Students in the Music Technology Concentration will complete one semester of MUS 400 (capstone), for 2 credits.

**Music Technology Concentration: Ensembles**

Students in the Music Technology Concentration will take MUS 140Q iPad Ensemble (2 credits)

and

1 or 2 additional credits of ensembles from the MUS 14X course range.

MUS 140 Ensemble 1

#### Music Technology Electives from CCSU

MUS 112 Computer Applications to Music 3

and/or

MUS 273 Jazz Improvisation I 2

and/or

MUS 274 Jazz Improvisation II 2

and/or

MUS 301 Coding for Music 3

MUS 378 Applied Music for Majors III 1

Students in the Music Technology Concentration are required to take a total of 9 credits of electives, which may be completed at CCSU, Capital Community College, or Middlesex Community College, as listed here.

As part of the Music Technology electives (9 credits total), students may take (in addition to the academic courses listed):

One or both of the following, for 2-4 credits: MUS 273 (2 credits) and/or MUS 274 (2 credits)

1-3 additional credits of MUS 378 (Music Technology composition lessons)

MUS 301 Coding for Music is a newly-proposed course (3 credits; 3 contact hours). This is listed on the curriculum sheet for the Music Technology Concentration.

#### Courses Completed at Capital Community College or Middlesex Community College

Students in the Music Technology Concentration are required to take a total of 9 credits of electives, which may be completed at CCSU, Capital Community College, or Middlesex Community College, as listed here. These courses align with existing courses at the two Community Colleges and will be able to be registered at CCSU but completed at the community colleges are as follows:

MUS 117 Audio Production (3 credits)

MUS 118 Electronic Music (3 credits)

MUS 223 Search in Music: Technology Music Business (students may take 3 - 9 credits of this course.)

MUS 224 Electronic Music Composition Audio Technology I (3 credits)

MUS 225 Electronic Music Composition Audio Technology II (3 credits)

MUS 226 Music for Film, TV, Video Gaming and Other Media (3 credits)

MUS 227 Principles of Sound Recording (3 credits)

MUS 228 Audio Mixing and Processing (3 credits)

#### Flexible Music Concentration (18 credits)

MUS 378 Applied Music for Majors III 1

MUS 367 Choral Conducting 2

MUS 380 Advanced Notation, Sequencing, 2

and Sound Synthesis

Music electives 5-13

Students in the Flexible Music Concentration will take:

2 semesters of MUS 378, for 1 credit each

8 additional credits of Music electives (MUS XXX), including courses, lessons, and/or ensembles beyond the basic requirements. These are not outlined in the course list, due to the numerous options available.

#### Flexible Music Concentration: Ensembles

Students in the Flexible Music Concentration will take 4 additional credits of Music ensembles from the course range MUS 14X.

#### Music with an External Minor (18 credits)

Students pursuing the option of Music with an External Minor will complete 18 credits, as required by their selected Minor outside of the Music Department.

#### ADDITIONAL REQUIREMENTS

All students in the BA in Music program with concentrations in Performance, Theory/Composition, and Jazz Studies must successfully pass the Piano Proficiency as detailed. Students doing an external Minor, the Music Technology Concentration, and the Flexible Music Concentration do not have to pass the piano proficiency.

#### Total Credit Hours: 60

Note: Students enrolled in MUS 177 must pay an extra fee of \$200 each semester. Students enrolled in MUS 178, MUS 278, MUS 378, or MUS 478 must pay an extra fee of \$400 each semester. This fee is non-refundable and subject to change. All students enrolled in MUS 178, MUS 278, MUS 378, or MUS 478 must perform in one student recital per year.

All music majors are required to enroll in MUS 090 every semester.

All students must be enrolled in a major ensemble every semester in which they are enrolled as full-time music

major. All part-time students must be enrolled in a major ensemble for six semesters. The Department of Music reserves the right to assign students to major ensembles.

The piano proficiency exam may be taken a total of four times, and students must demonstrate a minimum proficiency in all 8 categories to pass. Most students should begin taking this exam during their sophomore year.

**The piano proficiency exam consists of the following:**

- Playing major and harmonic minor scales (up to 4 sharps and flats), two octaves, hands together;
- Playing a prepared intermediate-level piece from the recommended list, piece using a score;
- Playing a prepared intermediate-level piece from the recommended list, memorized;
- Playing the Star-Spangled Banner;
- Harmonizing a simple melody;
- Transposing the same melody up or down a major/minor second;
- Sight-reading a simple piano piece; and
- Sight-reading a simple accompaniment.

**NETWORKING INFORMATION TECHNOLOGY, B.S.**

A minor is not required with this major.

The mission of the Networking Information Technology program is to prepare graduates with background and skills to design, implement, and support networked systems in both standard and enterprise settings. It builds a solid foundation in the hardware and architecture of computer networks and systems; operating systems and applications; network system design and analysis; networking theory and solutions; types of networks, including fiber optics and wireless; network management and control; Information security; configuring and troubleshooting; business plan development including marketing, implementation and management.

**REQUIREMENTS**

**General Education**

**Study Area I -Arts and Humanities**

Literature (I)	3
Elective	3
Elective	3

**Study Area II - Social Sciences**

	History (I)	3
ECON 200	Principles of Macroeconomics	3
	or	
ECON 201	Principles of Microeconomics	3
	Elective	3

**Study Area III - Behavioral Sciences**

PSY 112	Introduction to Psychology	3
	Elective	3

**Study Area IV - Natural Scientific**

PHYS 111	Introductory Physics I	3
CHEM 161	General Chemistry	3

**Skill Area I - Communication Skills**

ENG 110	Introduction to College Writing	3
	or	
ENG 105	Enhanced Introduction to College Writing	3
	and	
ENG 105P	Enhanced Introduction to College Writing Workshop	2
ENGR 290	Engineering Technical Writing and Presentation	3

**Skill Area II - Mathematical**

STAT 104	Elementary Statistics	3
MATH 115	Trigonometry	3
	or	
MATH 116	Pre-Calculus Mathematics	3

**Skill Area III - Foreign Language**

See University Catalog

**Skill Area IV - Univ. Requirements**

PE 144	College Wellness	2
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**Major Requirements**

CET 113	Introduction to Information Processing	3
CEGT 200	Seminar	1
CEGT 400	Internship and Senior Seminar	3
TM 190	Global Quality Management Systems	3
TM 362	Leading Project Teams	3
AC 210	Accounting for Decision-Making	3
	or	
AC 211	Introduction to Financial Accounting	3
MGT 295	Fundamentals of Management and Organizational Behavior	3
MKT 295	Fundamentals of Marketing	3
CET 179	Basic Network Administration	3

CET 223	Basic Electrical Circuits	3
CET 229	Computer Hardware Architecture	3
CET 249	Introduction to Networking Technology	3
CET 339	Computer System Administration	3
CET 349	Network Design and Implementation	3
CET 363	Digital Circuits	3
CET 439	Enterprise Messaging Systems	3
CET 449	Advanced Networking	3
CET 459/CYS 459	Network Security Technologies	3
CET 479	Network Administration	3
CET 179	Basic Network Administration	3
CET 223	Basic Electrical Circuits	3
CET 229	Computer Hardware Architecture	3
CET 249	Introduction to Networking Technology	3
CET 339	Computer System Administration	3
CET 349	Network Design and Implementation	3
CET 363	Digital Circuits	3
CET 439	Enterprise Messaging Systems	3
CET 449	Advanced Networking	3
CET 459/CYS 459	Network Security Technologies	3
CET 479	Network Administration	3
<b>Related Major Requirements</b>		
CET 113	Introduction to Information Processing	3
CEGT 200	Seminar	1
CEGT 400	Internship and Senior Seminar	3
TM 190	Global Quality Management Systems	3
TM 362	Leading Project Teams	3
AC 210	Accounting for Decision-Making or	3
AC 211	Introduction to Financial Accounting	3
MGT 295	Fundamentals of Management and Organizational Behavior	3
MKT 295	Fundamentals of Marketing	3

**12 credits of Directed Electives w/advisor****Total Credit Hours: 120**

Electives to meet 120 credits

**NURSING, B.S.N.**

A minor is not required with this major.

**REQUIREMENTS:****Nursing Major Courses: 60 credits**Please note: NRSE 110 Introduction to Nursing Theories has been **decreased to 2 credits**.

NRSE 110/BIO 318	Introduction to Nursing Theories	2
NRSE 150	Nutrition	3
NRSE 210/BIO 318	Health Assessment	4
NRSE 250	Nursing Care of Well Populations	2
NRSE 260	Evidence-Based Nursing Interventions	4
NRSE 270	Gerontological Nursing	3
NRSE 303	Nursing Research for Evidence-Based Practice	2
NRSE 310	Altered Health Concepts and Therapeutic Interventions	4
NRSE 320	Holistic Care of Adults with Health Alterations	5
NRSE 345	Psychiatric/Mental Health Nursing	4
NRSE 360	Maternity Nursing: The Expanding Family	4
NRSE 445	Social Justice and Health Promotion of Communities	4
NRSE 465	Nursing Care of Families with Children	4
NRSE 470	Holistic Nursing Care of the Critically Ill	5
NRSE 485	Professional Values and Role Development	2
NRSE 490	Leadership and Management in Nursing	2
NRSE 495	Synthesis of Professional Nursing Practice	6
<b>Related Requirements: 25 credits</b>		
PSY 136	Life-Span Development	3
BMS 102	Introduction to Biomolecular Science	3
BMS 216	Microbiology for Nursing	3
CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 210	Organic Chemistry I - Foundations	3
BMS 103	Introduction to Biomolecular Science Laboratory	1
BMS 318/BIO 318	Anatomy and Physiology I	4
	or	
BIO 318/BMS 318	Anatomy and Physiology I	4
BMS 318		
BMS	Anatomy and Physiology II	4

319/BIO 319		
	or	
BIO 319/BMS 319	Anatomy and Physiology II	4

**Additional Requirements:**

PS 110	American Government & Politics	3
SOC 110	Introductory Sociology	3
STAT 215	Statistics for Behavioral Sciences I	3
	or	
STAT 104	Elementary Statistics	3

**Total Credit Hours: 120**

By adding BMS 103 as a requirement, we are adding an additional 1 credit to BMS 102. These courses are required in order to take BMS 318 and BMS 319 Anatomy and Physiology. This is the rationale for decreasing NRSE 110 to 2 credits to ensure 120 credits.

**NURSING, R.N. TO B.S.N.**

A minor is not required with this major.

Admission In addition to meeting all requirements established for admission to Central Connecticut State University\*, the applicant must:

- Be licensed currently as a registered nurse in Connecticut;\*\*
- Carry and provide documentation of adequate malpractice and health insurance;
- Have completed a minimum of 45 undergraduate credits from an accredited college or university;
- Have advisement by nursing faculty;
- Be CPR certified;
- Meet specific immunization and OSHA requirements;
- Successfully complete the state articulation agreement (35 credits of nursing transferred from associate degree or diploma school program) prior to enrolling in NRSE 303; and
- Complete the BSN program within five years of taking NRSE 303.

*\*Admission to the University does not guarantee advancement to upper division nursing courses.*

*\*\*Applicants in their final year of a diploma or associate degree may be accepted on a provisional basis.*

Note: 120 credits required for degree.

**RN to BSN Major & Related Requirements:**

NRSE 246	Ethical Issues in Professional Nursing Practice	3
NRSE 300	Health Assessment and Promotion	3
NRSE 301	The Art and Science of Nursing	3
NRSE 305	Scholarship for the Nursing Discipline	3
NRSE 413	Population Health	3
NRSE 414	Policy and Advocacy in Professional Nursing	3
NRSE 492	Leadership Development for Quality Care	4
NRSE 496	Professional Values in Practice	3
BIO 318/BMS 318	Anatomy and Physiology I	4
	or	
BMS 318/BIO 318	Anatomy and Physiology I	4
	and	
BIO 319/BMS 319	Anatomy and Physiology II	4
	or	
BMS 319/BIO 319	Anatomy and Physiology II	4
PSY 136	Life-Span Development	3
BMS 216	Microbiology for Nursing	3
	or	
BMS 316	Microbiology	4
	and	
STAT 104	Elementary Statistics	3
	or	
STAT 200	Business Statistics	3
	or	
STAT 215	Statistics for Behavioral Sciences I	3
	and	
	up to 35 additional articulation credits in Nursing.	

**Subtotal: 74-75**

**PHILOSOPHY, B.A.**

Philosophy involves critical inquiry about ourselves and the world we inhabit. The study of Philosophy develops

many skills, such as critical thinking, reasoning and argumentation, clear communication about complex topics, careful consideration of multiple perspectives on the same topic, and thoughtful consideration of ethics and values in public and private spheres.

Philosophy majors pursue many different paths, including graduate programs, law school, medical school, and careers in a diversity of professions. For recent data, see "Why Major in Philosophy?" and "Philosophy as a Pre-Law Major."

CCSU offers a B.A. in Philosophy and a B.A. in Philosophy with Concentration in Social Justice, Ethics, and Law.

A minor is required with this major. Double majors are exempt from a minor.

### REQUIREMENTS: (39 CREDITS)

Requirements include: Foundation (3 credits), Core (18 credits), Alternative Traditions (3 credits), and Electives (15 credits). Students pursuing the Philosophy B.A. will select electives from the "Electives: Philosophy B.A." course list. Students pursuing the Philosophy B.A. with Concentration in Social Justice, Ethics, and Law will select electives from the "Electives: Philosophy B.A. with Concentration in Social Justice, Ethics, and Law" course list.

#### Foundation (3 credits)

Any 100-level PHIL course.

PHIL 100	Search in Philosophy	3
PHIL 112	Introduction to Philosophy	3
PHIL 125	Introduction to Philosophy through Popular Culture	3
PHIL 135	Nature, Mind, and Science	3
PHIL 144	Moral Issues	3

#### Core (18 credits)

PHIL 221	Introduction to Modern Logic	3
PHIL 230	Ancient Greek Philosophy	3
PHIL 310	Philosophy Research and Writing	3
PHIL 330	Early Modern Philosophy	3
PHIL 344	Topics in Philosophical & Social Justice	3
	or	
PHIL 346	Ethical Theory	3
PHIL 400	Seminar in Philosophy	3

#### African, African-American, and Asian Philosophy (3 credits)

PHIL 250	Introduction to Asian Philosophy	3
	or	
PHIL 260/AFAM	African Philosophy	3

260	or	
PHIL 275	Chinese Philosophy	3
	or	
PHIL 360/AFAM	African-American Philosophy	3
360		
	or	
PHIL 375	Japanese Philosophy	3
	or	
PHIL 376	Buddhist Philosophy	3

#### Electives: Philosophy B.A. (15 credits)

15 credits, of which at least 9 credits must be upper-level (300-level or 400-level) PHIL courses; 6 additional elective credits of courses with the PHIL designator or other courses approved by the Philosophy Department Chair .

**Total Credit Hours: 39**

### PHILOSOPHY WITH CONCENTRATION IN SOCIAL JUSTICE, ETHICS AND LAW, B.A.

Philosophy involves critical inquiry about ourselves and the world we inhabit. The study of Philosophy develops many skills, such as critical thinking, reasoning and argumentation, clear communication about complex topics, careful consideration of multiple perspectives on the same topic, and thoughtful consideration of ethics and values in public and private spheres.

Philosophy majors pursue many different paths, including graduate programs, law school, medical school, and careers in a diversity of professions. For recent data, see "Why Major in Philosophy?" and "Philosophy as a Pre-Law Major."

CCSU offers a B.A. in Philosophy and a B.A. in Philosophy with Concentration in Social Justice, Ethics, and Law.

A minor is required with this major. Double majors are exempt from a minor.

### REQUIREMENTS: (39 CREDITS)

Requirements include: Foundation (3 credits), Core (18 credits), African, African-American, and Asian Philosophy (3 credits), and Electives (15 credits). Students pursuing the Philosophy B.A. will select electives from the "Electives: Philosophy B.A." course list. Students pursuing the Philosophy B.A. with Concentration in Social Justice, Ethics, and Law will select electives from the "Electives: Philosophy B.A. with Concentration in Social Justice, Ethics, and Law" course list.

**Foundation (3 credits)**

Any 100-level PHIL course.

PHIL 100	Search in Philosophy	3
PHIL 112	Introduction to Philosophy	3
PHIL 125	Introduction to Philosophy through Popular Culture	3
PHIL 135	Nature, Mind, and Science	3
PHIL 144	Moral Issues	3

**Core (18 credits)**

PHIL 221	Introduction to Modern Logic	3
PHIL 230	Ancient Greek Philosophy	3
PHIL 310	Philosophy Research and Writing	3
PHIL 330	Early Modern Philosophy	3
PHIL 344	Topics in Philosophical & Social Justice	3
	or	
PHIL 346	Ethical Theory	3
PHIL 400	Seminar in Philosophy	3

**African, African-American, and Asian Philosophy (3 credits)**

PHIL 250	Introduction to Asian Philosophy	3
	or	
PHIL 260/AFAM 260	African Philosophy	3
	or	
PHIL 275	Chinese Philosophy	3
	or	
PHIL 360/AFAM 360	African-American Philosophy	3
	or	
PHIL 375	Japanese Philosophy	3
	or	
PHIL 376	Buddhist Philosophy	3

**Electives 15 credits**

15 credits from the following course list, of which at least 9 credits must be upper-level (300-level or 400-level) PHIL or PS courses or other upper-level courses approved by the Philosophy Department Chair. Provided their focus is relevant to the concentration, Independent Studies in Philosophy (PHIL 492) and/or Philosophy Theses (PHIL 497, PHIL 498, and PHIL 499) can be counted, with approval of the Philosophy Department Chair.

PHIL 144	Moral Issues	3
PHIL 211/PES 210	Philosophy & Global Justice	3
PHIL 222/WGSS 222	Philosophy of Gender	3

PHIL 240	Ethical Problems in Business	3
PHIL 241	Environmental Ethics	3
PHIL 242	Ethical Problems in Technology	3
PHIL 243	Philosophy of Bioethics	3
PHIL 244	Introduction to the Philosophy of Social Justice	3
PHIL 245	Computer Ethics	3
PHIL 344	Topics in Philosophical & Social Justice	3
PHIL 345/PES 345	Philosophy of War & Peace	3
PHIL 346	Ethical Theory	3
PHIL 349	Philosophy of Law	3
PHIL 360/AFAM 360	African-American Philosophy	3
PS 334	Modern Political Thought	3
PS 433	Contemporary Political Thought	3
PS 445	Public Policy Analysis and Evaluation	3
PS 450	Public Sector Ethics	3

**Total Credit Hours: 39**

**PHYSICS, B.S.**

Pending May 2024 Board of Regents approval.

A minor is required with this major.

**OPTION 1: B.S. IN PHYSICS**

For the B.S. in Physics without any selected concentration, completion of a minor is required.

**REQUIREMENTS**

**Required Courses (37 credits)**

PHYS 125	University Physics I	4
PHYS 126	University Physics II	4
PHYS 220	Mechanics I	3
PHYS 250	Intermediate Lab I	1
PHYS 305	Foundations of Electricity and Magnetism	3
PHYS 320	Heat and Thermodynamics	3
PHYS 325	Optics	4
PHYS 331	Electronics I	3
PHYS 350	Intermediate Lab II	1
PHYS 425	Modern Physics	3
PHYS 450	Advanced Laboratory Techniques	1
PHYS 460	Seminar in Physics	1
PHYS 470	Quantum Mechanics I	3
PHYS 471	Quantum Mechanics II	3

**In addition, students must take (20 credits)**

CHEM 161	General Chemistry	3
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CHEM 162	General Chemistry Laboratory	1
CHEM 260	Foundations of Inorganic Chemistry	3
CHEM 201	Foundations of Analytical Chemistry Laboratory	1
MATH 152	Calculus I	4
MATH 221	Calculus II	4
MATH 222	Calculus III	4

### OPTION 2: B.S. IN PHYSICS WITH CONCENTRATION IN BIOLOGY

A minor is not required.

#### Physics (37 credits)

PHYS 125	University Physics I	4
PHYS 126	University Physics II	4
PHYS 220	Mechanics I	3
PHYS 250	Intermediate Lab I	1
PHYS 305	Foundations of Electricity and Magnetism	3
PHYS 320	Heat and Thermodynamics	3
PHYS 325	Optics	4
PHYS 331	Electronics I	3
PHYS 350	Intermediate Lab II	1
PHYS 425	Modern Physics	3
PHYS 450	Advanced Laboratory Techniques	1
PHYS 460	Seminar in Physics	1
PHYS 470	Quantum Mechanics I	3
PHYS 471	Quantum Mechanics II	3

#### Mathematics (12 credits)

MATH 152	Calculus I	4
MATH 221	Calculus II	4
MATH 222	Calculus III	4

#### Biology (22 credits)

BIO 121	General Biology I	4
BIO 122	General Biology II	4
BIO 200	Integrative Biology	4
BIO 331	Neurobiology	4
	6 credits of BIO or BMS electives at the 200-level or above	

#### Chemistry (16 credits)

CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 260	Foundations of Inorganic Chemistry	3
CHEM 201	Foundations of Analytical Chemistry Laboratory	1
CHEM 210	Organic Chemistry I - Foundations	3
CHEM 211	Organic Chemistry I Laboratory -	1

	Foundations	
CHEM 212	Organic Synthesis	3
CHEM 213	Organic Chemistry II Laboratory - Synthesis	1

### OPTION 3: B.S. IN PHYSICS WITH CONCENTRATION IN BIOMOLECULAR SCIENCES

A minor is not required.

#### Physics (37 credits)

PHYS 125	University Physics I	4
PHYS 126	University Physics II	4
PHYS 220	Mechanics I	3
PHYS 250	Intermediate Lab I	1
PHYS 305	Foundations of Electricity and Magnetism	3
PHYS 320	Heat and Thermodynamics	3
PHYS 325	Optics	4
PHYS 331	Electronics I	3
PHYS 350	Intermediate Lab II	1
PHYS 425	Modern Physics	3
PHYS 450	Advanced Laboratory Techniques	1
PHYS 460	Seminar in Physics	1
PHYS 470	Quantum Mechanics I	3
PHYS 471	Quantum Mechanics II	3

#### Mathematics (12 credits)

MATH 152	Calculus I	4
MATH 221	Calculus II	4
MATH 222	Calculus III	4

#### Biomolecular Sciences (20.5 credits)

BMS 102	Introduction to Biomolecular Science	3
BMS 103	Introduction to Biomolecular Science Laboratory	1
BMS 190	Friday Seminar in Biomolecular Sciences I	.5
BMS 201	Principles of Cell and Molecular Biology	4
BMS 311	Cell Biology	4
BMS 307	Genomics	4
	4 credits of BMS or BIO electives at the 200-level or above	

#### Chemistry (16 credits)

CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 260	Foundations of Inorganic Chemistry	3
CHEM 201	Foundations of Analytical Chemistry Laboratory	1
CHEM 210	Organic Chemistry I - Foundations	3
CHEM 211	Organic Chemistry I Laboratory - Foundations	1



CHEM 212	Organic Synthesis	3
CHEM 213	Organic Chemistry II Laboratory - Synthesis	1

#### OPTION 4: B.S. IN PHYSICS WITH CONCENTRATION IN FINANCE

##### Physics (37 credits)

PHYS 125	University Physics I	4
PHYS 126	University Physics II	4
PHYS 220	Mechanics I	3
PHYS 250	Intermediate Lab I	1
PHYS 305	Foundations of Electricity and Magnetism	3
PHYS 320	Heat and Thermodynamics	3
PHYS 325	Optics	4
PHYS 331	Electronics I	3
PHYS 350	Intermediate Lab II	1
PHYS 425	Modern Physics	3
PHYS 450	Advanced Laboratory Techniques	1
PHYS 460	Seminar in Physics	1
PHYS 470	Quantum Mechanics I	3
PHYS 471	Quantum Mechanics II	3

A minor is not required.

##### Chemistry (4 credits)

CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1

##### Mathematics (23 credits)

MATH 152	Calculus I	4
STAT 215	Statistics for Behavioral Sciences I	3
MATH 221	Calculus II	4
MATH 222	Calculus III	4
MATH 226	Linear Algebra and Probability for Engineers	4
	or	
MATH 228	Introduction to Linear Algebra	4
MATH 355	Introduction to Differential Equations with Applications	4

##### Finance (21 credits)

FIN 295	Managerial Finance	3
FIN 301	Intermediate Managerial Finance	3
FIN 310	Principles of Investments	3
FIN 320	Financial Markets and Institutions	3
FIN 410	Securities Analysis and Portfolio Management	3
	6 credits of FIN electives	

##### Ancillary requirements (9 credits)

AC 211	Introduction to Financial Accounting	3
ECON 200	Principles of Macroeconomics	3
ECON 201	Principles of Microeconomics	3

#### OPTION 5: B.S. IN PHYSICS WITH CONCENTRATION IN ENGINEERING PHYSICS

A minor is not required.

##### Physics Courses (39 credits)

PHYS 125	University Physics I	4
PHYS 126	University Physics II	4
PHYS 220	Mechanics I	3
PHYS 250	Intermediate Lab I	1
PHYS 305	Foundations of Electricity and Magnetism	3
PHYS 320	Heat and Thermodynamics	3
PHYS 325	Optics	4
PHYS 331	Electronics I	3
PHYS 350	Intermediate Lab II	1
PHYS 425	Modern Physics	3
PHYS 450	Advanced Laboratory Techniques	1
PHYS 452	Independent Study in Physics	1-3
PHYS 470	Quantum Mechanics I	3
PHYS 471	Quantum Mechanics II	3

##### Engineering Courses (21 credits)

ENGR 251	Engineering Mechanics I - Statics	3
ENGR 357	Mechanics of Materials	3
ME 258	Engineering Thermodynamics	3
ME 354	Fluid Mechanics	3

Engineering Electives (ME and/or CE 300 or above) - 9 credits

##### Chemistry Courses (4 credits)

CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1

##### Math Courses (20 credits)

MATH 152	Calculus I	4
MATH 221	Calculus II	4
MATH 222	Calculus III	4
MATH 226	Linear Algebra and Probability for Engineers	4
MATH 355	Introduction to Differential Equations with Applications	4

#### OPTION 6: B.S. IN PHYSICS WITH CONCENTRATION IN BUSINESS

##### Physics (37 credits)

PHYS 125	University Physics I	4
PHYS 126	University Physics II	4
PHYS 220	Mechanics I	3
PHYS 250	Intermediate Lab I	1
PHYS 305	Foundations of Electricity and Magnetism	3
PHYS 320	Heat and Thermodynamics	3
PHYS 325	Optics	4
PHYS 331	Electronics I	3

PHYS 350	Intermediate Lab II	1
PHYS 425	Modern Physics	3
PHYS 450	Advanced Laboratory Techniques	1
PHYS 460	Seminar in Physics	1
PHYS 470	Quantum Mechanics I	3
PHYS 471	Quantum Mechanics II	3

**Chemistry (8 credits)**

CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 162	General Chemistry Laboratory	1
CHEM 201	Foundations of Analytical Chemistry Laboratory	1

**Mathematics (15 credits)**

MATH 152	Calculus I	4
MATH 221	Calculus II	4
MATH 222	Calculus III	4
STAT 200	Business Statistics	3

**Business Courses (24 credits)**

LAW 250	The Legal and Ethical Environment of Business	3
MC 207	Managerial Communication I	3
AC 211	Introduction to Financial Accounting	3
AC 212	Introduction to Managerial Accounting	3
MGT 295	Fundamentals of Management and Organizational Behavior	3
FIN 295	Managerial Finance	3
MIS 201	Introduction to Management Information Systems	3
MKT 295	Fundamentals of Marketing	3

**A separate minor is not required, a minor in Business is obtained as part of the program. Students in the Business concentration may be eligible for the Accelerate Central M.B.A. program.**

**Accelerate Central B.S.- Physics /M.B.A. Program****Eligibility**

Students typically apply during their junior year of study and must meet the requirements specified below:

1. Have at least a 3.3 cumulative grade point average.
2. Completed 60 earned credit hours by the end of the Fall semester of their junior year. At least 30 credits must have been earned at CCSU.
3. Meet the M.B.A. program admission criteria.

Eligible students can apply for admission to the **Accelerate Central B.S. Physics/ M.B.A. Program** during their junior year of study. Selected students may be able to complete a B.S. in Physics and a M.B.A. in as few as five years on a full-time basis.

For students who are officially admitted to the **Accelerate Central B.S. Physics / M.B.A. Program**, two three (3)-credit M.B.A. core courses will replace two three (3)-credit undergraduate elective courses. In addition, up to two three (3)-credit graduate courses may be taken before matriculation as a graduate student; these 2 courses will be excluded from the student's B.S. program and transferred into the student's M.B.A. program.

Students who are accepted into **Accelerate Central B.S. Physics / M.B.A. Program** will officially matriculate into the School of Graduate Studies the semester immediately following conferral of their Bachelor's degree, even if they have already taken graduate-level courses while completing their Bachelor's degree. Students wishing to defer their graduate studies must notify Graduate Recruitment & Admissions of this decision prior to the start of the term following the conferral of their Bachelor's degree.

**How to Apply**

Students will submit Change of Major form, a current resume and one recommendation letter from a CCSU Physics professor to their undergraduate advisor by March 1st of their junior year. The

documents will go through the proper parties for review and approval, including the Graduate Program Director. Once the form has been approved by all required parties, the Registrar's Office will change the student's undergraduate curriculum to note the Accelerate Central program.

It is highly recommended to apply early for admission to this program to receive dedicated advising.

**POLITICAL SCIENCE, B.A.**

A minor is required with this major.

**REQUIREMENTS: (39 CREDITS)****Core:**

PS 104	The World's Political Systems	3
	or	
PS 110	American Government & Politics	3

PS 250	Approaches to Political Science	3	PS 338	International Organization	3
<b>Five Core Areas (3 credits in each):</b>			PS 345	Terrorism	3
<b>U.S. Government and Politics</b>			PS 370	Arab Uprisings	3
PS 111/AFAM 111	Race and Ethnicity in US and Global Politics	3	PS 380	International Conflict and Security	3
PS 230	American State and Local Government	3	PS 439	U.S. Middle East Policy	3
PS 231	U.S. Foreign Policy	3	PS 491	Special Topics in International Relations	3
PS 315	Internet & Media Politics	3	PS 210	The International and Domestic Legal Environment of Cybersecurity	3
PS 325	Public Opinion in American Politics	3	<b>Public Policy, Law and Administration</b>		
PS 330	American Parties and Interest Groups	3	PS 260	Public Administration	3
PS 401	The Politics of Sport	3	PS 270	Law and Politics	3
PS 430	The American Presidency	3	PS 331	American Constitutional Law	3
PS 431	The Legislative Process	3	PS 332	Civil Liberties	3
PS 432	Urban Politics and Government	3	PS 339	International Law	3
PS 494	Special Topics in U.S. Government and Politics	3	PS 445	Public Policy Analysis and Evaluation	3
<b>Political Theory</b>			PS 446	Power, Money, and Politics: The Public Budgeting Process	3
PS 232	Ancient and Medieval Political Thought	3	PS 448	Current U.S. Public Policy Issues	4
PS 334	Modern Political Thought	3	PS 450	Public Sector Ethics	3
PS 335	American Political Thought	3	PS 455	Environmental Politics and Policy	3
PS 433	Contemporary Political Thought	3	PS 495	Special Topics in Public Policy	3
PS 131	Introduction to Political Theory	3	<b>SPECIALIZATION</b>		
PS 330	American Parties and Interest Groups	3	6 credits in one of the following specializations:		
<b>Comparative Politics</b>			<b>U.S. and state government, administration, and policy</b>		
PS 280	Religion & Politics	3	PS 111/AFAM 111	Race and Ethnicity in US and Global Politics	3
PS 336	West European Governments	3	PS 230	American State and Local Government	3
PS 343	Political Leadership	3	PS 231	U.S. Foreign Policy	3
PS 380	International Conflict and Security	3	PS 260	Public Administration	3
PS 420/LAS 420	Government and Politics of Latin America	3	PS 270	Law and Politics	3
PS 421	Government and Politics of Africa	3	PS 325	Public Opinion in American Politics	3
PS 425	Asian Politics	3	PS 331	American Constitutional Law	3
PS 434	Government and Politics of the Middle East and North Africa	3	PS 332	Civil Liberties	3
PS 435	Central and Eastern European Politics	3	PS 401	The Politics of Sport	3
PS 493	Special Topics in Comparative Politics	3	PS 430	The American Presidency	3
PS 210	The International and Domestic Legal Environment of Cybersecurity	3	PS 431	The Legislative Process	3
PS 370	Arab Uprisings	3	PS 432	Urban Politics and Government	3
PS 300	Corruption and Scandal in Politics	3	PS 439	U.S. Middle East Policy	3
<b>International Relations</b>			PS 445	Public Policy Analysis and Evaluation	3
PS 235	International Relations	3	PS 446	Power, Money, and Politics: The Public Budgeting Process	3
			PS 448	Current U.S. Public Policy Issues	4
			PS 455	Environmental Politics and Policy	3
			PS 494	Special Topics in U.S. Government	3

	and Politics	
PS 495	Special Topics in Public Policy	3
<b>Comparative and international politics</b>		
PS 210	The International and Domestic Legal Environment of Cybersecurity	3
PS 235	International Relations	3
PS 336	West European Governments	3
PS 339	International Law	3
PS 345	Terrorism	3
PS 370	Arab Uprisings	3
PS 380	International Conflict and Security	3
PS 420/LAS 420	Government and Politics of Latin America	3
PS 421	Government and Politics of Africa	3
PS 425	Asian Politics	3
PS 434	Government and Politics of the Middle East and North Africa	3
PS 435	Central and Eastern European Politics	3
PS 491	Special Topics in International Relations	3

**Leadership, organizations, political behavior and methods**

PS 111/AFAM 111	Race and Ethnicity in US and Global Politics	3
PS 280	Religion & Politics	3
PS 315	Internet & Media Politics	3
PS 330	American Parties and Interest Groups	3
PS 338	International Organization	3
PS 343	Political Leadership	3
PS 450	Public Sector Ethics	3

**Political Theory**

PS 232	Ancient and Medieval Political Thought	3
PS 334	Modern Political Thought	3
PS 335	American Political Thought	3
PS 433	Contemporary Political Thought	3
PS 210	The International and Domestic Legal Environment of Cybersecurity	3
PS 330	American Parties and Interest Groups	3

**Electives (12 credits in Political Science)****Total Credit Hours: 39**

At least 21 credits for the Major must be taken at 300-400 level, at least 9 of which must be at the 400-level.

**POLITICAL SCIENCE WITH SPECIALIZATION IN LEGAL STUDIES, B.A.**

A minor is required with this major.

**REQUIREMENTS: (39 CREDITS)****Core:**

PS 110	American Government & Politics	3
PS 250	Approaches to Political Science	3

**Four Core Areas (3 credits in each):****U.S. and state government and politics**

PS 230	American State and Local Government	3
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**International relations**

PS 339	International Law	3
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**Law**

PS 270	Law and Politics	3
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**Ethics Requirement**

Select one of the following courses to fulfill the Ethics Requirement.

PHIL 240	Ethical Problems in Business	3
PHIL 241	Environmental Ethics	3
PHIL 242	Ethical Problems in Technology	3
PHIL 243	Philosophy of Bioethics	3
PHIL 245	Computer Ethics	3
PHIL 346	Ethical Theory	3
PS 450	Public Sector Ethics	3

**SPECIALIZATION**

6 credits in the following specialization:

**U.S. Legal Studies**

PS 331	American Constitutional Law	3
PS 332	Civil Liberties	3

**Electives (15 credits in Political Science)**

At least 12 of the 39 credits for the Major must be taken at the 300-400-level and 9 credits must be taken at the 400-level.

Credits from internships may be used to meet up to 6 credits of the elective requirement.

3 credits from the following list of pre-approved courses may also be used to meet the elective requirement.

ECON 250	Contemporary Economic Issues	3
SOC 111	Social Problems	3
PHIL 240	Ethical Problems in Business	3
PHIL 241	Environmental Ethics	3
PHIL 242	Ethical Problems in Technology	3

PHIL 243	Philosophy of Bioethics	3
PHIL 245	Computer Ethics	3
PHIL 346	Ethical Theory	3

**Total Credit Hours: 39**

**POLITICAL SCIENCE WITH SPECIALIZATION IN PUBLIC POLICY AND MANAGEMENT, B.A.**

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A minor is required with this major.

**REQUIREMENTS: (39 CREDITS)**

**Core Courses:**

PS 110	American Government & Politics	3
PS 230	American State and Local Government	3
PS 260	Public Administration	3
PS 450	Public Sector Ethics	3
PS 446	Power, Money, and Politics: The Public Budgeting Process	3
ECON 201	Principles of Microeconomics	3
MGT 295	Fundamentals of Management and Organizational Behavior	3

**Electives:**

At least 3 credits for the major must be taken at the 300-400 level in Political Science and 6 credits must be taken at the 400-level in Political Science and 9 credits at the upper level must be taken in Management. An Internship is highly encouraged. Students must also complete a minor in an area relevant to their policy interests.

MGT 305	Human Resource Management	3
	or	
MGT 345	Organizational Analysis & Change Management	3
	or	
MGT 348	Management Systems	3
	or	
MGT 390	Management Topics	3
	or	
MGT 340	Ethical and Social Issues for the Manager	3
	or	
MGT 425	Labor/Management Relations	3
	or	
MGT 432	Human Resource Development and Training	3
	or	
MGT 460	Staffing	3
	or	
MGT 497	Internship in Management and	1- 3

Organization

**Total Credit Hours: 39**

**PSYCHOLOGICAL SCIENCE, B.A.**

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A minor is required with this major.

**REQUIREMENTS: (42 CREDITS)**

**Required Courses:**

PSY 112	Introduction to Psychology	3
PSY 113	Exploring Psychology	1
PSY 136	Life-Span Development	3
PSY 301	Research Methods in Psychological Science I	4
PSY 302	Research Methods in Psychological Science II	4
PSY 330	Abnormal Psychology	3
PSY 490	History & Systems of Psychology	3

**One course is required from each of the following categories:**

**Social/personality:**

PSY 371	Personality Psychology	3
PSY 372	Social Psychology	3

**Biological:**

PSY 441	Sensation and Perception	3
PSY 450	Biopsychology	3

**Experimental:**

PSY 200	Learning & Memory	3
PSY 281	Cognitive Psychology	3

**Diversity:**

PSY 420	Cross-Cultural Psychology	3
PSY 430	Intergroup Relations	3
PSY 412	Diversity of Latino/a Psychology	3

**and 9 credits of psychology electives**

In addition, in order to graduate, students must complete the Psychology Exit Survey. The Exit Survey will be administered by the department every semester.

Note: PSY 112 (C- or higher) and STAT 215 (C- or higher) are prerequisites for PSY 301.

**ROBOTICS AND MECHATRONICS ENGINEERING TECHNOLOGY, B.S.**

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A minor is not required with this major.

This sequence of courses is designed to supply the student with knowledge and experiences that will enable him/her to work with and design Robotic and Mechatronics

Systems. The emphasis is on developing the practical, hands-on skills engineers need in order to meet modern industrial demands. This is a 130-credit program.

**REQUIREMENTS**

**Major Requirements**

ROBO 110	Introduction to Robotics and Mechatronics	3
ROBO 210	Engineering Mechanics for Automation	4
ROBO 220	Parametric Modeling and Simulation	3
ROBO 240	Electric Machines	3
ROBO 260	Programmable Controllers	4
ROBO 280	Embedded Systems Design	3
ROBO 310	Data Acquisition & Processing	3
ROBO 320	Fluid Power Control	4
ROBO 340	Modeling and Simulation in Mechatronics	3
ROBO 350	Applied Control Systems I	3
ROBO 370	Mechanisms for Automation	3
ROBO 380	Mechatronics	4
ROBO 390	Robotics, Theory and Applications	3
ROBO 460	Applied Control Systems II	3
ROBO 480	Industrial Robotics	3
ROBO 496	Industrial Internship	3
ROBO 497	Capstone Senior Project	3

**Subtotal: 55**

**At least two out of four courses (6-9 credits)**

ROBO 425	Advanced Programmable Logic Controllers	3
ROBO 440	Machine Vision and Image Processing	3
ROBO 450	Autonomous and Intelligent Mobile Robots	3
ROBO 470	Robotics Systems Engineering and Analysis	3

**Additional Requirements**

CET 236	Circuit Analysis	3
CET 270	Electronic Circuits and Devices for Robotics	3
CET 363	Digital Circuits	3
MATH 221	Calculus II	4
MATH 226	Linear Algebra and Probability for Engineers	4
MATH 355	Introduction to Differential Equations with Applications	4
MM 216	Manufacturing Processes	3

**General Education Requirements**

<b>Study Area I: Arts and Humanities (9 credits)</b>		
Literature (3)		3

Philosophy or Fine Arts 6

**Study Area II: Social Sciences (6 credits)**

History, Economics or ET 399 6

**Study Area III: Behavioral Sciences (3 credits)**

Anthropology, Psychology, or Sociology 3

**Study Area IV: Natural Sciences (8 credits)**

PHYS 125 University Physics I 4

CHEM 161 General Chemistry and 3

CHEM 162 General Chemistry Laboratory 1

**Skill Area I: Communication Skills (6 credits)**

WRT 110 Introduction to College Writing and 3

COMM 140 Public Speaking 3

**Skill Area II: Mathematics (8 credits)**

MATH 119 Pre-Calculus with Trigonometry 4

MATH 152 Calculus I 4

**Skill Area III: Foreign Language (0-3 credits)**

Foreign Language and Internation requirement

**Skill Area IV: University Requirement (2 credits)**

PE 144 College Wellness 2

**Total Credit Hours: 130**

**SOCIAL WORK, B.A.**

A minor is not required with this major.

**REQUIREMENTS**

**Social Work Major Requirements:**

SW 225 Writing for the Social Work Profession 3

SW 226 Social Welfare Policy and Services I 3

SW 227 Human Behavior and the Social Environment I 3

SW 360 Generalist Social Work Practice with Individuals and Families 3

SW 361 Generalist Social Work Practice with Small Groups 3

SW 362 Generalist Social Work Practice with Organizations and Communities 3

SW 368 Human Behavior and the Social Environment II 3

SW 374 Introduction to Social Work Research 3

SW 426 Social Welfare Policy and Services II 3

SW 450	Field Education Experience I	3
SW 451	Field Education Seminar I	3
SW 452	Field Education Experience II	3
SW 453	Field Education Seminar II	3
	Social work electives at the 400 level	6
SOC 233	The Family	3
SOC 110	Introductory Sociology	3
	or	
ANTH 140	Introduction to Anthropology	3
SOC 111	Social Problems	3
	or	
SW 100	Exploration in Social Work	3

**Subtotal: 54**

**Related Requirements:**

BIO 111	Introductory Biology	3
PS 110	American Government & Politics	3
	or	
PS 230	American State and Local Government	3
ECON 200	Principles of Macroeconomics	3
STAT 215	Statistics for Behavioral Sciences I	3

**Subtotal: 12**

**SOCIOLOGY, B.A.**

A minor is required with this major.

**REQUIREMENTS: (38 CREDITS)**

The five required core courses enable students to acquire fundamental analytical research skills and theoretical perspectives of the discipline.

**Core:**

SOC 110	Introductory Sociology	3
	or	
SOC 111	Social Problems	3
	and	
SOC 300	Sociological Theory	4
SOC 310	Research Methods	4

**Advanced Methods:**

4 credits from the following

SOC 410	Quantitative Analysis	4
SOC 411	Oral History for the Social Sciences	4
SOC 412	Qualitative Analysis	4
SOC 413	Community Research	4

**Capstone:**

SOC 499	Senior Seminar in Sociology	4
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**Electives:**

19 credits of Sociology electives: 12 of which must be at the 300- and/or 400-level, and with no more than 6 credits at the 100-level.

**Total Credit Hours: 38**

Students wishing to major in sociology are required to meet with the department chair to pick up introductory materials and information, as well as to be assigned a faculty advisor. Substantive areas of study should be developed in conjunction with the student's departmental advisor. Independent studies and internship opportunities are available to qualified majors. Eligible students are encouraged to participate in Alpha Kappa Delta, the International Sociology Honors Society.

Students are also required to successfully complete STAT 215.

**SPANISH, B.A.**

A minor is required with this major.

**REQUIREMENTS: (30 CREDITS)**

**Spanish Language**

**For non-native speakers:**

SPAN 125	Intermediate Spanish I and	3
SPAN 126	Intermediate Spanish II or	3
SPAN 128	Intensive Intermediate Spanish I	6
SPAN 225	Intermediate Spanish III	3
SPAN 226	Intermediate Spanish IV and	3
SPAN 335	Advanced Spanish for Oral Expression	3

**For native speakers:**

SPAN 190	Language for Heritage Speakers of Spanish I	3
SPAN 191	Language for Heritage Speakers of Spanish II	3
SPAN 290	Hispanic Culture for Heritage Speakers of Spanish I	3
SPAN 291	Hispanic Culture for Heritage Speakers of Spanish II and	3
SPAN 335	Advanced Spanish for Oral Expression	3

**Spanish and Spanish-American Literature and Cultures:**

15 credits from:

SPAN 300	Literary Analysis	3
SPAN 304	Introduction to Spanish Literature I or	3
SPAN 305	Introduction to Spanish Literature II	3
SPAN 315	Spanish Civilization	3
SPAN 316/LAS 316	Latin American Civilization	3
SPAN 375/LAS 375	Introduction to Spanish American Literature I or	3
SPAN 376/LAS 376	Spanish American Literature II	3
SPAN 401	Introduction to English-Spanish Translation	3

Add Two Proposed New Courses:

SPAN 402: English-Spanish Business Translation

SPAN 404: English-Spanish Medical Translation

**SPECIALIZATION IN INTER-UNIVERSITY SPANISH LANGUAGE AND HISPANIC CULTURES**

Students must complete 12 credits at one of our Spanish-speaking partner institutions abroad during one semester. The 12 credits may be taken in language, culture and/or literature as appropriate to the student's level of proficiency and upon recommendation of student's academic advisor at CCSU. These credits may apply to the core requirements of the major.

**Total Credit Hours: 30**

For students with advanced preparation, appropriate substitutions will be made.

**SPECIAL STUDIES**

With the help of an academic advisor, an undergraduate student may design a major to fit his or her own interests and needs. A special studies major must consist of 36-42 credits if a conventional minor is taken, or 54-60 credits if no minor is taken. At least half of the program must consist of 300- or 400-level courses. A proposal for a special studies major will only be considered when it is clearly shown that no present major offered by the University meets the same need. The major will consist of existing courses and all academic requirements of the University, including all course requirements and

prerequisites. All special studies programs total a minimum of 120 credits.

To be eligible for such a special studies major leading to a BS or BA degree, the student must be in good standing. The application must be approved by a faculty advisor, chairs of departments from which there are three or more courses in the major and the dean of the school of the advisor. Applications normally should be filed prior to the completion of 60 credits. The student must have completed at least 12 credits at CCSU or have transferred at least 30 credits prior to filing.

Approval of special studies majors is by a majority of a committee composed of the chair of the Curriculum Committee; the chairs of the Departments of Liberal Arts and Social Sciences, Business, Education and Professional Studies, and Engineering and Technology subcommittees; and the dean of the Carol A. Ammon College of Liberal Arts and Social Sciences or his or her representative. Information about special studies programs in all four schools is available in the office of the Dean of the College of Liberal Arts and Social Sciences.

Applications are reviewed once each semester; the deadlines are October 1 for fall and March 1 for spring. Completed applications, including signatures, must be submitted to the Dean's Office, Carol A. Ammon College of Liberal Arts & Social Sciences, by this date.

Download application (Word) here.

**STRATEGIC COMMUNICATION, B.A.**

A minor is required with this major.

**REQUIREMENTS**

38 credits total, with 12 credits in core courses, 8 credits in required gateway courses\* from a specified emphasis area, and at least 18 other credits of directed electives.

**Core Courses**

COMM 215	Introduction to Interpersonal Communication or	3
COMM 216	Introduction to Intercultural Communication	3
COMM 234	Introduction to Public Relations	3
COMM 253	Introduction to Organizational Communication	3
COMM 343	Communication and Social Influence	3



**Area of Emphasis**

(Students must take at least 3 courses, in addition to the gateway courses listed, in one of these 2 areas)

**Directed Electives**

Additional credits such that a student has at least 10 credits in 400-level classes and at least 38 total credits in the major. Two courses from other departments can count as directed electives towards the major, upon advisor approval.

**Additional Requirements**

All students must also take COMM 140 Public Speaking to fulfill a Skill Area I requirement in General Education.

\*Required gateway courses for a particular emphasis area

**Organizational Communication**

This emphasis area offers students preparation for careers in employee communication, special events and training, and development in corporate and non-profit organizations and government agencies.

\*Gateway courses: COMM 356 and COMM 453.

COMM 231	Communication Technologies	3
COMM 301	Critical Thinking	4
COMM 302	Problem-Solving and Decision Making	4
COMM 315	Political Communication	4
COMM 316/WGSS 316	Gender and Communication	3
COMM 332	Web Publishing	4
COMM 345	Writing for the Electronic Media	4
COMM 353	Interviewing Theory and Practice	3
COMM 414	Nonverbal Communication	4
COMM 423	Crisis Communication	4
COMM 439	Social Media Research & Big Data	4
COMM 450	Communication Skills for Training and Development	3
COMM 452	Health Communication	4
COMM 454	Communication and Social Change	3
COMM 456	Corporate Communication	3
COMM 490	Internship Study	1-6
COMM 493	Seminar in Communication	4
COMM 495	Special Topics in Strategic Communication	3 to 4
COMM 496	Field Studies in Communication	3

**Public Relations/Promotions**

Designed for students interested in careers in promotions and public relations, this emphasis provides students with both the theoretical knowledge and the practical

experience that is necessary to implement strategic communication campaigns and initiatives for organizations in the for-profit and not-for-profit sectors.

\*Gateway courses: COMM 334; and either COMM 410, COMM 411, COMM 434, or COMM 439

COMM 231	Communication Technologies	3
COMM 301	Critical Thinking	4
COMM 315	Political Communication	4
COMM 316/WGSS 316	Gender and Communication	3
COMM 332	Web Publishing	4
COMM 339	Public Relations and Social Media	4
COMM 345	Writing for the Electronic Media	4
COMM 406	Case Studies in Public Relations	4
COMM 410	Public Opinion	4
COMM 411	Public Opinion Research	4
COMM 414	Nonverbal Communication	4
COMM 457	Converging Media	4
COMM 434	Campaign Development Methods	4
COMM 436	Streaming Media in Web Publishing	4
COMM 439	Social Media Research & Big Data	4
COMM 451	Environmental Communication	3
COMM 452	Health Communication	4
COMM 453	Organizational Communication	4
COMM 454	Communication and Social Change	3
COMM 458	Sports Communication	4
COMM 490	Internship Study	1-6
COMM 492	Political/Legislative Intern Experience	3 OR 6
COMM 493	Seminar in Communication	4
COMM 495	Special Topics in Strategic Communication	3 to 4
COMM 496	Field Studies in Communication	3

**TECHNOLOGY MANAGEMENT, B.S.**

A minor is not required with this major.

Accredited by ATMAE

**MAJOR REQUIREMENTS**

**Core Requirements**

Students of this program are required to complete a common core of 24 credits in technical and management courses. Courses included within these common requirements are as follows:

TM 190	Global Quality Management Systems	3
TM 310	Environment, Health and Safety (EH&S)	3

	or		
CM 335	Construction Safety	3	
TM 362	Leading Project Teams	3	
TM 366	Supply Chain and Purchasing Strategies	3	
TM 401	Industrial Internship	3	
MGT 295	Fundamentals of Management and Organizational Behavior	3	
AC 210	Accounting for Decision-Making	3	
ENGR 290	Engineering Technical Writing and Presentation	3	
	or		
MC 207	Managerial Communication I	3	
<b>General Education Requirements</b>			
MATH 115	Trigonometry	3	
	or		
MATH 119	Pre-Calculus with Trigonometry	4	
	or		
MATH 123	Applied Business Mathematics	3	
ECON 201	Principles of Microeconomics	3	
CHEM 161	General Chemistry	3	
CHEM 162	General Chemistry Laboratory	1	
PHYS 111	Introductory Physics I	3	
	or		
PHYS 121	General Physics I	4	
	or		
PHYS 125	University Physics I	4	
STAT 200	Business Statistics	3	

**DIRECTED ELECTIVES**

This degree has been developed to allow students to develop a custom plan of study utilizing various existing technology and management courses. Students transferring credits in from other institutions of higher education can use those credits in this program. The technology management degree requires the student to complete the 24 credits in core courses plus 36 credits of technical and management electives.

**Technical and Management Electives**

Technical and Management elective courses selected in consultation with, and approved by, advisor.

**Total Credit Hours: 60**

## **THEATRE WITH SPECIALIZATION IN TECHNOLOGY, DESIGN AND PRODUCTION, B.F.A.**

In addition to developing a foundation in theatre – its history and the process of creating -- this specialization focuses on training students to acquire the necessary

technical skills used in theatre production including scenery, costuming, lighting, sound, properties, stage management and technical direction. This tract fosters a passion for design, storytelling, behind-the-scenes experience and collaborative process.

A minor is not required with this major.

The B.F.A. consists of Theatre Core Courses; Technology, Design, & Production Core Courses; and Directed Electives

**REQUIREMENTS (65 CREDITS):**

Interview Requirement:

All students choosing to pursue a BFA in Theatre with a Specialization in Design, Technology, and Production must interview for the Department of Theatre to enroll. The interview process is an opportunity to demonstrate an adequate proficiency to craft. For more details about the interview process, please see the Theatre Department website.

If a student chooses to pursue the BFA in Theatre with a Specialization in Design, Technology, and Production, and has not yet successfully competed the interview, their degree program will be listed as pre-BFA Theatre.

**Theatre Core (27 credits):**

TH 111	Stagecraft	3
TH 117	Lighting	3
	or	
TH 121	Costuming	3
TH 145	Acting I	3
TH 147	Theatre Design Fundamentals	3
TH 260	Directing for the Stage	3
TH 253	Script Analysis for the Theatre	3
TH 375	History of Theatre I	3
TH 376	History of Theatre II	3

**and 3 credits of:**

TH 115	Play Production	1-2
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As part of the core, B.F.A. students will take TH 115 for a total of 3 credits.

TH 115 can be worth 1 or 2 credits, depending on the production role. Whenever possible, students will be assigned to different production roles to gain a well-rounded experience. For example, a student may be assigned to help paint scenery one semester and assist with lighting in another. With each play production, students will learn and refine new skills related to theatre production.

**Technology, Design, & Production Core (30 credits):**

TH 117	Lighting	3
	or	

TH 121	Costuming	3
TH 211	Rendering and Drawing for the Theatre	3
TH 201	Introduction to Sound or	3
TH 213	Scene Painting or	3
TH 219	Properties Design and Construction	3
TH 217	Computer Aided Design (CAD) for the Theatre	3
TH 251	Stage Management	2
TH 316	Scene Design	3
TH 318	Lighting Design	3
TH 332	Costume Design	3
TH 333	Period Styles	3

Both TH 117 (Lighting) and TH 121 (Costuming) must be taken as part of the B.F.A. with Specialization in Technology, Design, & Performance.

**and 3 credits from the following:**

TH 479	Projects: Production Carpenter	3
TH 480	Projects: Production Electrician	3
TH 481	Projects: Scenery	3
TH 482	Projects: Costuming	3
TH 485	Projects: Lighting	3
TH 486	Projects: Sound	3
TH 488	Thesis Project in Acting or Directing	1
TH 491	Projects: Technical Direction	3
TH 492	Projects: Theatre Computer Technology	3
TH 493	Projects: Stage Management	3

**Directed Electives (8 credits):**

Chosen from other theatre courses or from courses in related fields in consultation with faculty advisor.

**Total Credit Hours: 65**

**THEATRE WITH SPECIALIZATION IN PERFORMANCE, B.F.A.**

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In addition to developing a foundation in theatre – its history and the process of creating -- this specialization focuses on training the voice, body, and inner life of the actors so they may live authentically within the imaginary world. Understanding human behavior, relating to the given circumstances, specifying actionable objectives, and justifying motivations are some of the core principles addressed in this specialization.

A minor is not required with this major.

The B.F.A. consists of Theatre Core Courses, Performance Core Courses, and Directed Electives

**REQUIREMENTS: (60 CREDITS)**

Audition/Interview Requirement:

All students choosing to pursue the BFA in Theatre must audition/interview for the Department of Theatre to enroll. The audition/interview process is an opportunity to demonstrate an adequate proficiency to craft. For more details about interviews/auditions, please see the Theatre Department website.

If a student chooses to pursue the BFA in Theatre and has not yet successfully competed the audition/interview, their degree program will be listed as pre-BFA Theatre.

**Theatre Core (27 credits):**

TH 111	Stagecraft	3
TH 117	Lighting or	3
TH 121	Costuming	3
TH 147	Theatre Design Fundamentals	3
TH 253	Script Analysis for the Theatre	3
TH 260	Directing for the Stage	3
TH 375	History of Theatre I	3
TH 376	History of Theatre II	3

**and 3 credits of:**

TH 115	Play Production	1-2
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As part of the core, B.F.A. students will take TH 115 for a total of 3 credits.

TH 115 can be worth 1 or 2 credits, depending on the production role. Whenever possible, students will be assigned to different production roles to gain a well-rounded experience. For example, a student may be assigned to help paint scenery one semester and assist with lighting in another. With each play production, students will learn and refine new skills related to theatre production.

**Performance Core (21 credits):**

TH 126	Makeup I	3
TH 135	Speaking Voice I	3
TH 143	Improvisation and Ensemble	3
TH 235	Movement for Actors I	3
TH 246	Acting II	3
TH 347	Acting III: Scene Study	3
TH 488	Thesis Project in Acting or Directing	1

TH 488 (Thesis Project in Acting or Directing) will be taken in a single semester for 3 credits.

**Directed Electives (12 credits) including but not limited to the following:**

DAN 151	Beginning Modern Dance	2
DAN 152	Beginning Ballet	2
DAN 157	Beginning Jazz Dance	1
DAN 235	Movement for Performers	2
DAN 236	Principles of Choreography	2
DAN 252	Intermediate Ballet	2
DAN 377	Modern Dance and Theory	2
DAN 480	Project: Dance	1
ENG 220	Shakespeare	3
ENG 460/CINE 460	Shakespeare and Film	3
MUS 109	Fundamentals of Music	3
TH 146	Theatre for Social Change	3
TH 251	Stage Management	2
TH 335	Stage Combat	3
TH 338	Speaking Voice II	3
TH 435	Movement for the Actor II	3
TH 447	Acting IV: Shakespeare	3
TH 456	Acting V: Acting for Recorded Media	3
TH 474	Studies in NY Theatre Workshop	3
TH 475	Studies in London Theatre	3
TH 487	Projects: Research	3
TH 488	Thesis Project in Acting or Directing	1
TH 495	Theatre Internship	3-6

**Total Credit Hours: 60****THEATRE, B.A.**

The Theatre B.A. is a comprehensive program that teaches students practical application of techniques and theory related to performance, design, technology, and production. Additionally, students develop and refine skills in communication, personal responsibility, collaboration, and creative problem solving. This degree prepares students to work in an increasingly diverse and multicultural world.

A minor is required with this major.

**REQUIREMENTS: (40 CREDITS)**

The Theatre B.A. is composed of 28 credits in core theatre courses and 12 credits in electives.

**Core:**

24 credits as follows:

TH 111	Stagecraft	3
TH 117	Lighting	3
	or	
TH 121	Costuming	3
TH 145	Acting I	3
TH 147	Theatre Design Fundamentals	3
TH 253	Script Analysis for the Theatre	3
TH 260	Directing for the Stage	3
TH 375	History of Theatre I	3
TH 376	History of Theatre II	3

**must be repeated for a total of 4 credits:**

TH 115	Play Production	1-2
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As part of the core, students will take TH 115 for a total of 4 credits.

TH 115 can be worth 1 or 2 credits, depending on the production role. Whenever possible, students will be assigned to different production roles to gain a well-rounded experience. For example, a student may be assigned to help paint scenery one semester and assist with lighting in another. With each play production, students will learn and refine new skills related to theatre production.

**Directed Electives**

12 credits of Directed Electives approved by faculty advisor. 9 credits must be from 300+ level courses.

**Total Credit Hours: 40****TOURISM AND HOSPITALITY STUDIES, B.S.**

A minor is not required with this major.

**REQUIREMENTS: (54 CREDITS)**

This 54-credit program consists of 21 credits in foundation courses in business and geography, 15 credits of required core courses, and 18 credits in either the tourism studies track or the hospitality studies/transfer track. Note: Students may not exceed 24 credits in business courses.

**Foundation Courses:**

AC 210	Accounting for Decision-Making	3
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	or		
AC 211	Introduction to Financial Accounting	3	
GEOG 120	World Regional Geography	3	
GEOG 290	Geography of Tourism	3	
FIN 295	Managerial Finance	3	
	or		
LAW 250	The Legal and Ethical Environment of Business	3	
MGT 295	Fundamentals of Management and Organizational Behavior	3	
MIS 201	Introduction to Management Information Systems	3	
MKT 295	Fundamentals of Marketing	3	
<b>Tourism/Hospitality Core:</b>			
THS 101	Introduction to Hospitality and Tourism	3	
	or		
THS 300	The Hospitality Industry	3	
THS 410	Tourism & Hospitality Operations	3	
GEOG 450	Tourism Planning	3	
	or		
GEOG 453	Recreation and Resort Planning	3	
GEOG 454	Geography of Tourism Marketing	3	
	one 400-level THS elective		

**TOURISM STUDIES TRACK**

Students must take 18 credits of electives, selected in consultation with a faculty advisor.

**Recommended courses include:**

WRT 382	Travel Writing	3	
GEOG 451	Tourism Development in Southern New England	3	
GEOG 453	Recreation and Resort Planning	3	
GEOG 455	New Directions in Tourism	3	
MKT 359	Special Events Marketing	3	
THS 430	Internship in Tourism and Hospitality	3	
THS 435	Independent Study in Tourism and Hospitality	3	
THS 460	Hotel and Lodging Practicum	3	
THS 465	Convention, Event, and Meeting Planning	3	
THS 490	Current Topics in Tourism & Hospitality	3	

Students may also choose a maximum of two courses from the following list of regional geography courses:

GEOG 330	United States and Canada	3	
GEOG	Mexico, Central America, and the	3	

434/LAS 434	Caribbean		
GEOG 435	Japan and Korea	3	
GEOG	South America	3	
436/LAS 436			
GEOG 437	China	3	
GEOG 438	Australia, New Zealand, and Oceania	3	
GEOG 439	Urban Geography	3	
GEOG 444	European Union	3	
GEOG 446	Sub-Saharan Africa	3	
GEOG 448	Russia and Neighboring Regions	3	
GEOG 459	Field Studies in Regional Geography	3-6	
	or		
SUST 459	Field Studies in Sustainability	3	

**HOSPITALITY STUDIES/TRANSFER TRACK**

18 credits of courses, approved by a faculty advisor, taken at another institution.

**ADDITIONAL REQUIREMENTS**

**Requirements List**

ECON 200	Principles of Macroeconomics	3	
ECON 201	Principles of Microeconomics	3	

**Total Credit Hours: 54**

## UNDERGRADUATE MINORS

### AFRICAN STUDIES MINOR

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#### REQUIREMENTS: (18 CREDITS)

##### Required

IS 225 The World as a Total System 3

##### Electives

15 credits from the courses below. 6 credits must be at the 300 or 400-level. Not more than 9 credits from the same discipline (designator).

ANTH 416 Archaeology of Africa 4

ANTH 424 Peoples and Cultures of Africa 4

FR 305 Introduction to Francophone Literature 3

FR 315 Aspects of Francophone Cultures 3

GEOG 446 Sub-Saharan Africa 3

HIST 271 Introduction to African History and Culture 3

HIST 376 History of Africa since 1800 3

HIST 432 History of South Africa 3

IS 461 Topics in African Studies 3

PHIL African Philosophy 3

260/AFAM  
260

PS 421 Government and Politics of Africa 3

PS 434 Government and Politics of the Middle East and North Africa 3

**Subtotal: 15**

**Total Credit Hours: 18**

### THE APPLICATION OF ARTIFICIAL INTELLIGENCE MINOR

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The Minor in The Application of Artificial Intelligence is an interdisciplinary program designed to equip students with a robust understanding of the application of AI technologies. This minor is ideal for students from any major who wish to augment their primary field of study with AI skills, preparing them for a future where AI plays a pivotal role across all sectors. This interdisciplinary minor will meet the growing demand for professionals who want to develop a background in using artificial intelligence. A minimum GPA of 2.00 in all courses is mandatory, and grades below C– will not be accepted.

### REQUIRED CORE COURSES

#### Required 12 Credits

LSC 160 Information Exploration in the AI Era 3

MIS 202 Introduction to the Application of Artificial Intelligence 3

CS 113 Introduction to Computer Programming  
or

MIS 310 Contemporary Business Applications Development I 3

PHIL 242 Ethical Problems in Technology  
or

PHIL 245 Computer Ethics 3

You can take either CS113 or MIS310 but will not receive credit for both

You can take either PHIL242 or PHIL245 but will not receive credit for both

A minimum GPA of 2.00 in minor courses is mandatory, and grades below C– will not be accepted.

#### Electives (Chose two for a total of 6 credits)

LING 200 Introduction to Linguistics 3

LING 230 The Study of Language 3

CS 253 Data Structures and Introduction to Algorithms 3

BUS 250 Introduction to Business Analytics and Skills 3

ROBO 110 Introduction to Robotics and Mechatronics 3

ROBO 280 Embedded Systems Design 3

AI 460 Topics in the Application of AI 3

Students are encouraged to take two related courses from the electives.

**Total Credit Hours: 18**

### AFRICAN-AMERICAN STUDIES MINOR

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#### Program Overview

The African-American studies minor offers a broad curriculum dedicated to the study of Black life in the Americas and the Diaspora from 1350 to the present. The African-American studies program develops and coordinates an interdisciplinary curriculum. Its objectives are to encourage all students and faculty to examine the African-American experience, to facilitate a cultural and

intellectual atmosphere on campus that will be favorable to such studies, and to develop a program of research and community service. The program also has a nationally recognized African-American lecture series, featuring nationally and internationally known scholars in the field of Black studies. In addition to the ongoing lecture series, the program also hosts the traditional celebration of Black History Month during February with rich and diverse activities such as a film series, art exhibits, and student debating contests. For more information, visit the office of the Director of African-American Studies at Willard-DiLoreto W304-04.

**REQUIREMENTS: (18 CREDITS)**

**Required Courses**

AFAM 110	Introduction to African-American Studies	3
PHIL 360/AFAM 360	African-American Philosophy	3

**and 12 credits from any of the following:**

AFAM 111/PS 111	Race and Ethnicity in US and Global Politics	3
AFAM 263	The History & Culture of African Americans to 1900	3
AFAM 264/HIST 264	The History & Culture of African Americans Since 1900	3
ANTH 200/AFAM 200	Dimensions of Diversity and Inequality	3
ANTH 352	Ethnicity and Ethnic Identity	3
ANTH 401	City Life & Culture	4
ANTH 420	African Diaspora Archaeology	4
ANTH 424	Peoples and Cultures of Africa	4
CRM 245	Diversity and Criminal Justice	3
ENG 212/AFAM 212	African-American Literature	3
ENG 345/AFAM 345	Modern African-American Literature	3
PSY 430	Intergroup Relations	3
REL 361/AFAM 361	African-American Religion	3

*Note: Search or Special Topics courses are subject to approval by the Director of the African-American Studies minor.*

**Total Credit Hours: 18**

**AMERICAN STUDIES MINOR**

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**Program Overview**

The American Studies Minor gives students the opportunity to explore the diverse culture of the United States in an interdisciplinary context. In consultation with the Coordinator of the American Studies Minor, students are encouraged to shape an individualized course of study to pursue their own academic interests and goals.

**REQUIREMENTS (18 CREDITS)**

**REQUIRED COURSE**

**Required Course**

AMS 110	Introduction to American Studies	3
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**ELECTIVES**

**Electives**

15 credits from:

AAPI 110	Introduction to Asian American and Pacific Islander Studies	3
AFAM 110	Introduction to African-American Studies	3
AMS 210	Topics in American Studies	3
AMS 310	Special Topics in American Studies	3
AMS 410	Seminar in American Studies	1-4
ANTH 352	Ethnicity and Ethnic Identity	3
ANTH 401	City Life & Culture	4
ART 414/ART 509	American Art & Architecture	3
ASL 125	Intermediate American Sign Language I	3
ASL 126	Intermediate American Sign Language II	3
CEN 200	Introduction to Community and Civic Engagement	3
CEN 201	Practicum in Community and Civic Engagement	1
CINE 382/COMM 382	American Cinema	4
CRM 110	Introduction to the Criminal Justice System	3
CRM 231	Criminal Procedure and the Courts	3
CRM 238	Corrections	3
ENG 210	Survey of American Literature: Pre-Civil War	3
ENG 211	Survey of American Literature: Civil War to the Present	3
ENG	African-American Literature	3

212/AFAM  
212

ENG 213	Studies in American Literature	3
GEOG 330	United States and Canada	3
HIST 161	American History to 1877	3
HIST 162	American History from 1877 to Present	3
HIST 328	History of American Foreign Relations	3
LTN 110	Introduction to Latino Studies	3
MUS 113	History of Jazz	3
MUS 213	Jazz Styles and Chronology	3
PHIL 355	American Philosophy	3
PS 110	American Government & Politics	3
PS	Race and Ethnicity in US and Global Politics	3
111/AFAM 111		
PS 230	American State and Local Government	3
PS 231	U.S. Foreign Policy	3
RJ 200	Studies in Racial Justice	3
SOC 111	Social Problems	3
SOC 212	Race, Class, and Gender	3
SOC 233	The Family	3

*Note: No more than 6 credits can be from any one discipline. Special topics courses are subject to approval by the Coordinator of the American Studies Minor.*

**Total Credit Hours: 18**

Other course options may be available if they focus specifically on some aspect of American culture; consult one of the American Studies Co-Coordinators, Mathew Foust (Department of Philosophy) at foust@ccsu.edu or Aimee Pozorski (Department of English) at pozorskia@ccsu.edu.

**ANTHROPOLOGY MINOR****REQUIREMENTS: (18 CREDITS)****Required Course:**

ANTH 140	Introduction to Anthropology	3
		<b>Subtotal: 3</b>

**Electives:**

15 credits in Anthropology

**Subtotal: 15**

**Total Credit Hours: 18**

Individual programs will differ according to the particular needs of the student and must be developed jointly with the student's advisor.

**ARCHAEOLOGY MINOR****REQUIREMENTS: (24 CREDITS)****Required Courses**

ANTH 150	Introduction to Archaeology	3
ANTH 215	The Unwritten World	3
ANTH 324	Archaeology of the State	3
ANTH 450	Archaeological Field School	3 TO 6
		<b>Subtotal: 12</b>

**and 12 credits from the following:**

ANTH 210	The Ancient World	3
ANTH 230	Archaeology of Indigenous North America	3
ANTH 322	Historical Archaeology	3
ANTH 329	Experimental Archaeology	4
ANTH 416	Archaeology of Africa	4
ANTH 418	New England Archaeology	4
ANTH 420	African Diaspora Archaeology	4
		<b>Subtotal: 12</b>

**Total Credit Hours: 24**

For students majoring in anthropology, 6 credits of this minor may be applied to the major.

**ART HISTORY MINOR****MINOR REQUIREMENTS (18 CREDITS)****Required Courses (9-12 credits)**

3 to 6 credits are required in ART 110, ART 112, and ART 113

ART 110	Introduction to Art History	3
ART 112	History of Art I	3
ART 113	History of Art II	3
ART 216	Modern Art	3
ART 200	Introduction to Global Art	3
		<b>Subtotal: 0</b>

**Electives (6-9 credits)**

ART 211	Greek and Roman Art	3
ART 215	The African Diaspora	3
ART 218	Renaissance Art	3
ART 265	Exploratory Topics in Art	1-6
ART	Studies in Art History	3
409/ART		
509		
ART 412	Asian Art	3
ART	American Art & Architecture	3
414/ART		
509		
ART	Issues in Contemporary Art	3



420/ART 509		
ART 490	Curatorship	3

Art 265 Exploratory Topics in Art must be an art history course, not a studio course.

At least three of the elective credits need to be at the 300 or 400 level.

To fulfill the residency requirement, transfer students must complete 9 credits of the minor at CCSU.

**Total Credit Hours: 18**

**ART MINOR**

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**REQUIREMENTS: (18 CREDITS)**

**Required Courses:**

ART 112	History of Art I	3
	or	
ART 113	History of Art II	3
ART 120	Design I	3
	or	
ART 124	Three-Dimensional Design	3
ART 130	Drawing I	3

**Subtotal: 9**

**Electives:**

9 credits selected in consultation with the Department of Art advisor. To fulfill the residency requirement, transfer students must complete 9 credits at CCSU.

**Subtotal: 9**

**Total Credit Hours: 18**

**ART MINOR FOR GRAPHIC/INFORMATION DESIGN MAJORS**

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The Minor in Art for Graphic/Information Design Majors addresses the fact that Graphic/Information Design Majors are required to take 9 credits in Art as part of their major: ART 130 Drawing I, ART 224 Illustration I, and ART 110 Introduction to Art History. The nine credits required in the proposed Art Minor for Graphic/Information Design Majors are selected for their relevance to the Graphic/Information Design Major's studies. The additional 9 credits are selected on an individual basis to address the interests of the student, whether it be 3-D (Ceramics or Sculpture), Video, Animation or Illustration, Curatorship or Art History. Passing Portfolio Review will be required to take 300, or 400 level Studio courses.

Art is a popular Minor for Graphic/ Information Design Majors. This proposal strengthens the ongoing interdisciplinary relationship of Art and Design Departments

**Proposed Minor in Art for Graphic/ Information Design Majors 18 credits**

**ART 230 Drawing II, or ART 252 Painting I, or ART 250 Watercolor I**

**ART 247 Photography I**

**ART 216 Modern Art**

**9 Additional Credits in consultation with Art Minor Advisor to equal 18 credits**

**Total Credit Hours: 0**

**ASIAN AMERICAN AND PACIFIC ISLANDER STUDIES, MINOR**

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The Asian American and Pacific Islander Studies minor draws from social science, history, and both literary and cultural traditions to provide students with the knowledge and understanding of the experiences and contributions of Asian Americans and Pacific Islanders in the United States.

**MINOR REQUIREMENTS (18 CREDITS)**

**Minor Core**

AAPI 110	Introduction to Asian American and Pacific Islander Studies	3
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**Directed Electives, 15 credits from the following (at least 6 of which must be at or above 300 level)**

AAPI 202/CRM 202	Prejudice, Harassment, and Bias Crime in the 21st Century	3
AAPI 207/ENG 207/AAPI 207	Special Topics in Asian American Literature	3
AAPI 270	Topics in Asian American and Pacific Islander Studies	3
AAPI 370	Advanced topics in Asian American and Pacific Islander Studies	3
AAPI 410	Readings in Asian American and Pacific Islander Studies	1-3
AAPI 470	Seminar in Asian American and Pacific Islander Studies	3
ANTH 200/AFAM 200	Dimensions of Diversity and Inequality	3

ANTH 352	Ethnicity and Ethnic Identity	3
COMM 216	Introduction to Intercultural Communication	3
HIST 316/LTN 316	History of the American West to 1890	3
HIST 317/LTN 317	History of the American West, 1890 to Present	3
HIST 319/LTN 319	Race, Ethnicity and Migration in the U.S.	3
PS 111/AFAM 111	Race and Ethnicity in US and Global Politics	3
PSY 430	Intergroup Relations	3
SOC 309/LTN 309	U.S. Immigration	4

**Total Credit Hours: 18**

### **ASTROBIOLOGY MINOR**

Designed for majors in Biology, Biomolecular Science, Chemistry, Geological Sciences, or Physics.

#### **REQUIREMENTS: (18 CREDITS)**

Capstone: GSCI 470 Exoplanets and Astrobiology (3)

Note that some electives have additional prerequisites.

In addition, students must take CHEM 161 General Chemistry, CHEM 162 General Chemistry Lab and CHEM 201. Foundations of Analytical Chemistry Lab, and either CHEM 200 Foundations of Analytical Chemistry or CHEM 260 Foundations of Inorganic Chemistry. (all required by majors listed above.)

Since students cannot double-count specific courses for a major and minor, Biology, BMS, and GSCI majors may take additional electives in lieu of designated core courses.

#### **Core Courses:**

AST 208	Planetary Astronomy and	4
BIO 121	General Biology I or	4
BMS 102	Introduction to Biomolecular Science and	3
BMS 103	Introduction to Biomolecular Science Laboratory	1

**The remaining 7 credits will be selected from the following pre-approved electives or other electives as approved by an advisor in the minor:**

BIO 200	Integrative Biology	3
BIO 230	Natural History	3
BIO 315	Microbial Ecology	4

BIO 305	Ecology	4
BIO 440	Evolution	3
BMS 201	Principles of Cell and Molecular Biology	4
BMS 316	Microbiology	4
CHEM 210	Organic Chemistry I - Foundations	3
CHEM 211	Organic Chemistry I Laboratory - Foundations	1
CHEM 212	Organic Synthesis	3
CHEM 213	Organic Chemistry II Laboratory - Synthesis	1
AST 209	Stellar and Galactic Astronomy	4
AST 378	Earth and Planetary Science	3

**Total Credit Hours: 18**

### **ASTRONOMY MINOR**

#### **REQUIREMENTS (18 CREDITS IN ASTRONOMY AND RELATED FIELDS)**

##### **Core Requirements (8 credits)**

AST 208	Planetary Astronomy	4
AST 209	Stellar and Galactic Astronomy	4

##### **Electives (10 credits)**

*The remaining course will be selected from the list below, or other electives after consultation with a Geological Sciences department advisor.*

AST 212	Studies in Astronomy	3
AST 278	The Night Sky	3
AST 378	Comparative Planetology	3
AST 418	Stellar Astrophysics	3
AST 460	Independent Research in Astronomy	1-3
AST 470	Exoplanets and Astrobiology	3
AST 490	Topics in Astronomy	1-3
AST 495	Seminar in Astronomy	1

##### **Additional Requirements**

In addition, students must take:

MATH 152	Calculus I	4
MATH 221	Calculus II	4
PHYS 125	University Physics I	4
PHYS 126	University Physics II	4

**Total Credit Hours: 18**

### **BIOCHEMISTRY MINOR**

#### **REQUIREMENTS (18 CREDITS)**

##### **Required Courses**

CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1

CHEM 210	Organic Chemistry I - Foundations	3
CHEM 211	Organic Chemistry I Laboratory - Foundations	1
CHEM 354	Foundations of Biochemistry	3
CHEM 456	Toxicology	3
CHEM 455	Biochemistry Laboratory	1
CHEM 458	Advanced Biochemistry	3

**Subtotal: 18**

**Total Credit Hours: 18**

**BIOLOGICAL ANTHROPOLOGY MINOR**

**REQUIREMENTS (17-18 CREDITS)**

**Required Courses**

ANTH 160	Introduction to Biological Anthropology	3
ANTH 373	Methods in Biological Anthropology	4

**and 3 credits from the following:**

ANTH 335	Theories of Human Evolution and Behavior	3
ANTH 365	The Anthropology of Human Differences	3

**Minor-related electives (7-8 credits)**

**Total Credit Hours: 17-18**

**BIOLOGY MINOR (NON-TEACHING)**

**REQUIREMENTS: (20 CREDITS)**

**Required Courses**

BIO 121	General Biology I	4
BIO 122	General Biology II	4
BIO 200	Integrative Biology	3
	8 credits in BIO at the 200 level or higher (not including BIO 211) (8)	8

**Subtotal: 20**

**Total Credit Hours: 20**

**BIOMOLECULAR SCIENCES MINOR (NON-TEACHING)**

**REQUIREMENTS: (20 CREDITS)**

**Required Courses**

BMS 102	Introduction to Biomolecular Science	3
BMS 103	Introduction to Biomolecular Science Laboratory	1
BMS 190	Friday Seminar in Biomolecular Sciences I	.5

BMS 201	Principles of Cell and Molecular Biology	4
BMS 290	Friday Seminar in Biomolecular Sciences II	.5
	11 additional credits of BMS courses, as approved by the biomolecular sciences advisor. BIO 121 may be substituted for BMS 102/BMS 103	

**Subtotal: 20**

**Total Credit Hours: 20**

**BUILDING CONSTRUCTION MANAGEMENT, MINOR**

Fundamental skills required for the management of commercial building construction projects. Covers topics from receipt of plans to project turnover, including building construction concepts, estimating, scheduling and project safety. Principle focus is the management of the construction process.

**MINOR REQUIREMENTS (18 CREDITS)**

**Required Core**

CM 165	Building Construction Systems	3
CM 265	Print Reading/Quantity Take-Off	3
CM 325	Building Construction Estimating	3
CM 335	Construction Safety	3
CM 355	Construction Planning	3
CM 455	Construction Project Management	3

**Total Credit Hours: 18**

**BUSINESS MINOR (FOR NON-BUSINESS MAJORS)**

The business minor for non-business majors is a versatile program designed to complement a wide range of major fields. This minor provides students with a valuable opportunity to acquire fundamental business skills and knowledge that are increasingly vital in today's workplace. Through courses in various business disciplines, such as finance, marketing, management, accounting and management information systems, students will gain a solid foundation in business principles and practices. This minor will enhance students' career flexibility and foster the development of critical thinking, teamwork, and problem-solving skills in a practical setting. The business minor for non-business majors provides valuable learning experiences that serve to enhance the foundational knowledge of a student's business studies and provides

non-business majors with a clear pathway into graduate programs in the business disciplines.

## REQUIREMENTS

**18 credits (six courses) from the following courses:**

AC 210	Accounting for Decision-Making or	3
AC 211	Introduction to Financial Accounting	3
ECON 200	Principles of Macroeconomics	3
FIN 210	Personal Finance	3
FIN 295	Managerial Finance	3
LAW 250	The Legal and Ethical Environment of Business	3
MC 207	Managerial Communication I	3
MGT 295	Fundamentals of Management and Organizational Behavior	3
MIS 201	Introduction to Management Information Systems	3
MIS 202	Introduction to the Application of Artificial Intelligence	3
MKT 295	Fundamentals of Marketing or	3
ENT 296	Main Street Business Ownership and Management	3

### Total Credit Hours: 18

Students must complete the entire business minor course requirements with a minimum cumulative grade point average of 2.00 for the six courses used to complete the business minor. Students must also receive a grade of C- or better in each minor course taken.

## CHEMISTRY MINOR

18 Credits in Chemistry, excluding CHEM 100

### Total Credit Hours: 18

## CINEMA STUDIES MINOR

### Program Overview

The interdisciplinary minor in cinema studies is for students interested in developing a critical understanding of the moving image. Audio-visual media play a dominant role in our culture and in our lives, and this course of study will provide students with the skills to create, understand, and interpret various forms of the moving image. The minor is multidisciplinary in method (drawing on courses from different departments in the university) and multicultural in scope as it seeks to look at media in an international and cross-cultural context. This course of

study regards cinema as an art form, as social practice, and as cultural artifact. Courses in the minor cover the history, theory, criticism, and practice of the moving image, with the aim of creating active and critical viewers of films and other audio-visual texts.

The curriculum for cinema studies may include coursework in film history, production, film theory, national cinemas, genre studies, authorship, visual culture, history, philosophy, and aesthetics. All courses in the curriculum are devoted primarily to study or production of the moving image. A rigorous curriculum will be grounded first of all in a basic understanding of production along with cinema history and theory. Students may then elect to focus on production courses, critical studies courses, or a combination of both.

### REQUIREMENTS: (18 CREDITS)

#### Required Courses:

	either	
COMM 227	Introduction to Television Production or	3
COMM 228	Introduction to Digital Film Production and	3
CINE 201	The Language of Film or	3
COMM 220/CINE 220	Introduction to History of Film	3

**Subtotal: 6**

#### Electives:

12 credits of electives

**Subtotal: 12**

#### Production Electives

COMM 427	Studio Production II	4
COMM 487	Documentary Production	4
COMM 495	Special Topics in Strategic Communication	3 to 4

#### Critical Studies Electives

CINE 201	The Language of Film	3
CINE 220/COMM 220	Introduction to History of Film	3
CINE 270/HUM 270	Studies of World Culture Through Cinema	3
CINE 319/COMM 319	Filmic Narrative	4

CINE 350	Laughter, Blood, and Tears: Studies in Film Genre	3	SOC 212	Race, Class, and Gender	3
CINE 365	Nonfiction and Documentary Film	3	ANTH	Dimensions of Diversity and	3
CINE 380/COMM 380	Women and Film	4	200/AFAM 200	Inequality	
CINE 382/COMM 382	American Cinema	4	CEN 300/IS 300	Global Community Engagement	3
CINE 460/ENG 460	Shakespeare and Film	3	<b>At least 6 credits from any of the following</b> (in consultation with CEN facilitator):		
CINE 465/ENG 465	Global Cinema	3	ANTH 170	Introduction to Cultural Anthropology	3
CINE 466/ENG 466	American Cinema in the 60s and 70s	3	ART 465	Studio Topics	1 TO 3
CINE 467/ENG 467	Hitchcock	3	BIO 132	Introductory Ecology	3
CINE 480	Topics in Cinema Studies	3	BIO 133	Laboratory in Introductory Ecology	1
CINE 489/ENG 489	Studies in Film Adaptation	3	COMM 215	Introduction to Interpersonal Communication	3
CINE 490	Cinema Studies: Independent Study	3	COMM 343	Communication and Social Influence	3
COMM 495	Special Topics in Strategic Communication	3 to 4	COMM 451	Environmental Communication	3
PES 111	War & Peace through Films	3	CRM 230	Law Enforcement & Society	3
			CRM 240	Gender, Crime and Criminal Justice	3
			ECON 200	Principles of Macroeconomics	3
			ECON 321	The Economics of Social Issues	3
			WRT 370	Creative Nonfiction I	3
			AST 278	The Night Sky	3
			ENT 330/MGT 330	Entrepreneurship and New Venture Creation	3
			GERO 101	Introduction to Gerontology	3
			HIST 302	Introduction to Public History	3
			JRN 200	Introduction to Journalism	3
			JRN 370	Global News in Context	3
			JRN 371	Reporting Cultural Diversity	3
			MGT 295	Fundamentals of Management and Organizational Behavior	3
			MGT 340	Ethical and Social Issues for the Manager	3
			MUS 211	Ethnomusicology	3
			PHIL 144	Moral Issues	3
			PS 230	American State and Local Government	3
			PSY 125	Environment & Behavior	3
			PSY 250	The Psychology of Community Service	3
			PSY 420	Cross-Cultural Psychology	3
			PSY 430	Intergroup Relations	3
			PSY 380	Psychology of Dying and Death	3
			SOC 110	Introductory Sociology	3
			SOC 111	Social Problems	3
			RJ 200	Studies in Racial Justice	3
			ART 270	Art in Community	3

**Total Credit Hours: 18**

**COMMUNITY ENGAGEMENT MINOR**

**REQUIREMENTS:**

A minimum of 17 credits is required for the minor, distributed as follows:

**Required Courses:**

CEN 200	Introduction to Community and Civic Engagement	3
CEN 201	Practicum in Community and Civic Engagement	1
CEN 402	Community Engagement Internship Seminar	4
<b>ONE course from the following</b>		
PHIL 244	Introduction to the Philosophy of Social Justice	3
CRM 245	Diversity and Criminal Justice	3

TH 146	Theatre for Social Change	3
EDEL 210	Education & Teacher Leadership in Diverse Learning Communities	3

ART 465\*, ECON 321\*, ENT 301\* HIST 403\*, HIST 405\*,  
JRN 370\*, JRN 371\*, MGT 403\*, PSY 125\*, PSY 250\*, PSY  
420\*, PSY 430\*, PSY 380\*

\* = Indicates prerequisite and/or permission required.

#### Total Credit Hours: 17

Other courses, as approved by the appropriate department chair and the Community Engagement Committee using the Community Engagement course rubric.

(Optional and upon invitation only): The 2-credit course CEN/FYE 301, which may be taken more than once. The course is open only to students with a GPA of 3.0 and higher, and a nomination from a CEN course instructor.

### COMPUTER SCIENCE MINOR

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#### REQUIREMENTS: (18 CREDITS)

##### Required Courses

CS 140	Survey of Computer Science	3
CS 151	Computer Science I	3
CS 152	Computer Science II	3
CS 253	Data Structures and Introduction to Algorithms	3

##### Additional Requirements

6 credits of computer science courses numbered CS 210 or higher

**Total Credit Hours: 18**

### COMPUTER SCIENCE MINOR FOR TEACHER CERTIFICATION

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#### Program description:

This minor provides education students with the knowledge to teach K-12 computer science. The focus of the curriculum for this potential cross-endorsement represents the range of knowledge areas necessary to give the computer science background necessary for teaching with this focus. The intent of this curriculum is not to be inclusive of all courses necessary to be a teacher, but rather to provide the computer science content for teachers to understand & appreciate the breadth of computer science and develop the technical knowledge for teaching K-12 computer science.

Teachers will be knowledgeable and experienced in

1. Impacts of computing
2. Computational thinking and problem-solving
3. User interface design
4. Programming
5. Data representation
6. Structure of the Internet
7. Ethical issues and constraints of computing

**Note:** students who wish to apply for a cross-endorsement must make this request to the state Bureau of Certification. This program does not lead to initial certification.

### COURSE REQUIREMENTS (22-23 CREDITS)

#### Core Courses

MATH 217	Discrete Mathematics for Computer Science	4
CS 140	Survey of Computer Science	3
CS 151	Computer Science I	3
CS 152	Computer Science II	3
CS 253	Data Structures and Introduction to Algorithms	3
CS 254	Computer Organization and Assembly Language Programming	3
TE 350	Current Topics in STEM Education or	3
TE 417	Robot Design & Construction	4

**Total Credit Hours: 0**

### CREATIVE WRITING MINOR

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Minor designed for students interested in fiction, poetry, and/or creative nonfiction professionally or for personal fulfillment.

1. WRT 105 or WRT 110 is the prerequisite for all Creative Writing courses.
2. No repetition of courses is allowed, with the exception of WRT 378: Creative Writing: Special Topics.
3. As a way of introducing themselves to Creative Writing from a broader perspective and exploring various genres in which they might wish to write, students are encouraged to take WRT 265 Introduction to Creative Writing: A Survey of Forms to fulfill 3 credits of the 6-credit Skill Area I requirement in General Education.

**REQUIREMENTS (18 CREDITS):**

Students are required to take:

1. At least two of the following Level One courses:

- WRT 370 Creative Nonfiction I
- WRT 371 Fiction I
- WRT 373 Poetry I

2. At least one of the following Level Two courses:

- WRT 372 Fiction II
- WRT 374 Poetry II
- WRT 375 Creative Nonfiction II

3. WRT 486 Creative Writing Capstone Seminar

4. Electives from the following list to make a total of at least 18 credits in the minor:

- ENG 310 Close Reading the Sentence
- ENG 495 Internship
- WRT 370 Creative Nonfiction I
- WRT 371 Fiction I
- WRT 372 Fiction II
- WRT 373 Poetry I
- WRT 374 Poetry II
- WRT 375 Creative Nonfiction II
- WRT 377 Playwriting
- WRT 378 Creative Writing Special Topics
- WRT 383 Writing for Digital Platforms
- WRT 384 Publishing
- WRT 385 Writing About...
- WRT 494 Creative Writing Independent Study

**Total Credit Hours: 18**

**CRIMINAL JUSTICE MINOR**

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**REQUIREMENTS (18 CREDITS):**

**Required Courses**

CRM 110	Introduction to the Criminal Justice System	3
CRM 230	Law Enforcement & Society	3
CRM 231	Criminal Procedure and the Courts	3
CRM 238	Corrections	3

CRM 260	Criminology	3
	one elective	3
		<b>Subtotal: 18</b>

**Total Credit Hours: 18**

**CROSS-CULTURAL ANALYSIS MINOR**

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**REQUIREMENTS (18 CREDITS):**

**Required Courses:**

ANTH 170	Introduction to Cultural Anthropology	3
ANTH 200/AFAM 200	Dimensions of Diversity and Inequality	3
ANTH 340	Theories of Culture	4
		<b>Subtotal: 9</b>

**Electives:**

ANTH 352	Ethnicity and Ethnic Identity	3
ANTH 424	Peoples and Cultures of Africa	4
ANTH 428/LAS 428	Cultures of Latin America	4
ANTH 475	Topics in Anthropology	3
		<b>Subtotal: 9</b>

In place of one of the above, an elective devoted to a specific world area may be selected upon advisor approval.

For students also majoring in anthropology, 3 credits of this minor may be applied to the major.

**Total Credit Hours: 18**

**CYBERSECURITY TECHNOLOGY MINOR**

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18 credits of required courses.

**MINOR REQUIREMENTS (18 CREDITS)**

**Required Courses**

CET 249	Introduction to Networking Technology	3
CET 349	Network Design and Implementation	3
CYS 227	Introduction to Cybersecurity	3
CYS 459/CET 459	Network Security Technologies	3
CYS 467	Security System Management	3
CYS 477	Ethical Hacking and Penetration Testing	3

**Total Credit Hours: 18****DANCE MINOR**

15 core credits and 3 elective credits

**REQUIREMENTS: (18 CREDITS)****Core Courses (15 credits from the following)**

DAN 151	Beginning Modern Dance	2
DAN 152	Beginning Ballet	2
DAN 157	Beginning Jazz Dance	1
DAN 200	Dance Practicum	1
DAN 235	Movement for Performers	2
DAN 236	Principles of Choreography	2
DAN 252	Intermediate Ballet	2
DAN 398	Contemporary Dance Technique	2
DAN 477	Secondary Methods in Dance Education	3

**Electives (3 credits from the following)**

DAN 234	Ballroom Dance	1
DAN 257	Intermediate Jazz Dance	1
DAN 299	Dance History	3
DAN 377	Modern Dance and Theory	2
DAN 480	Project: Dance	1
MUS 109	Fundamentals of Music	3
TH 117	Lighting	3

**Total Credit Hours: 18****EARTH SCIENCES MINOR****REQUIREMENTS: (18 CREDITS)****Required Courses**

ESCI 121	The Dynamic Earth or	3
ESCI 131	Environmental Earth Science	3
ESCI 125	The Dynamic Earth Laboratory or	1
ESCI 135	Environmental Earth Science Laboratory	1
ESCI 129	Meteorology: Earth's Weather	4
AST 208	Planetary Astronomy or	4
AST 209	Stellar and Galactic Astronomy	4

The remaining credits will be chosen after consultation with an Earth Sciences advisor.

Subtotal: 18

**Total Credit Hours: 18****EARTH SCIENCES MINOR (CERTIFIABLE FOR SECONDARY TEACHING)****REQUIREMENTS****Required Courses**

ESCI 121	The Dynamic Earth or	3
ESCI 131	Environmental Earth Science	3
ESCI 125	The Dynamic Earth Laboratory or	1
ESCI 135	Environmental Earth Science Laboratory	1
ESCI 141	Earth and Life History	3
ESCI 145	Earth and Life History Laboratory	1
ESCI 129	Meteorology: Earth's Weather	4
AST 208	Planetary Astronomy	4
AST 209	Stellar and Galactic Astronomy	4

**In addition, students must take:**

SCI 417	Science Methods in Secondary School	3
SCI 419	Student Teaching Seminar	1
MATH 152	Calculus I	4
MATH 221	Calculus II	4
PHYS 121	General Physics I	4
PHYS 122	General Physics II	4

**Total Credit Hours: 20****EAST ASIAN STUDIES MINOR****REQUIREMENTS: (18 CREDITS)****Required**

IS 225	The World as a Total System	3
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**Electives**

15 credits from the courses below. 6 credits must be at the 300 or 400-level. Not more than 9 credits from the same discipline (designator).

ANTH 423	Vietnam, A Country, Not a War	4
ART 412	Asian Art	3
CHIN 304	Topics in Chinese Literature	3
CHIN 315	Topics in Chinese Culture	3
GEOG 435	Japan and Korea	3
GEOG 437	China	3
HIST 354	History of Modern Japan	3
HIST 422	Topics in Japanese History	3
IS 462	Topics in East Asian Studies	3
PHIL 250	Introduction to Asian Philosophy	3



PHIL 275	Chinese Philosophy	3
PHIL 350	Philosophy East & West	3
PHIL 375	Japanese Philosophy	3
PHIL 376	Buddhist Philosophy	3
PS 425	Asian Politics	3
REL 250	Japanese Religion	3

**ECONOMICS MINOR**

**REQUIREMENTS (18 CREDITS):**

**Required Courses:**

ECON 200	Principles of Macroeconomics	3
ECON 201	Principles of Microeconomics	3

**Subtotal: 6**

**Electives:**

12 credits in Economics coursework above ECON 200 and ECON 201

**Subtotal: 12**

Note: GEOG 244 may be credited toward the minor for students completing elementary and secondary certificates.

**Total Credit Hours: 18**

**ENGLISH MINOR**

**REQUIREMENTS (18 CREDITS):**

**Required Courses:**

ENG 205	Survey in British Literature: Middle Ages to the 18th Century	3
ENG 210	Survey of American Literature: Pre-Civil War	3
ENG 298	Introduction to Literary Studies	3

**Subtotal: 9**

**Electives:**

9 credits of literature electives at the 200 level or higher, with at least 6 credits at the 300-400 level

**Subtotal: 9**

**Total Credit Hours: 18**

**ENTREPRENEURSHIP MINOR**

Prepares students for entrepreneurial careers in new venture creation, managing family-owned or other small business enterprises or working in an entrepreneurial capacity (product development, business development, cross-discipline leadership, etc.) for existing firms. The minor provides a basic foundation in the knowledge, skills

and mind-set to search for and evaluate new venture opportunities and to finance, operate, and manage new or growing businesses. It aims to complement the discipline-based knowledge students develop in their major.

Not available to Management majors.

**MINOR IN ENTREPRENEURSHIP**

**Minor Core**

AC 210	Accounting for Decision-Making	3
MGT 295	Fundamentals of Management and Organizational Behavior	3
ENT 330/MGT 330	Entrepreneurship and New Venture Creation	3
ENT 350/MGT 350	Financing Entrepreneurial Ventures	3

**Six credit hours from the following electives**

ENT 355/MGT 355	Managing a Growing Business	3
ENT 390/MGT 390	Topics in Entrepreneurship	3
ENT 475/MGT 475	New Venture Challenge: Lean Launch Methodology	3
MGT 473	Organizing and Managing for Innovation	3

**Total Credit Hours: 18**

**EUROPEAN STUDIES**

**REQUIREMENTS: (18 CREDITS)**

**Required**

IS 225	The World as a Total System	3
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**Electives**

15 credits from the courses below. 6 credits must be at the 300 or 400-level. Not more than 9 credits from the same discipline (designator).

ENG 365	The Modern European Novel	3
FR 304	Introduction to French Literature	3
FR 305	Introduction to Francophone Literature	3
FR 315	Aspects of Francophone Cultures	3
FR 316	Contemporary France	3
GEOG 444	European Union	3
GEOG 448	Russia and Neighboring Regions	3
GER 316	German Civilization from 1800 to Present	3

HIST 234	Modern Europe	3
HIST 348	History of Russia II	3
HIST 380	Modern Poland	3
HIST 443	Revolution and Reformation in Europe	3
HIST 444	Mass Politics and Total War in Europe	3
HIST 447	History of the Soviet Union	3
HIST 448	Stalin and Stalinism	3
HIST 452	World War II in Europe	3
IS 463	Topics in European Studies	3
ITAL 304	Introduction to Italian Literature I	3
ITAL 305	Introduction to Italian Literature II	3
ITAL 316	Italian Civilization from 1861 to the Present	3
ITAL 488	Italian Life and Culture	3
PHIL 330	Early Modern Philosophy	3
PHIL 332	19th Century Philosophy	3
PHIL 366	Existentialism	3
PS 336	West European Governments	3
PS 435	Central and Eastern European Politics	3
SPAN 304	Introduction to Spanish Literature I	3
SPAN 305	Introduction to Spanish Literature II	3
SPAN 315	Spanish Civilization	3
SPAN 451	Introduction to Spanish Linguistics	3

**Total Credit Hours: 18**

### **GENERAL SCIENCE MINOR (CERTIFIABLE FOR SECONDARY TEACHING)**

Restricted to students with a major in biology, chemistry, earth science, or physics.

#### **REQUIREMENTS**

**32 credits in science as follows:**

BIO 121	General Biology I	4
BIO 122	General Biology II	4
CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 260	Foundations of Inorganic Chemistry	3
CHEM 201	Foundations of Analytical Chemistry Laboratory	1
PHYS 121	General Physics I	4
PHYS 122	General Physics II	4
ESCI 121	The Dynamic Earth	3

**and 4 credits from the following:**

BIO 318/BMS	Anatomy and Physiology I	4
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318		
CHEM 210	Organic Chemistry I - Foundations and	3
CHEM 211	Organic Chemistry I Laboratory - Foundations	1
PHYS 325	Optics	4

**In addition, students must complete the following:**

SCI 417	Science Methods in Secondary School	3
SCI 419	Student Teaching Seminar	1

**Total Credit Hours: 43**

### **GEOGRAPHY - ENVIRONMENTAL GEOGRAPHY & SUSTAINABILITY MINOR**

#### **REQUIREMENTS**

**Required Courses**

GEOG 110	Introduction to Geography	3
SUST 140	Introduction to Sustainability	3

**6 credits from the following**

GEOG 270	Geography of Hazards	3
GEOG 272	Physical Geography	3
GEOG 275/SUST 275	Soils and Vegetation Sustainability	3

GEOG 374	Climatology	3
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**6 credits from the following**

GEOG 433	Issues in Environmental Protection	3
GEOG 445	Environmental Planning	3
GEOG 472	Topics in Physical Geography	3
GEOG 473	Geography of Natural Resources	3
GEOG 475/SUST 475	Energy Resources and Climate Change	3

**Total Credit Hours: 18**

### **GEOGRAPHY - GENERAL/REGIONAL MINOR**

#### **REQUIREMENTS (18 CREDITS):**

**Required Courses:**

These courses may be taken online.

GEOG 110	Introduction to Geography	3
	or	
GEOG 120	World Regional Geography	3

**Subtotal: 3**

**Electives:**

**Subtotal: 15**

12 credits of Geography electives with at least 6 credits in courses at the 300 or 400 level

**Total Credit Hours: 18**

**GEOGRAPHY - GEOGRAPHIC INFORMATION SCIENCE MINOR**

**REQUIREMENTS (18 CREDITS):**

**Required Courses:**

GEOG 130 Introduction to Geographic Information Science 3

GEOG 276 Elementary Cartography 3

**Electives:**

GEOG 266 Introduction to Remote Sensing 3

GEOG 378 Geographic Information Systems 3

GEOG 476 Advanced Cartography 3

GEOG 478 GIS Design and Implementation 3

GEOG 479 Geographic Information Systems Applications 3

GEOG 480 Topics in GIS 3

GEOG 460 GIS Applications in Crime Mapping 3

GEOG 463 GIS Applications in Public Health 3

GEOG 466 Advanced Remote Sensing 3

GEOG 468 GIS Applications in Urban Planning 3

GEOG 464 GIS Applications in Resource Assessment 3

12 credits of electives must include at least 6 credits at the 300 or 400 level.

**Total Credit Hours: 18**

Note: For geography majors, 3 additional credits of electives are required. Geography majors in the geographic information sciences track may not choose this minor.

**GEOGRAPHY - PLANNING MINOR**

**REQUIREMENTS (18 CREDITS):**

**Required Courses:**

GEOG 110 Introduction to Geography 3

GEOG 241 Introduction to Planning 3

GEOG 441 Community & Regional Planning 3

**Subtotal: 9**

**Electives:**

6 credits of Geography electives from GEOG 272 and/or any Geographic Techniques course

and

3 credits from any 400-level Planning course

**Subtotal: 9**

**Total Credit Hours: 18**

**GEOGRAPHY - TOURISM MINOR**

**REQUIREMENTS (18 CREDITS)**

**Required Courses:**

GEOG 110 Introduction to Geography 3  
or

GEOG 120 World Regional Geography 3

GEOG 290 Geography of Tourism 3

**Subtotal: 6**

**Regional Geography:**

3 credits from any regional geography course

**Subtotal: 3**

**Electives:**

9 credits from the following:

GEOG 291 National Parks and World Heritage Sites 3

GEOG 450 Tourism Planning 3

GEOG 451 Tourism Development in Southern New England 3

GEOG 453 Recreation and Resort Planning 3

GEOG 454 Geography of Tourism Marketing 3

GEOG 455 New Directions in Tourism 3

**Subtotal: 9**

**Total Credit Hours: 18**

Note: Courses used to satisfy this minor may not be used to satisfy the requirements of any major in geography. Students selecting this minor must consult with the department chair.

**GEOLOGY MINOR**

**REQUIREMENTS: (18 CREDITS)**

**Required Courses**

ESCI 121 The Dynamic Earth 3  
or

ESCI 131 Environmental Earth Science 3

ESCI 125 The Dynamic Earth Laboratory 1  
or

ESCI 135 Environmental Earth Science Laboratory 1

ESCI 221/GSCI Mineralogy 4

221			
ESCI 321	Structural Geology	4	
ESCI 290	Field Methods in the Earth Sciences	2	

**and one course from the following:**

ESCI 223	Sedimentary Geology	4	
ESCI 321	Structural Geology	4	
ESCI 424	Geomorphology	4	

**Total Credit Hours: 18****GERONTOLOGY MINOR**

The minor in gerontology provides students with a solid background in different issues related to adult development and aging in order to prepare them to serve the aging population in various capacities. The minor incorporates courses from the schools of Liberal Arts and Social Sciences, Education and Professional Studies, and Engineering, Science and Technology. For more information, refer to the Gerontology page linked here.

Note: Psychology majors choosing to minor in Gerontology cannot double-count major and minor requirements.

**REQUIREMENTS (19 CREDITS):****Required Courses (10-11 credits):**

GERO 101	Introduction to Gerontology	3	
PSY 364	Adult Development & Aging	3	
	or		
SOC 340	Aging and Life Course	4	
GERO 495	Internship in Gerontology	4	

**Electives (8-9 credits)**

BIO 401	Human Nutrition and Metabolism	3	
ENG 370	Creative Nonfiction I	3	
ENT 475/MGT 475	New Venture Challenge: Lean Launch Methodology	3	
EXS 215	Physiological Aspects of the Human Performance of the Aging	3	
GEOG 455	New Directions in Tourism	3	
GERO 491	Independent Reading and Research in Gerontology	1-3	
GERO 498	Special Topics in Gerontology	3	
PSY 241	Introduction to Health Psychology	3	
PSY 380	Psychology of Dying and Death	3	
PSY 458	Human Neuropsychology	3	
PSY 364	Adult Development & Aging	3	
SOC 340	Aging and Life Course	4	
SOC 440	Death and Dying: Sociological Implications	4	
SOC 441	Sociology of the Aging Body	4	

SOC 461/WGSS 461	Intimacy and Aging	4	
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**Total Credit Hours: 19****GLOBAL STUDIES MINOR****REQUIREMENTS: (18 CREDITS)****Required**

IS 225	The World as a Total System	3	
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**15 CREDITS FROM THE COURSES IN ONE OF THE THEMATIC CATEGORIES BELOW.**

6 credits must be at the 300- or 400-level. Not more than 9 credits from the same discipline (designator).

**Communication and Diversity in the Global Context**

ANTH 170	Introduction to Cultural Anthropology	3	
ANTH 200/AFAM 200	Dimensions of Diversity and Inequality	3	
ANTH 239	Economic Anthropology	3	
ANTH 240	The Supernatural	3	
ART 200	Introduction to Global Art	3	
COMM 216	Introduction to Intercultural Communication	3	
ENG 214	Studies in International Literature	3	
ENG 367	Global Novel	3	
ENG 465/CINE 465	Global Cinema	3	
ENG 486	World Literature and Film	3	
JRN 370	Global News in Context	3	
IS 470	Topics in Global Studies	3	
LING 230	The Study of Language	3	
MUS 111	Music of the World's People	3	
PHIL 350	Philosophy East & West	3	
PSY 420	Cross-Cultural Psychology	3	
REL 110	World Religions	3	
SPAN 441	Cross-Cultural Communication	3	

**Energy, Resources, and Environment**

COMM 451	Environmental Communication	3	
GEOG 270	Geography of Hazards	3	
GEOG 433	Issues in Environmental Protection	3	
GEOG 445	Environmental Planning	3	
GEOG 473	Geography of Natural Resources	3	
GEOG 475/SUST 475	Energy Resources and Climate Change	3	
ESCI 131	Environmental Earth Science	3	
GSCI 450	Environmental and Engineering	3	

	Geology	
IS 470	Topics in Global Studies	3
PHIL 241	Environmental Ethics	3
SUST 140	Introduction to Sustainability	3
<b>Governance, Security, and Human Rights</b>		
GEOG 333	Political Geography	3
HIST 420	Imperialism	3
IS 470	Topics in Global Studies	3
PES 202/PSY 202	Peace Psychology	3
PES 345/PHIL 345	Philosophy of War and Peace	3
PHIL 211/PES 210	Philosophy & Global Justice	3
PHIL 344	Topics in Philosophical & Social Justice	3
PS 235	International Relations	3
PS 338	International Organization	3
PS 339	International Law	3
PS 345	Terrorism	3
PS 380	International Conflict and Security	3
PS 445	Public Policy Analysis and Evaluation	3
PS 450	Public Sector Ethics	3
SOC 424	Genocide and the Modern World	4
<b>Population, Mobility, and Development</b>		
ANTH 352	Ethnicity and Ethnic Identity	3
ANTH 401	City Life & Culture	4
ECON 320	Globalization Issues	3
ECON 430	International Economics	3
ECON 435	Economic Development	3
GEOG 160	Geography of Global Contemporary Migration	3
GEOG 220	Human Geography	3
GEOG 244	Economic Geography	3
GEOG 439	Urban Geography	3
IS 470	Topics in Global Studies	3
MKT 295	Fundamentals of Marketing	3
MKT 321	International Marketing	3
SOC 309/LTN 309	U.S. Immigration	4
SOC 428	Globalization and Its Discontents	4

**GRAPHICS TECHNOLOGY, MINOR**

**Minor in Graphics Technology**

Introduction of the internet (digital communications) into the digital graphics and print media industry led to the digital revolution dramatically changing the way we

interact and communicate. In this scenario, print is just one of many media channels which consumers can access. The practice of interactive, static, still and moving imagery has converged, as evidenced in the capability of the present role of image capturing, print/packaging, publishing, and interactive/motion technologies. These technologies have resulted in both opportunities and challenges and have created a need for college graduates who understand the entire digital graphics and print media process and possess the competencies necessary to manage print and non-print media related operations.

**GRAPHICS TECHNOLOGY, MINOR**

**Students complete 6 courses, 18 credit hours towards the minor**

GRT 112	Digital Imaging for Graphics Technology	3
GRT 212	Graphics Technology Systems	3
GRT 222	2D Animation for Graphics Technology	3
GRT 272	Packaging Technology	3
GRT 342	Screen & Specialty Printing Manufacturing	3
GRT 442	Print Production	3

**Total Credit Hours: 18**

**HISTORY MINOR**

18 credits of History with at least 6 credits at the 300-level and above.

**Total Credit Hours: 18**

**JOURNALISM MINOR**

**REQUIREMENTS (18 CREDITS):**

**Required Courses:**

JRN 200	Introduction to Journalism	3
JRN 235	News Writing and Reporting I	3
JRN 255	Multimedia Journalism	3
JRN 383	Responsibilities of Journalism	3
	or	
JRN 384	Journalism History	3

JRN 255: To be taken concurrently with JRN 235

**Six Credits of Directed Electives:**

These may be drawn from JRN courses numbered 200-499, but one or both courses could also be drawn from disciplines other than JRN with an advisor approval.

**Total Credit Hours: 18****LATINO AND PUERTO RICAN STUDIES MINOR****Program Overview**

A minor program in Latino and Puerto Rican studies prepares students with interdisciplinary knowledge and practical understanding of the social, economic, historical, and cultural conditions and impact of Latinos/as in the U.S. The program consists of a gateway introductory course in interdisciplinary Latino Studies (LTN 110), a capstone Individual Research Experience requirement (LTN 410), and 12 credits of electives, at least six of which must be at or above the 300 level.

**REQUIREMENTS (18 CREDITS):****Required Courses:**

LTN 110	Introduction to Latino Studies	3
LTN 410	Individual Study Project in Latino Studies	3

**Subtotal: 6****Electives:**

Note: Students without intermediate competence in Spanish (SPAN 125/SPAN 190 or equivalent) must complete SPAN 125 or SPAN 190 in lieu of one of their elective courses.

ANTH 200/AFAM 200	Dimensions of Diversity and Inequality	3
ANTH 352	Ethnicity and Ethnic Identity	3
ANTH 428/LAS 428	Cultures of Latin America	4
CRM 245	Diversity and Criminal Justice	3
ENG 347/LTN 347	Latino/a Literature	3
HIST 316/LTN 316	History of the American West to 1890	3
HIST 317/LTN 317	History of the American West, 1890 to Present	3
HIST 319/LTN 319	Race, Ethnicity and Migration in the U.S.	3
IS 240	Caribbean Cultures	3
IS 245	Puerto Rico	3
LTN 270	Topics in Latino and Puerto Rican Studies	3
LTN 370	Topics in Latino and Puerto Rican Studies	3
LTN 470	Topics in Latino Studies	3
SOC 309/LTN 309	U.S. Immigration	4

SOC 305	Social Movements and Collective Action	4
SPAN 191	Language for Heritage Speakers of Spanish II	3
SPAN 290	Hispanic Culture for Heritage Speakers of Spanish I	3
SPAN 291	Hispanic Culture for Heritage Speakers of Spanish II	3
SPAN 316/LAS 316	Latin American Civilization	3

**Subtotal: 12****Total Credit Hours: 18****LATIN AMERICAN STUDIES MINOR****REQUIREMENTS: (18 CREDITS)****Required:**

IS 225	The World as a Total System	3
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**Subtotal: 3****Electives:**

15 credits from the courses below. 6 credits must be at the 300 or 400-level. Not more than 9 credits from the same discipline (designator).

ANTH 428/LAS 428	Cultures of Latin America	4
GEOG 434/LAS 434	Mexico, Central America, and the Caribbean	3
GEOG 436/LAS 436	South America	3
HIST 281/LAS 281	History of Latin America to 1823	3
HIST 282/LAS 282	History of Latin America since 1823	3
HIST 383	History of Brazil	3
IS 240	Caribbean Cultures	3
IS 245	Puerto Rico	3
IS 464	Topics in Latin American Studies	3
PS 420/LAS 420	Government and Politics of Latin America	3
SPAN 316/LAS 316	Latin American Civilization	3
SPAN 375/LAS 375	Introduction to Spanish American Literature I	3
SPAN 376/LAS 376	Spanish American Literature II	3

**Subtotal: 15****Total Credit Hours: 18**

*Note prerequisites where applicable. Students selecting this minor must register with the program coordinator.*

**LINGUISTICS MINOR**

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The minor in Descriptive Linguistics provides students with a foundation in the core cognitive and social theories of human language. The minor is ideal for majors in Psychological Science, Computer Science, Communication, Education, English, World Languages, Anthropology, and the Social Sciences.

**REQUIREMENTS (18 CREDITS):**

**Required Courses (12 credits):**

LING 400/LING 500	Linguistic Analysis	3
LING 412/LING 512	Syntax	3
LING 413/LING 513	Phonology	3
LING 414/LING 514	Variation and Discourse	3

**Students must choose TWO electives from the following:**

LING 200	Introduction to Linguistics	3
LING 230	The Study of Language	3
LING 300	Language Acquisition	3
LING 497	Second Language Acquisition	3
LING 430/LING 530	Topics in Applied Linguistics	3
LING 431/LING 531	The History of the English Language	3
LING 437/LING 537	Introduction to Multilingualism	3
LING 450	Internship in Applied Linguistics	3

**Total Credit Hours: 18**

**MANAGEMENT INFORMATION SYSTEMS MINOR (FOR BUSINESS MAJORS AND NON-BUSINESS MAJORS)**

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Program addresses career planning needs of students who would like to complement their major area of study with a focused professional component in the field of Management Information Systems.

**REQUIREMENTS: (18 CREDITS)**

**18 Credits from:**

MIS 201	Introduction to Management Information Systems	3
MIS 202	Introduction to the Application of Artificial Intelligence	3
MIS 220	Introductory Business Applications Development	3
MIS 300	IT Project Management I	3
MIS 315	Database Management Systems	3
MIS 361	Systems Analysis and Design for Business	3
MIS 395	Business-Driven Infrastructure Design	3
MIS 399/BUS 370	Business Analytics and Decision Support	3
MIS 412	Contemporary Business Applications Development II	3
MIS 416	Advanced Database Management Systems	3
MIS 450	IT Governance and Strategy	3
MIS 460	Emerging Technologies for Business	3
MIS 462	IT Project Management II	3
MIS 463	Analytics Applications	3

In consultation with an MIS faculty advisor, students must complete 18 credits chosen to further their major area of study and individual goals. In addition, students must maintain a GPA of at least 2.0 in the MIS minor and a receive C- or higher in each Minor course.

**Total Credit Hours: 18**

**MATHEMATICS MINOR (NON-TEACHING)**

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**REQUIREMENTS: (20-21 CREDITS)**

**Required Courses**

MATH 152	Calculus I	4
MATH 221	Calculus II	4
MATH 222	Calculus III	4

**and 8-9 credits from:**

MATH 218	Discrete Mathematics	4
MATH 226	Linear Algebra and Probability for Engineers	4
MATH 228	Introduction to Linear Algebra	4
MATH 355	Introduction to Differential Equations with Applications	4
MATH 366	Introduction to Abstract Algebra	4
MATH 377	Introduction to Real Analysis	4
MATH 422	Introduction to Mathematical	1

Software

**Total Credit Hours: 0****MATHEMATICS MINOR (FOR STUDENTS COMPLETING SECONDARY CERTIFICATES)****REQUIREMENTS****Required Courses**

MATH 152	Calculus I	4
MATH 218	Discrete Mathematics	4
MATH 221	Calculus II	4
MATH 228	Introduction to Linear Algebra or	4
MATH 366	Introduction to Abstract Algebra	4
STAT 314	Introductory Statistics for Secondary Teachers	3

**Subtotal: 19****Total Credit Hours: 19**

*Note: For certification in mathematics as a second teaching field, the state of Connecticut requires a minimum of 30 credits in mathematics and an acceptable score on the Praxis II examination.*

**MEDIA STUDIES MINOR****REQUIREMENTS: (17 CREDITS)****Required course:**

COMM 230	Introduction to Mass Media	3
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**Any two of the following (6-7 credits)**

COMM 220/CINE 220	Introduction to History of Film	3
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or

COMM 255	Visual Communication	3
COMM 227	Introduction to Television Production	3

or

COMM 228	Introduction to Digital Film Production	3
COMM 231	Communication Technologies	3
COMM 336	Media Literacy	4

**Additional credits from the following list (7-8 credits to reach the required 17 credits)**

COMM 315	Political Communication	4
COMM 319/CINE 319	Filmic Narrative	4

COMM 327	TV Production	4
COMM 328	Digital Film Production 1	4
COMM 329	Screenwriting	4
COMM 332	Web Publishing	4
COMM 345	Writing for the Electronic Media	4
COMM 380/CINE 380/WGSS 380	Women and Film	4
COMM 382	American Cinema	4
COMM 399	Current Topics in Communication	1
COMM 410	Public Opinion	4
COMM 420	Principles of Digital Photography for Convergent Media	4
COMM 427	Studio Production	4
COMM 428	Digital Film Production II	4
COMM 431	Mass Media and Society	4
COMM 432	Media In Film	4
COMM 435/WGSS 435	Images of Gender in the Media	4
COMM 436	Streaming Media in Web Publishing	4
COMM 455	Global Visual Communication	4
COMM 457	Converging Media	4
COMM 485	Topics in Media and Culture	3 to 4
COMM 487	TV Documentary	4
COMM 488	Film Documentary	4
COMM 496	Field Studies in Communication	3

**MIDDLE EASTERN STUDIES MINOR****REQUIREMENTS: (18 CREDITS)****Required:**

IS 225	The World as a Total System	3
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**Electives:**

15 credits from the courses below. 6 credits must be at the 300 or 400-level. Not more than 9 credits from the same discipline (designator).

GEOG 447	Geographic Perspective on Israel/Palestine	3
HIST 231	Ancient Mediterranean World	3
IS 465	Topics in Middle East Studies	3
PS 345	Terrorism	3
PS 370	Arab Uprisings	3
PS 434	Government and Politics of the Middle East and North Africa	3
PS 439	U.S. Middle East Policy	3



**Total Credit Hours: 18**

**MODERN LANGUAGE MINOR**

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**REQUIREMENTS (18 CREDITS):**

Required Courses (12 credits): a four-semester sequence of language courses in a single language:

- In French, Italian, German and Spanish for non-heritage speakers, students must reach intermediate level IV (226 level)
- In Spanish for heritage speakers, students must reach Hispanic Culture for Heritage Speakers of Spanish II (SPAN 291)
- In all other languages, Intermediate Level II must be reached (126 level)

Electives (6 credits):

6 credits of directed electives approved by the Chair of the Department of World Languages, Literatures, and Cultures, including advanced study of the language. If no other language courses are offered, directed electives may include courses in other disciplines taught in English, dealing with the communities or countries where the target language is used. Availability of intermediate level courses is subject to sufficient enrollment for course to be offered.

**Required Courses:**

FR 125	Intermediate French I	3
FR 126	Intermediate French II	3
FR 225	Intermediate French III	3
FR 226	Intermediate French IV	3
	or	
ITAL 125	Intermediate Italian I	3
ITAL 126	Intermediate Italian II	3
ITAL 225	Intermediate Italian III	3
ITAL 226	Intermediate Italian IV	3
	or	
GER 125	Intermediate German I	3
GER 126	Intermediate German II	3
GER 225	Intermediate German III	3
GER 226	Intermediate German IV	3
	or	
CHIN 111	Elementary Chinese I	3
CHIN 112	Elementary Chinese II	3
CHIN 125	Intermediate Chinese I	3
CHIN 126	Intermediate Chinese II	3
	or	
JAPN 111	Elementary Japanese I	3

JAPN 112	Elementary Japanese II	3
JAPN 125	Intermediate Japanese I	3
JAPN 126	Intermediate Japanese II	3
	or	
ASL 111	American Sign Language I	3
ASL 112	American Sign Language II	3
ASL 125	Intermediate American Sign Language I	3
	or	
ASL 126	Intermediate American Sign Language II	3
	or	
ARAB 111	Elementary Arabic I	3
ARAB 112	Elementary Arabic II	3
ML 125	Intermediate Modern Language I	3
ML 126	Intermediate Modern Language II	3
	or	
LAT 111	Elementary Latin I	3
LAT 112	Elementary Latin II	3
ML 125	Intermediate Modern Language I	3
ML 126	Intermediate Modern Language II	3
	or	
POL 111	Elementary Polish I	3
POL 112	Elementary Polish II	3
POL 125	Intermediate Polish I	3
POL 126	Intermediate Polish II	3

**For non-heritage speakers:**

SPAN 125	Intermediate Spanish I	3
SPAN 126	Intermediate Spanish II	3
SPAN 225	Intermediate Spanish III	3
SPAN 226	Intermediate Spanish IV	3
	or	

OR

**For heritage speakers:**

SPAN 190	Language for Heritage Speakers of Spanish I	3
SPAN 191	Language for Heritage Speakers of Spanish II	3
SPAN 290	Hispanic Culture for Heritage Speakers of Spanish I	3
SPAN 291	Hispanic Culture for Heritage Speakers of Spanish II	3

AND

**Electives:**

6 CREDITS of Directed Electives approved by the Chair of the Department of World Languages, Literatures, and Cultures, including further study of the target language or – if no other language courses are offered – courses in

other disciplines taught in English, dealing with the communities or countries where the target language is used.

and  
6 credits of directed electives

6 credits of directed electives are required to complete the minor.

#### Total Credit Hours: 18

ASL 125 and ASL 126 were approved in Spring 2016, and should replace ML 125 and ML 126, as part of required courses for Minor in America Sign Language. Students may take advantage of coursework offered through the Hartford Consortium for Higher Education, particularly if required courses in the language are not available at CCSU. For more information about the Hartford Consortium, [click here](#).

## MUSIC MINOR

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Students planning to minor in music must consult the Department Chair for advisement.

#### REQUIREMENTS (18 CREDITS):

##### Required: Three (3) credits from:

MUS 109	Fundamentals of Music	3
	or	
MUS 102	Fundamentals of Musicianship	3

##### Also Required -- Category A. Six (6) credits from:

MUS 100	Search in Music	3
MUS 110	Listening to Classical Music	3
MUS 111	Music of the World's People	3
MUS 113	History of Jazz	3
MUS 115	Aural Skills I	1
MUS 116	Aural Skills II	1
MUS 214	Electro-Acoustic Music and Sonic Art	3
MUS 237	Diatonic Harmony	2
MUS 318	Chromatic Harmony I	2

**Nine (9) credits required from at least two of the following categories (B, C, or D):**

##### Category B. Zero-Six (0-6) credits from:

MUS 250	Piano Class I	1
MUS 251	Piano Class II	1
MUS 264	Voice Class	2
MUS 273	Jazz Improvisation I	2
MUS 274	Jazz Improvisation II	2
MUS 350	Piano Class III	1
MUS 351	Piano Class IV	1

##### Category C. Zero-Six (0-6) credit from: (the same course may be repeated for credit)

MUS 140	Ensemble	1
MUS 141	Chorus	1
MUS 142A	Band: Wind Symphony	1
MUS 143	Sinfonietta	1
MUS 144	Marching Band	1
MUS 147A	Traditional Jazz Ensemble	1
	or	
MUS 147B	Improvisatory Jazz Ensemble	1
MUS 148	Ensemble: University Singers	1
MUS 149	University Chamber Players	1
MUS 177	Applied Music	.5

##### Category D. Zero-Six (0-6) credits from:

MUS 112	Computer Applications to Music	3
MUS 114	Introduction to Music Technology	1
MUS 380	Advanced Notation, Sequencing, and Sound Synthesis	2

**Total Credit Hours: 18**

## NETWORKING TECHNOLOGY MINOR

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#### REQUIREMENTS: (18 CREDITS)

##### Required Courses

CET 223	Basic Electrical Circuits	3
CET 229	Computer Hardware Architecture	3
CET 249	Introduction to Networking Technology	3
CET 349	Network Design and Implementation	3
CET 363	Digital Circuits	3
CET 449	Advanced Networking	3

**Total Credit Hours: 18**

## PEACE STUDIES MINOR

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#### Program Overview

Peace studies is an interdisciplinary program concerned with the origins of war and the prospects for peace. Topics to be considered include just war theory, types of pacifism, the nature of wars, conflict resolution and the history of peace movements, deterrence theory, weapons of mass destruction, and problems of international security. The program offers students the opportunity to study conflicts and peace efforts in specific regions of the world and to produce a senior thesis on a topic of their choice.

**REQUIREMENTS: (18 CREDITS)**

**Required Courses:**

PES 110	Introduction to the Study of Peace & War	3
PES 410	Research in Peace Studies	3

**Electives:**

ART 270	Art in Community	3
HIST 291	Modern Middle East	3
PES 111	War & Peace through Films	3
PES 210	Topics in International Peace Studies	3
PES 310	Internship in Peace Studies	1-6
PHIL 345/PES 345	Philosophy of War & Peace	3
PS 235	International Relations	3
PS 345	Terrorism	3
PS 380	International Conflict and Security	3
PSY 202/PES 202	Peace Psychology	3

**Total Credit Hours: 18**

**PERSONAL FINANCIAL PLANNING MINOR**

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The minor in personal financial planning addresses career planning needs of students who would like to complement their major area of study with a focused professional component in the rapidly growing specialism of financial advisor and personal financial planner. The minor is ideal for students who are considering progressing to a role in banking, insurance, retirement planning, investment management, personal benefit administration, or financial planning. Not open to Finance majors.

**REQUIREMENTS (18 CREDITS):**

**Required Courses (12 credits) :**

AC 211	Introduction to Financial Accounting	3
FIN 210	Personal Finance	3
FIN 295	Managerial Finance	3
FIN 300/AC 305	Personal Financial Planning	3

**Electives Courses: (6 credits)**

FIN 310	Principles of Investments	3
FIN 320	Financial Markets and Institutions	3
FIN 321	Insurance	3
AC 302	Introduction to Income Taxation	3

The electives courses must be approved by the Finance Department Chair before the courses are taken. Students must complete the entire personal financial planning

minor course requirements with a minimum cumulative grade point average of 2.00 for the six courses used to complete the personal financial planning minor. Students must also receive a grade of C- or better in each minor course taken.

**Total Credit Hours: 18**

**PHILOSOPHY MINOR**

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**REQUIREMENTS: (18 CREDITS)**

**Required Courses:**

	Any 100-level Philosophy course	3
PHIL 310	Philosophy Research and Writing	3

**Electives:**

12 credits in Philosophy courses; at least 6 credits must be at the 300-level or higher

**Total Credit Hours: 18**

**PHYSICS MINOR**

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**REQUIREMENTS**

**18 credits in Physics, including:**

PHYS 125	University Physics I	4
PHYS 126	University Physics II	4
PHYS 220	Mechanics I	3

**Subtotal: 18**

The remaining Physics courses must be at the 200 level or above and will be selected after consultation with the student's department advisor.

**In addition the student must take:**

MATH 152	Calculus I	4
MATH 221	Calculus II	4
MATH 222	Calculus III	4

**Total Credit Hours: 18**

**PHYSICS MINOR (CERTIFIABLE FOR SECONDARY TEACHING)**

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**REQUIREMENTS**

**Required Courses**

PHYS 125	University Physics I	4
PHYS 126	University Physics II	4
PHYS 220	Mechanics I	3
PHYS 250	Intermediate Lab I	1
	Physics electives	6

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**Subtotal: 18**

**In addition, students must take:**

CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 260	Foundations of Inorganic Chemistry	3
CHEM 201	Foundations of Analytical Chemistry Laboratory	1
MATH 152	Calculus I	4
MATH 221	Calculus II	4
MATH 222	Calculus III	4
SCI 417	Science Methods in Secondary School	3

**Total Credit Hours: 18**

**POLISH STUDIES MINOR****REQUIREMENTS (18 CREDITS)****Polish Language:**

6 credits of Polish language, unless waived by the Modern Language Department.

**Subtotal: 6**

**Electives:**

HIST 319/LTN 319	Race, Ethnicity and Migration in the U.S.	3
HIST 380	Modern Poland	3
SOC 480	The Polish-American Immigrant and Ethnic Communities	3
SOC 478	Current Topics in Sociology	3 - 4

**Subtotal: 12-18**

Additional electives as approved by the Coordinator

SOC 478: as approved by Coordinator

**Total Credit Hours: 18**

**POLITICAL SCIENCE MINOR****REQUIREMENTS (18 CREDITS)**

18 credits in Political Science, 9 credits of which must be at the 300 or 400 level.

**Total Credit Hours: 18**

**PRACTICING ANTHROPOLOGY MINOR****REQUIREMENTS (18 CREDITS)****Required Courses:**

ANTH 170	Introduction to Cultural Anthropology	3
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ANTH 200/AFAM 200	Dimensions of Diversity and Inequality	3
ANTH 270	Applying Anthropology	3
ANTH 374	Field Research Methods	4
ANTH 401	City Life & Culture	4
ANTH 437	Internship in Anthropology	3

**Subtotal: 18**

For students majoring in anthropology, 3 credits of this minor may be applied to the major.

**Total Credit Hours: 18**

**PSYCHOLOGICAL SCIENCE MINOR****REQUIREMENTS: (18 CREDITS)****Required Course:**

PSY 112	Introduction to Psychology	3
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**Subtotal: 3**

**Electives:**

15 credits in Psychological Science

**Subtotal: 15**

**Total Credit Hours: 18**

**PUBLIC HISTORY MINOR**

The minor in Public History prepares students for non-teaching careers as historians outside the academy. Emphasis is placed on exposing students to the broad range of skills and issues associated with careers in museums, archives, historic preservation agencies, heritage tourism, historic site assessment, cultural resource management, and other careers that utilize the skills of the historian outside of the classroom setting. The minor provides a foundation for history majors seeking employment as public historians and also prepares students for graduate study in public history.

Drawing on the recommendations of the National Council on Public History for undergraduate programs in Public History,[1] this minor will stress:

- exposing students to the diversity of careers in Public History
- historical skills
- applied research
- interdisciplinary methods of research and inquiry into the historical past

· field research/internships/community engagement projects

**REQUIREMENTS (18 CREDITS)**

**Required Courses (9-10 Credits):**

HIST 302	Introduction to Public History and	3
HIST 403	Public History Project or	3
HIST 492	Public History Intern Experience	3 OR 4

300-level U.S. History course (3 credits)

Students can take HIST 403 and HIST 492, but one will count towards their required electives.

**Directed Electives (9 credits):**

HIST 403	Public History Project	3
HIST 404	American Material Culture	3
HIST 405	Local History and Community Development	4
HIST 455	Topics in Latin American History	3
HIST 492	Public History Intern Experience	3 OR 4
ANTH 150	Introduction to Archaeology	3
ANTH 210	The Ancient World	3
ANTH 322	Historical Archaeology	3
ANTH 329	Experimental Archaeology	4
ANTH 418	New England Archaeology	4
ANTH 450	Archaeological Field School	3 TO 6
ART 110	Introduction to Art History	3
ART 216	Modern Art	3
ART 270	Art in Community	3
ART 414/ART 509	American Art & Architecture	3
ART 490	Curatorship	3
ART 420/ART 509	Issues in Contemporary Art	3
ART 491	Aesthetic and Critical Dialogue About Art	3
WRT 370	Creative Nonfiction I	3
WRT 382	Travel Writing	3
JRN 381	Opinion Writing	3
GEOG 130	Introduction to Geographic Information Science	3
GEOG 241	Introduction to Planning	3
GEOG 276	Elementary Cartography	3
GEOG 290	Geography of Tourism	3
GEOG 291	National Parks and World Heritage Sites	3

GEOG 378	Geographic Information Systems	3
GEOG 433	Issues in Environmental Protection	3
GEOG 439	Urban Geography	3
GEOG 441	Community & Regional Planning	3
GEOG 445	Environmental Planning	3
GEOG 450	Tourism Planning	3
GEOG 451	Tourism Development in Southern New England	3
GEOG 472	Topics in Physical Geography	3
GEOG 475/SUST 475	Energy Resources and Climate Change	3
GEOG 483	Topics in Planning	3
SOC 411	Oral History for the Social Sciences	4
THS 300	The Hospitality Industry	3

No more than 6 credits may be taken from any one discipline. Other courses, such as certain special topics courses like HIST 395, may be available if they address some specific aspect of public history. Consult the Public History Coordinator for current options.

Students wishing to take HIST 404 or HIST 405 should contact the chair of the department for a waiver of HIST 301.

**Total Credit Hours: 18**

**QUALITY MANAGEMENT MINOR**

**REQUIREMENTS (18 CREDITS)**

**Required Courses**

TM 190	Global Quality Management Systems	3
TM 360	Production Systems	3
TM 390	Lean Operation Management	3
TM 426	Applied Metrology	3
TM 464	Six Sigma Quality	3
TM 490	Advanced Six Sigma Quality	3

**Total Credit Hours: 18**

**RELIGIOUS STUDIES MINOR**

**REQUIREMENTS: (18 CREDITS)**

**Required Courses (6 credits):**

REL 101	Introduction to Religious Studies	3
REL 110	World Religions	3

**Historical/Social Science (3 credits):**

ANTH 240	The Supernatural	3
HIST 441	Renaissance & Reformation	3
PS 280	Religion & Politics	3

**Philosophical/Religious Thought (9 credits):**

PHIL 232	Medieval and Renaissance Philosophy	3
PHIL 250	Introduction to Asian Philosophy	3
PHIL 255	Philosophy of Religion	3
PHIL 275	Chinese Philosophy	3
PHIL 375	Japanese Philosophy	3
PHIL 376	Buddhist Philosophy	3
REL 105	Development of Christian Thought	3
REL 250	Japanese Religion	3
REL 256	Religion, Philosophy, and Culture	3
REL 257	Special Topics in Religion	3
REL 361/AFAM 361	African-American Religion	3
REL 492	Independent Study	1 TO 3

Students may take advantage of coursework offered through the Hartford Consortium for Higher Education if required courses are not available at CCSU. For more information about the Hartford Consortium, click [here](#).

**SCIENCE MINOR****REQUIREMENTS****12 credits as follows:**

BIO 121	General Biology I or	4
BMS 102	Introduction to Biomolecular Science	3
BMS 103	Introduction to Biomolecular Science Laboratory	1
CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
<b>4 credits from the following:</b>		
ESCI 121	The Dynamic Earth	3
PHYS 121	General Physics I	4
PHYS 125	University Physics I	4
<b>Subtotal: 12</b>		

**and 12 credits from the following:**

BIO 122	General Biology II or	4
BMS 201	Principles of Cell and Molecular Biology	4
CHEM 200	Foundations of Analytical Chemistry or	3

CHEM 260	Foundations of Inorganic Chemistry and	3
CHEM 201	Foundations of Analytical Chemistry Laboratory	1
PHYS 122	General Physics II or	4
PHYS 126	University Physics II	4
<b>Subtotal: 12</b>		

Students must take at least one course in each discipline (biology or biomolecular sciences, chemistry, and physics), and the 8 credits in the minor may be credited toward a major as well.

**Total Credit Hours: 24****SOCIAL JUSTICE MINOR**

The minor in Social Justice provides students with a solid background in philosophical concepts and theories of social justice, and fosters skills necessary for critical analysis of social justice issues that arise in contemporary society. (This minor is not open to Philosophy majors).

**REQUIREMENTS: (18 CREDITS)****Social Justice Core:**

PHIL 244	Introduction to the Philosophy of Social Justice	3
PHIL 344	Topics in Philosophical & Social Justice	3

**NOTE:**

- PHIL 244 is offered in the Fall ONLY
- PHIL 344 is offered in the Spring ONLY

**Electives (12 credits)**

12 credits from the following courses:

AAPI 110	Introduction to Asian American and Pacific Islander Studies	3
AAPI 202/CRM 202	Prejudice, Harassment, and Bias Crime in the 21st Century	3
ANTH 200/AFAM 200	Dimensions of Diversity and Inequality	3
ANTH 350/WGSS 350	Genders and Cultures Around the Globe	3
ANTH 352	Ethnicity and Ethnic Identity	3
CEN 200	Introduction to Community and Civic Engagement	3
CEN 201	Practicum in Community and Civic	1

ENG 209	Engagement	
ENG 212/AFAM 212	EJI Topics in Literature	3
ENG 215/WGSS 215	African-American Literature	3
LING 406/LING 506	Introduction to Women Writers	3
LING 415/LING 515	TESOL Methods	3
LING 437/LING 537	Language Policy and Planning	3
LTN 250/SOC 250	Introduction to Multilingualism	3
PHIL 211/PES 210	Latina Identity and Empowerment	3
PHIL 222/WGSS 222	Philosophy & Global Justice	3
PHIL 360/AFAM 360	Philosophy of Gender	3
PS 111/AFAM 111	African-American Philosophy	3
PS 270	Race and Ethnicity in US and Global Politics	3
PS 300	Law and Politics	3
PS 332	Corruption and Scandal in Politics	3
RJ 200	Civil Liberties	3
RJ 371/HIST 371/SOC 371	Studies in Racial Justice	3
SOC 208/WGSS 208	Race and Immigration in CT	4
SOC 209	Sociology of LGBTQ+Communities	3
SOC 212	Sociology of Culture	3
SOC 240/WGSS 240	Race, Class, and Gender	3
SOC 240/WGSS 240	The Sociology of Gender	3
SOC 250/LTN 250	Latina Identity and Empowerment	3
WGSS 200	Introduction to Women, Gender and Sexuality Studies	3
WGSS	Philosophy and Gender	3

222/PHIL 222		
WGSS 288	Topics in Women, Gender, Sexuality Studies	3
WGSS 350/ANTH 350/WGSS 350	Men and Women in Different Cultures	3
WGSS 240	The Sociology of Gender	3
<b>Total Credit Hours: 18</b>		

**SOCIAL STUDIES MINOR**

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**REQUIREMENTS (18 CREDITS)**

**Required Courses:**

12 credits from the following:

ANTH 140	Introduction to Anthropology	3
ECON 200	Principles of Macroeconomics	3
ECON 201	Principles of Microeconomics	3
GEOG 110	Introduction to Geography	3
GEOG 120	World Regional Geography	3
PS 104	The World's Political Systems	3
PS 110	American Government & Politics	3
SOC 110	Introductory Sociology	3

**Subtotal: 12**

**Electives:**

6 credits at the 300- or 400-level in a social or behavioral science department as approved by the Department of History Department chair.

**Subtotal: 6**

**Total Credit Hours: 18**

**SOCIOLOGY MINOR**

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**REQUIREMENTS (18 CREDITS)**

**Required Courses:**

SOC 110	Introductory Sociology	3
	or	
SOC 111	Social Problems	3

**Electives:**

3 credit 200 Level Elective Course

12 credits of electives which must be at the 300 or 400 level (3 Courses)

**Total Credit Hours: 18**

**STATISTICS MINOR**

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**REQUIREMENTS: (21 CREDITS)****Required Courses**

STAT 215	Statistics for Behavioral Sciences I	3
STAT 216	Statistics for Behavioral Sciences II	3
STAT 455	Experimental Design	3
	or	
STAT 456	Statistical Computation	3

**and 9 credits from the following:**

CS 151	Computer Science I	3
STAT 455	Experimental Design	3
STAT 456	Statistical Computation	3
STAT 465	Nonparametric Statistics	3
STAT 476	Topics in Statistics	3

**and one course chosen from the courses listed above or from:**

CS 473	Simulation Techniques	3
BIO 305	Ecology	4
ECON 460	Economic Forecasting	3
ECON 485	Econometrics	3
PSY 451	Psychological Evaluation	3
GEOG 476	Advanced Cartography	3

Note: No more than one course may be used in both the student's major program and the minor in statistics.

**Total Credit Hours: 21**

**STRATEGIC COMMUNICATION MINOR****REQUIREMENTS: (17 CREDITS)****Required courses**

COMM 234	Introduction to Public Relations	3
	or	
COMM 253	Introduction to Organizational Communication	3
COMM 334	Public Relations Strategies and Techniques	4
	or	
COMM 356	Professional Communication	4
COMM 410	Public Opinion	4
	or	
COMM 434	Campaign Development Methods	4
	or	
COMM 453	Organizational Communication	4

**At least two courses from the following list**

(some are 3, some are 4 credits):

COMM 215	Introduction to Interpersonal Communication	3
COMM 216	Introduction to Intercultural Communication	3
COMM 234	Introduction to Public Relations	3

COMM 253	Introduction to Organizational Communication	3
COMM 301	Critical Thinking	4
COMM 302	Small Group and Team Communication	4
COMM 315	Political Communication	4
COMM 316/WGSS 316	Gender and Communication	3
COMM 339	Public Relations and Social Media	4
COMM 341	Signature Events: Public Relations and Media Relations	3
COMM 343	Communication and Social Influence	3
COMM 345	Writing for the Electronic Media	4
COMM 353	Interviewing Theory and Practice	3
COMM 457	Converging Media	4
COMM 406	Case Studies in Public Relations	4
COMM 423	Crisis Communication	4
COMM 436	Streaming Media in Web Publishing	4
COMM 450	Communication Skills for Training and Development	3
COMM 451	Environmental Communication	3
COMM 452	Health Communication	4
COMM 454	Communication and Social Change	3
COMM 456	Corporate Communication	3
COMM 458	Sports Communication	4
COMM 495	Special Topics in Strategic Communication	3 to 4
COMM 496	Field Studies in Communication	3

**TESOL MINOR**

The minor in TESOL provides students with a practical foundation in the skills needed to teach English to speakers of other languages. The minor is ideal for majors in Education, English, World Languages, Psychological Science, and virtually any other major. The practical teaching skills developed in this minor can be used almost anywhere in the world.

**REQUIREMENTS (18 CREDITS)****Required Courses (12 credits):**

LING 400/LING 500	Linguistic Analysis	3
LING 406/LING 506	TESOL Methods	3
LING 407	Second Language Acquisition	3
LING	Second Language Testing	3



435/LING  
535

**Students must choose TWO electives from the following:**

LING 200	Introduction to Linguistics	3
LING 230	The Study of Language	3
LING 300	Language Acquisition	3
LING 415/LING 515	Language Policy and Planning	3
LING 430/LING 530	Topics in Applied Linguistics	3
LING 431/LING 531	The History of the English Language	3
LING 437/LING 537	Introduction to Multilingualism	3
LING 438/LING 538	Content-Based Second Language Instruction	3
LING 450	Internship in Applied Linguistics	3

**Total Credit Hours: 18**

**THEATRE MINOR**

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**REQUIREMENTS (18 CREDITS)**

**Required Courses:**

TH 111	Stagecraft	3
TH 143	Improvisation and Ensemble	3
	or	
TH 145	Acting I	3
TH 253	Script Analysis for the Theatre	3
TH 274	History of Theatre I	3
	or	
TH 276	History of Theatre II	3

**Electives:**

Six credits of TH electives.

**Total Credit Hours: 18**

**WOMEN, GENDER, AND SEXUALITY STUDIES MINOR**

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**Program Overview**

Women, gender, and sexuality studies is an interdisciplinary program concerned with issues that affect people due to their gender or sexual identity. The minor allows students to take courses in various departments that will enrich their lives as they explore

topics such as the meanings of femininity and masculinity, sexual orientation, gender roles in society, sex, feminism, and global gender issues.

**REQUIREMENTS (18 CREDITS)**

**Required Course:**

WGSS 200	Introduction to Women, Gender and Sexuality Studies	3
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**Electives:**

15 credits from the following:

WGSS 208/SOC 208	Sociology of LGBTQ+Communities	3
WGSS 215/ENG 215	Introduction to Women Writers	3
WGSS 222/PHIL 222	Philosophy and Gender	3
WGSS 240	The Sociology of Gender	3
WGSS 241/PHIL 241	Women and American Law	3
WGSS 288	Topics in Women, Gender, Sexuality Studies	3
WGSS 306/SOC 306	Social Construction of Sexuality	3
WGSS 330/HIST 330	History of Women in the US, 1620-1865	3
WGSS 331/HIST 331	History of Women in the United States, 1865-present.	3
WGSS 334	Women of Medieval Europe	3
WGSS 335	Women, Marriage, and Family in Early Modern Europe	3
WGSS 350/ANTH 350/WGSS 350	Men and Women in Different Cultures	3
WGSS 380/COMM 380	Women and Film	4
WGSS 390	Topics in Women, Gender, and Sexuality Studies	3
WGSS 391/PSY 390	Human Sexuality	3
WGSS 398	Special Topics in Women, Gender, and Sexuality Studies	1-4
WGSS 400	Advanced Feminist Studies	3
WGSS 435/COMM	Images of Gender in the Media	4

435			
WGSS	Psychology of Women		3
448/PSY 448			
WGSS	Intimacy and Aging		4
461/SOC 461			
WGSS 469	Readings in Women, Gender, and Sexuality Studies		3
WGSS 498	Special Topics in Women Gender and Sexuality Studies	1-4	

**Total Credit Hours: 18**

At least nine credits must be at the 300-400 level, and no more than nine credits can be from any one discipline. Special topic courses may also be used pending approval of the appropriate department chair and the Women, Gender, and Sexuality Studies coordinator.

Students may take advantage of coursework offered through the Hartford Consortium for Higher Education if required courses are not available at CCSU. For more information about the Hartford Consortium, click here.

**WRITING AND PUBLISHING MINOR**

A minor for students from all disciplines who are interested in writing as a profession or who see writing as part of their professional life. Students will learn writing, editing, and publishing skills, including those necessary for digital environments.

**REQUIREMENTS (19 CREDITS)**

1. Students must take the minor's three core courses:

WRT 370 Creative Nonfiction I

WRT 383 Writing for Digital Platforms

WRT 384 Publishing

2. Remaining credits may be taken from the following list of electives:

ENG 310 Close Reading the Sentence

ENG 495 Internship

WRT 371 Fiction I

WRT 372 Fiction II

WRT 373 Poetry I

WRT 374 Poetry II

WRT 375 Creative Nonfiction II

WRT 377 Playwriting

WRT 378 Creative Writing Special Topics

WRT 385 Writing About...

WRT 494 Creative Writing Independent Study

**Required Courses:**

WRT 370 Creative Nonfiction I 3

WRT 383 Writing for Digital Platforms 3

WRT 384 Publishing 4

**Directed Electives:**

9 credits from the following:

ENG 310 Close Reading the Sentence

ENG 495 Internship

WRT 371 Fiction I

WRT 372 Fiction II

WRT 373 Poetry I

WRT 374 Poetry II

WRT 375 Creative Nonfiction II

WRT 377 Playwriting

WRT 378 Creative Writing Special Topics

WRT 385 Writing About...

WRT 494 Creative Writing Independent Study

ENG 310 Close Reading the Sentence 3

WRT 371 Creative Writing: Fiction I 3

WRT 372 Creative Writing: Fiction II 3

WRT 373 Creative Writing: Poetry I 3

WRT 374 Creative Writing: Poetry II 3

WRT 375 Creative Nonfiction II 3

WRT 377 Creative Writing: Playwriting 3

WRT 385 Topic: Writing About... 3

ENG 495 Internship 1-6

WRT 378 Creative Writing: Special Topics 3

WRT 494 Creative Writing: Independent Study 3

**Total Credit Hours: 19**

## UNDERGRADUATE CERTIFICATE PROGRAMS

### DATABASE MANAGEMENT CERTIFICATE

The Advanced Database Management Certificate provides an introduction to management information systems, along with introductory and advanced database courses. The initial database course emphasizes the importance of data management in business, while the advanced database course is a hands-on experience with the Amazon Relational Database Services (RDS) and an understanding of how to define, design, and implement databases.

#### CERTIFICATE REQUIREMENTS

Take these three courses, all with a grade of C- or higher:

MIS 201	Introduction to Management Information Systems	3
MIS 315	Database Management Systems	3
MIS 416	Advanced Database Management Systems	3

**Total Credit Hours: 9**

### CULTURAL RESOURCES MANAGEMENT CERTIFICATE

This Undergraduate Certificate in Cultural Resource Management, is offered jointly through the Departments of History and Anthropology/Geography/Tourism. It will appeal to students interested in cultural heritage and filling critical workforce needs in the Northeast. Archaeology (and History) employment in Connecticut and the United States is largely driven by compliance with federal laws. Students can pair the certificate with a History or Anthropology major, and/or a Public History or Archaeology minor in consultation with a program advisor. The Certificate will prepare students for a post-baccalaureate degree program in Archeology, Public History, Historic Preservation, Planning, or other related field.

#### UNDERGRADUATE CRM CERTIFICATE (15 CREDITS)

##### Core (12 Credits)

ANTH 150	Introduction to Archaeology	3
ANTH 201	Archaeology, Cultural Heritage, and Ethics	3
GEOG 130	Introduction to Geographic Information Science	3

ANTH 450	Archaeological Field School	3 TO 6
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or

HIST 492	Public History Intern Experience	3 OR 4
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#### Electives (3 Credits)

ART 141	Photography I	3
ANTH 140	Introduction to Anthropology	3
ANTH 322	Historical Archaeology	3
ANTH 329	Experimental Archaeology	4
ANTH 230	Archaeology of Indigenous North America	3
ANTH 402	Space, Place, and People: The Archaeology of Landscapes	4
ANTH 418	New England Archaeology	4
ANTH 420	African Diaspora Archaeology	4
CEN 200	Introduction to Community and Civic Engagement	3
GEOG 130	Introduction to Geographic Information Science	3
GEOG 241	Introduction to Planning	3
GEOG 266	Introduction to Remote Sensing	3
GEOG 291	National Parks and World Heritage Sites	3
HIST 300	Topics in History	3
HIST 305	History of Connecticut	3
HIST 323	Native Americans of the Eastern Woodlands, 1520-Present	3
HIST 404	American Material Culture	3
WRT 403	Technical Writing	3

HIST 300- Early American/ Colonial History.

**Total Credit Hours: 15**

### DETECTIVE CERTIFICATE

Designed for professionals involved in crime scene investigation and command situations at critical events. Program covers theory and practice of investigation using modern technology and best practices. Students will learn fundamental principles and methods to improve work processes. All courses must be completed with a grade of C- or better. Up to 12 credits from the Detective Program may be applied toward the B.A. in Criminology per permission of the Department Chair.

Applicants for the Detective Certificate Program can complete the admission process on the CCSU Undergraduate Application section. Current CCSU

students must seek approval from the program coordinator to take courses in the Detective Certificate program.

### **CERTIFICATE REQUIREMENTS (12 CREDITS)**

#### **Program Electives (12 credits from)**

CRM 480	Death Investigations	3
CRM 481	Sexual Assault Investigation	3
CRM 483	Interview & Interrogation	3
CRM 485	Financial Crime Investigation	3
CRM 482	Police Involved Shootings & Crime Scene Investigations	3
CRM 484	Expectation of Privacy	3
CRM 489/CJ 589	Special Topics in Investigations	1-3

Completion of 12 credits in the Detective Certificate program with a GPA of 2.0 or better

**Total Credit Hours: 12**

### **ENGLISH-SPANISH TRANSLATION CERTIFICATE**

This certificate allows students to acquire and develop translation skills along with specialized knowledge in linguistic and cultural competencies related to English-Spanish translation, including business and medical Spanish.

#### **Admission Policy to the Certificate in English-Spanish Translation**

Prerequisite: SPAN 225 or equivalent proficiency in Spanish. If the student has not taken SPA 225,

they must meet with the chairperson of the Department of World Languages, Literature, and Cultures

to determine their proficiency level via a placement test.

The students must declare the Certificate using the appropriate form. Please contact the chair of the

Department of World Languages to get an approval signature and further information.

### **CERTIFICATE REQUIREMENTS (12 CREDITS)**

#### **Certificate Core**

SPAN 401	Introduction to English-Spanish Translation	3
SPAN 402	English-Spanish Business Translation	3
SPAN 404	English-Spanish Medical Translation	3
SPAN 441	Cross-Cultural Communication	3

**Total Credit Hours: 12**

### **GERONTOLOGY CERTIFICATE**

This interdisciplinary certificate is designed for currently enrolled students and continuing education students to meet the growing demand for professionals who understand the opportunities, concerns, and needs associated with our aging population. The program will provide students with a foundation in the biopsychosocial aspects of aging, the difference between aging and disease, and the consequences of ageism. The Gerontology Certificate prepares students to understand the social and economic promise of an aging population to meet the diverse needs of older adults in our state in medical and health services, social and community services, and business.

The Gerontology Certificate can prepare students for work in nonprofit organizations, for-profit social service companies, government agencies, and offices in health care facilities, particularly those serving older adults.

All courses must be completed with a grade of C- or better. Up to 12 credits from the Gerontology Certificate may be applied toward the minor in gerontology with permission of the program coordinator. Courses may be double counted as per university guidelines.

Applicants for the Gerontology Certificate Program can complete the admission process online on the CCSU Undergraduate Application section. Current CCSU students can add the certificate with permission from the Gerontology Program Coordinator using the Undergraduate Change of Major form.

Admission Policy:

Applicants for the Gerontology Certificate Program must complete the online application using the CCSU application portal (not the common application) on the University Office of Admissions website.

Required items:

- Submit an online application form that is on the Admissions Office webpage
- High school transcripts • College transcripts
- Non-refundable application fee

Admission to the Gerontology Certificate program is separate from bachelor's degree programs. Students can apply to the Gerontology Certificate program using the above criteria. They can then use the reactivation form to

apply to the University if they wish to pursue a bachelor's degree.

**REQUIREMENTS (12 CREDITS)**

**Required Course (3 credits)**

GERO 101 Introduction to Gerontology 3

**Electives (9 credits; no more than 2 courses from a single designator)**

EXS 215 Physiological Aspects of the Human Performance of the Aging 3  
 GERO 491 Independent Reading and Research in Gerontology 1-3  
 GERO 495 Internship in Gerontology 4  
 GERO 498 Special Topics in Gerontology 3  
 NRSE 270 Gerontological Nursing 3  
 PSY 241 Introduction to Health Psychology 3  
 PSY 364 Adult Development & Aging 3  
 PSY 380 Psychology of Dying and Death 3  
 SOC 340 Aging in American Society 4  
 SOC 440 Death and Dying: Sociological Implications 4  
 SOC 441 Sociology of the Aging Body 4  
 SOC 461 Intimacy and Aging 4  
 461/WGSS 461

**Total Credit Hours: 12**

**RACIAL JUSTICE CERTIFICATE**

The interdisciplinary Certificate in Racial Justice is designed to educate students about such concepts as anti-racism, advocacy, white privilege, and institutionalized racism in the United States. The anti-racist education will expand an understanding of systemic racism in the United States, educating citizens and students about how to advocate for and begin to repair social, cultural, economic, and legal inequalities that affect our neighborhoods and our nation.

Completing this certificate will allow professionals in fields such as education, nursing, social work, business and management, political reform, and criminal justice, to holistically serve various cultural groups with an understanding and appreciation of the social, political, and racial contexts of their lives.

All courses must be completed with a grade of C- or better.

**Admission Policy:**

Online application through the University Office of Admissions In-state tuition process remains the same.

There is no common application or CollegeNET application.

Required items:

- Submit an online application form that is on the Admissions Office webpage
- High school transcripts
- College transcripts
- Non-refundable application fee

Admission to the Racial Justice Certificate program is separate from the BA degrees. Students can apply to the Racial Justice Certificate program using the above criteria. They can then use the reactivation form to apply to the University if they wish to pursue a bachelor's degree.

**REQUIREMENTS (15 CREDITS)**

**Required Course (3 credits)**

RJ 200 Studies in Racial Justice 3

**Electives (12 credits; no more than 2 courses from a single designator)**

AAPI 110 Introduction to Asian American and Pacific Islander Studies 3  
 AAPI 202/CRM 202 Prejudice, Harassment, and Bias Crime in the 21st Century 3  
 AAPI 270 Topics in Asian American and Pacific Islander Studies 3  
 AAPI 370 Advanced topics in Asian American and Pacific Islander Studies 3  
 AAPI 470 Seminar in Asian American and Pacific Islander Studies 3  
 AFAM 110 Introduction to African-American Studies 3  
 AFAM 111/PS 111 Race and Ethnicity in US and Global Politics 3  
 AFAM 200/ANTH 200 Dimensions of Diversity and Inequality 3  
 AFAM 250 Topics in African American Studies 3  
 AFAM 469 African Americans in the 20th-Century 3  
 ANTH 200/AFAM 200 Dimensions of Diversity and Inequality 3  
 ANTH 352 Ethnicity and Ethnic Identity 3  
 ANTH 401 City Life & Culture 4  
 CEN 200 Introduction to Community and Civic Engagement 3  
 CEN 201 Practicum in Community and Civic 1

	Engagement		322/LTN 322		
CRM 245	Diversity and Criminal Justice	3	SOC 351	Oppression and Liberation	4
CRM 302	Hate Crimes	3	SOC 406	Women of Color in the U.S.	4
CRM 326	Racism and Bias in Criminal Justice Settings	3	SOC 427	American Poverty and Social Welfare	4
DAN 230	Afro-Caribbean Dance and Culture	2			
ENG 212/AFAM 212	African-American Literature	3			
ENG 347/LTN 347	Latino/a Literature	3			
HIST 319/LTN 319	Race, Ethnicity and Migration in the U.S.	3			
HIST 460	African Enslavement in the Americas	3			
IS 245	Puerto Rico	3			
LTN 110	Introduction to Latino Studies	3			
LTN 270	Topics in Latino and Puerto Rican Studies	3			
LTN 309/SOC 309	U.S. Immigration	4			
LTN 319/HIST 319	Race, Ethnicity, and Migration in the U.S.	3			
LTN 322/SOC 322	Race and Ethnic Relations	3			
MUS 113	History of Jazz	3			
PHIL 244	Introduction to the Philosophy of Social Justice	3			
PHIL 360/AFAM 360	African-American Philosophy	3			
PS 111/AFAM 111	Race and Ethnicity in US and Global Politics	3			
PS 332	Civil Liberties	3			
PSY 430	Intergroup Relations	3			
REL 361/AFAM 361	African-American Religion	3			
RJ 371/HIST 371/SOC 371	Race and Immigration in CT	4			
RJ 400	Internship in Racial Justice	1-3			
SOC 212	Race, Class, and Gender	3			
SOC 250/LTN 250	Latina Identity and Empowerment	3			
SOC 309/LTN 309	U.S. Immigration	4			
SOC	Race and Racism	4			

The following courses may count toward the Racial Justice Certificate with the permission of the Racial Justice Coordinator:

CRM 378 Current Topics in Criminal Justice

CRM 478 Current Topics in Criminal Justice

PHIL 344 Topics in Philosophy Social Justice

SOC 478 Current Topics in Sociology

**Total Credit Hours: 15**

### **SPANISH FOR HEALTH PROFESSIONALS CERTIFICATE**

The Department of World Languages, Literatures, and Cultures offers a Certificate in Spanish for Health Professionals, designed to allow students to specialize in Spanish for their specific field. Students will develop their oral proficiency and cultural literacy to serve Spanish-speaking patients as they study routine tasks related to health care. Students will learn medical terminology in Spanish and improve their understanding of Hispanic and Latinx cultures as they relate to the healthcare setting to develop their communication skills in the language. All courses taken in the certificate may be used by undergraduates toward Spanish majors or minors.

#### **Program Features**

- 15-credit program
- Classes offered on campus and online
- Taught via intercultural perspectives and communicative methods

#### **Admission Policy to the Certificate in Spanish for Health Professionals**

Prerequisite: SPAN 112 or equivalent proficiency. If the student has not taken SPAN 112, they must meet

with the chairperson of the Department of World Languages, Literatures, and Cultures to determine their proficiency level via a placement test.

The students must declare the Certificate using the appropriate form. Please contact the chair of the

Department of World Languages to get an approval signature and further information.

The certificate is open to students interested in the health professions.

**REQUIRED COURSES (15 CREDITS)**

SPAN 441	Cross-Cultural Communication	3
SPAN 129	Spanish for the Health Professions I	3
SPAN 130	Spanish for the Health Professions II	3
SPAN 229	Advanced Intermediate Spanish for Health Professionals	3
SPAN 404	English-Spanish Medical Translation	3

**Total Credit Hours: 15**

## UNDERGRADUATE TEACHER PREPARATION PROGRAMS

### ELEMENTARY EDUCATION (GRADES 1-6)

The teacher preparation program in elementary education (Grades 1-6) prepares beginning teachers to become highly knowledgeable about subject matter and pedagogy; and to be critically reflective, responsive, compassionate, and committed to meeting the learning needs of all children with diverse cultural, socioeconomic, and linguistic backgrounds.

#### PROGRAM REQUIREMENTS (120 CREDITS)

Students must choose a major designed for elementary education (33-39 credits). Majors include English, geography, history, mathematics, general science with a specialization in biology, and general science with a specialization in earth science. For specific major requirements see individual majors certifiable for elementary education.

#### Related Requirements (27 credits)

All of these courses, with the exception of PSY 361 and PSY 362, can be used to fulfill general education requirements.

HIST 161	American History to 1877 or	3
HIST 162	American History from 1877 to Present	3
PSY 136	Life-Span Development	3
SCI 111	Elementary Earth-Physical Sciences	3
BIO 211	Concepts in Biology	3
MATH 113	Structure of Mathematics I: Number Systems	3
MATH 213	Structure of Mathematics II: Probability & Geometry	3
PSY 361	Psychology of Early Childhood or	3
PSY 362	Child Psychology	3
EDEL 115	Fostering Positive School Climate through Aesthetic Education	3
EDEL 212	Foundations of Educating and Schooling in Elementary Education	3

Elementary Education candidates with a History major do not take HIST 161 or HIST 162.

#### Professional Education (40 credits)

Enrollment in the following courses requires acceptance to the professional program for teacher certification.

LLA 315	Comprehensive Reading	3
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EDEL 315	Instruction I Principles of Learning: Elementary Education	3
SPED 315	Introduction to Educating Learners with Exceptionalities	3
LLA 316	Comprehensive Reading Instruction II	3
EDT 210	Introduction to Educational Technology	1
EDEL 322	Effective Elementary Teaching I	3
EDEL 420	Effective Elementary Teaching II	3
EDT 415	Developing Instructional Materials	1
LLA 412	Literacy instruction in the Elementary School	3
MATH 412	Elementary Mathematical Methods	3
SCI 412	Elementary Science Methods	2
EDEL 415	Elementary Social Studies Methods	2
EDEL 430	Elementary Education Student Teaching	9
EDEL 431	Topic Seminar in Leadership and Learning Communities	1

#### Total Credit Hours: 120

The completion of a minor is not required.

### Elementary Education (Subjects)

#### ENGLISH, B.S. (CERTIFIABLE FOR ELEMENTARY EDUCATION)

A minor is not required with this major.

#### MAJOR REQUIREMENTS (39 CREDITS)

##### Major Core (21 credits)

ENG 205	Survey in British Literature: Middle Ages to the 18th Century	3
ENG 210	Survey of American Literature: Pre-Civil War	3
ENG 298	Introduction to Literary Studies	3
ENG 491	Children's Literature	3
ENG 492	Literature for Young Adults	3
LING 200	Introduction to Linguistics	3
LING 300	Language Acquisition	3
<b>3 credits from the following:</b>		
ENG 203	Survey of World Literature: Ancient to Early Modern	3
ENG 204	Survey of World Literature: 17th Century to the Present	3



ENG 206	Survey of British Literature: Romanticism to the Present	3
ENG 211	Survey of American Literature: Civil War to the Present	3

**Oral Performance (3 credits)**

ENG 270	Dramatic Enactment or	3
ENG 274	Storytelling	3

**Choose a Composition Sequence (6 credits)**

**Expository:**

WRT 202	Intermediate Composition and	3
WRT 401	Advanced Composition or	3

**Fiction:**

WRT 265	Introduction to Creative Writing: A Survey of Forms and	3
WRT 371	Creative Writing: Fiction I	3

**Poetry:**

WRT 265	Introduction to Creative Writing: A Survey of Forms and	3
WRT 373	Creative Writing: Poetry I	3

**Creative Nonfiction:**

WRT 265	Introduction to Creative Writing: A Survey of Forms and	3
WRT 370	Creative Nonfiction I	3

**Journalism:**

JRN 200	Introduction to Journalism and either	3
JRN 380	Feature Writing or	3

one of the following with permission of  
instructor/program coordinator:

JRN 235	News Writing and Reporting I	3
JRN 381	Opinion Writing	3
JRN 418	Studies in Journalism	3

**Directed Electives: 6 credits**

Selected in consultation with an advisor, from the  
following: ENG 220, any 300-400 level British literature,  
American literature, World literature, Cinema Studies  
courses

**Total Credit Hours: 39**

See Elementary Education, B.S. for additional  
requirements and professional education requirements.

**GENERAL SCIENCE: SPECIALIZATION IN  
BIOLOGY OR EARTH SCIENCES, B.S.  
(CERTIFIABLE FOR ELEMENTARY EDUCATION)**

**REQUIREMENTS: 36 CREDITS**

For additional course requirements see the Elementary  
Education, B.S. Program requirements.

**General Science Core (10-11 credits)**

SCI 111	Elementary Earth-Physical Sciences	3
CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
PHYS 111	Introductory Physics I or	3
PHYS 121	General Physics I	4

**Biology Specialization (20-22 credits)**

**Biology Core**

BIO 121	General Biology I and	4
BIO 122	General Biology II and	4
BIO 200	Integrative Biology	3

**Biology Electives (at least 5 credits of 300 or 400 level  
BIO to reach 36 credits in the major)**

**Choose Earth Science Group A, B, or C (7-8 credits)**

**Group A**

ESCI 129	Meteorology: Earth's Weather	4
AST 113	The Cosmos	3

**Group B**

ESCI 121	The Dynamic Earth	3
ESCI 125	The Dynamic Earth Laboratory	1
ESCI 141	Earth and Life History	3
ESCI 145	Earth and Life History Laboratory	1

**Group C**

ESCI 131	Environmental Earth Science	3
ESCI 135	Environmental Earth Science Laboratory	1
ESCI 141	Earth and Life History	3
ESCI 145	Earth and Life History Laboratory	1

**EARTH SCIENCE SPECIALIZATION**

**Earth Science Group A (15-16 credits)**

ESCI 121	The Dynamic Earth and	3
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ESCI 125	The Dynamic Earth Laboratory or	1	<b>GEOGRAPHY SUBJECT MATTER REQUIREMENTS (33 CREDITS)</b>
ESCI 131	Environmental Earth Science and	3	
ESCI 135	Environmental Earth Science Laboratory	1	
ESCI 141	Earth and Life History	3	
ESCI 145	Earth and Life History Laboratory	1	
AST 113	The Cosmos	3	
ESCI 129	Meteorology: Earth's Weather	4	
<b>Earth Science Group B (16 credits)</b>			
ESCI 129	Meteorology: Earth's Weather	4	
AST 208	Planetary Astronomy	4	
ESCI 141	Earth and Life History	3	
ESCI 145	Earth and Life History Laboratory	1	
ESCI 121	The Dynamic Earth and	3	
ESCI 125	The Dynamic Earth Laboratory or	1	
ESCI 131	Environmental Earth Science and	3	
ESCI 135	Environmental Earth Science Laboratory	1	
<b>Choose Biology Group A or B (6-8 credits)</b>			
<b>Group A (6 credits)</b>			
BIO 211	Concepts in Biology	3	
BIO 111	Introductory Biology or	3	
BIO 132	Introductory Ecology	3	
<b>Group B (8 credits)</b>			
BIO 121	General Biology I	4	
BIO 122	General Biology II	4	
<b>GSCI/AST Electives at the 200-400 level to reach 36 credits</b>			
<b>Total Credit Hours: 36</b>			
<b>GEOGRAPHY, B.S. (CERTIFIABLE FOR ELEMENTARY EDUCATION)</b>			
A minor is not required with this major.			
This major is designed for students who wish to teach at the Elementary School level (Grades 1-6). The program includes a pre-professional program in which students declare a major content area in preparation for the professional education program. The geography major content area provides students with a holistic, liberal education that integrates the study of human activity and the natural environment.			
<b>Major Core</b>			
Complete GEOG 110 or GEOG 120 (3 credits)			
GEOG 110	Introduction to Geography or	3	
GEOG 120	World Regional Geography	3	
<b>Major Core</b>			
Complete GEOG 130 (3 credits)			
GEOG 130	Introduction to Geographic Information Science	3	
<b>Major Core</b>			
Complete one course (3 credits) from: GEOG 270, 272, 275, 374, 433, 472, 473, 475			
GEOG 270	Geography of Hazards or	3	
GEOG 272	Physical Geography or	3	
GEOG 275/SUST 275	Soils and Vegetation Sustainability or	3	
GEOG 374	Climatology or	3	
GEOG 433	Issues in Environmental Protection or	3	
GEOG 472	Topics in Physical Geography or	3	
GEOG 473	Geography of Natural Resources or	3	
GEOG 475/SUST 475	Energy Resources and Climate Change	3	
<b>Major Core</b>			
Complete one course (3 credits) from: GEOG 220, 223, 244, 290, 291, 333, 451, 453, 454, 455, 470, 471			
GEOG 220	Human Geography or	3	
GEOG 244	Economic Geography or	3	
GEOG 290	Geography of Tourism or	3	
GEOG 291	National Parks and World Heritage Sites or	3	
GEOG 333	Political Geography or	3	
GEOG 451	Tourism Development in Southern New England	3	

	or		
GEOG 453	Recreation and Resort Planning	3	
	or		
GEOG 454	Geography of Tourism Marketing	3	
	or		
GEOG 455	New Directions in Tourism	3	
	or		
GEOG 470	Geography of Health & Disease	3	
	or		
GEOG 471	Topics in Human Geography	3	

**Major Core**

Complete one course (3 credits) from: GEOG 241, 439, 440, 441, 445, 450, 483

GEOG 241	Introduction to Planning	3	
	or		
GEOG 439	Urban Geography	3	
	or		
GEOG 441	Community & Regional Planning	3	
	or		
GEOG 445	Environmental Planning	3	
	or		
GEOG 450	Tourism Planning	3	
	or		
GEOG 483	Topics in Planning	3	

**Major Core**

Complete one course (3 credits) from: GEOG 266, 276, 378, 442

GEOG 266	Introduction to Remote Sensing	3	
	or		
GEOG 276	Elementary Cartography	3	
	or		
GEOG 378	Geographic Information Systems	3	
	or		
GEOG 442	Field Methods in Geography	3	

**Major Core**

Complete TWO courses (6 credits) from: GEOG 330, 434, 435, 436, 437, 446, 448, 452, 459

GEOG 330	United States and Canada	3	
	or		
GEOG 434/LAS 434	Mexico, Central America, and the Caribbean	3	
	or		
GEOG 435	Japan and Korea	3	
	or		
GEOG 436/LAS 436	South America	3	
	or		
GEOG 437	China	3	
	or		

GEOG 446	Sub-Saharan Africa	3	
	or		
GEOG 448	Russia and Neighboring Regions	3	
	or		
GEOG 459	Field Studies in Regional Geography	3-6	

GEOG 452 is not listed in this submission program but exists and counts toward this section requirements.

**Major Electives**

Complete 3 credits of GEOG electives at any level and complete 6 credits of GEOG electives at 400-level.

Geography electives	3
Geography electives	6

6 credits of Geography electives must be at 400-level

**Total Credit Hours: 120**

**HISTORY, B.S. (CERTIFIABLE FOR ELEMENTARY EDUCATION)**

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A minor is not required with this major.

**REQUIREMENTS: 36 CREDITS**

Students must complete a minimum of 9 credits at the 400 level. This can include HIST 490.

**Core Courses: (9 credits)**

HIST 101	History Matters	1
HIST 301	The Historical Imagination	4
HIST 490	Senior Seminar	4

(HIST 490 to be taken after 24 credits of history courses, including HIST 301 and 6 credits of history courses at the 400-level)

**European History Courses: (3 credits above the 100 level)**

**Non-western History courses: (3 credits above the 100 level)**

**US History Courses: (9 credits above the 100 level)**

HIST 401: U.S. History for Teachers

**History Electives: (6 credits at 100 level)**

HIST 121 and 122 strongly encouraged

**Related Requirements (6 credits)**

PS 110	American Government & Politics	3
GEOG 110	Introduction to Geography	3

**Total Credit Hours: 36**

For additional course requirements see the Elementary Education, B.S. Program requirements.

### **MATHEMATICS, B.S. (CERTIFIABLE FOR ELEMENTARY TEACHING)**

A minor is not required with this major.

**REQUIREMENTS: 33 CREDITS**

For additional course requirements see the Elementary Education, B.S. Program requirements.

**Core Requirements (21-22 credits)**

MATH 113	Structure of Mathematics I: Number Systems	3
MATH 213	Structure of Mathematics II: Probability & Geometry	3
MATH 305	Structure of Mathematics III: Number Patterns	3
MATH 306	Structure of Mathematics IV: Development of Geometric Ideas	3
MATH 409	Mathematics through Computers	3
STAT 215	Statistics for Behavioral Sciences I	3
MATH 125	Applied Calculus	3
	or	
MATH 152	Calculus I	4

**Subtotal: 21-22****Directed Electives ( 11-12 credits)**

MATH 110	Finite Mathematics	3
MATH 115	Trigonometry	3
MATH 116	Pre-Calculus Mathematics	3
MATH 119	Pre-Calculus with Trigonometry	4
MATH 120	Problem Solving I	1
MATH 211	Clinical Experience in Mathematics Education I	1
MATH 218	Discrete Mathematics	4
MATH 221	Calculus II	4
MATH 307	Topics in Elementary Mathematics	1-3
MATH 344	Mathematics and Diverse Cultures	3
STAT 216	Statistics for Behavioral Sciences II	3

**Total Credit Hours: 33**

Note: Majors should consult with the School of Education and Professional Studies concerning additional education requirements.

**Secondary Education (Grades 7-12)**

### **BIOLOGY, B.S. (CERTIFIABLE FOR SECONDARY TEACHING)**

A minor is not required with this major.

**MAJOR REQUIREMENTS (31-35 CREDITS)****Biology Core (15 credits)**

BIO 121	General Biology I	4
BIO 122	General Biology II	4
BIO 200	Integrative Biology	3
BIO 290	Biology Research Experience I	3
BIO 390	Biology Research Experience II	1

**Animal Diversity Elective (4 credits)**

BIO 322	Vertebrate Zoology	4
	or	
BIO 420	Ornithology	4
	or	
BIO 421	Marine Invertebrate Biology	4
	or	
BIO 469	Entomology	4

**Plant Diversity Elective (3-4 credits)**

BIO 326	Mushrooms, Mosses, & More	4
	or	
BIO 327	Vascular Plants	4
	or	
BIO 425/BIO 516	Biology of Marine and Freshwater Algae	4
	or	
BIO 444	Plant Taxonomy	3

**Genetics/Microbiology Elective (3-4 credits)**

BIO 315	Microbial Ecology	4
	or	
BMS 306	Genetics	3

**Physiology Elective (3-4 credits)**

BIO 318/BMS 318	Anatomy and Physiology I	4
	or	
BIO 319/BMS 319	Anatomy and Physiology II	4
	or	
BIO 331	Neurobiology	4
	or	
BIO 412/BMS 412	Human Physiology	3
	or	

BIO 449	Plant Physiology	3
<b>Ecology/Evolution Elective (3-4 credits)</b>		
BIO 305	Ecology	4
	or	
BIO 434	Ecology of Inland Waters	4
	or	
BIO 440	Evolution	3
	or	
BIO 470	Field Studies in Biology	1 TO 4
	or	
BIO 471	International Field Studies in Biology	1 TO 4
	or	
BIO 480	Animal Behavior	4

At least one course in BIO or BMS must be at the 400-level. Please note that upper-level BMS courses require BMS 201, which can count as an elective in the biology major.

**Science Related Requirements (21 credits)**

CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 200	Foundations of Analytical Chemistry	3
	or	
CHEM 260	Foundations of Inorganic Chemistry	3
CHEM 210	Organic Chemistry I - Foundations and	3
CHEM 211	Organic Chemistry I Laboratory - Foundations	1
PHYS 121	General Physics I	4
	or	
PHYS 125	University Physics I	4
SCI 400	Nature of Science and Technology	3
SCI 414	Interdisciplinary Science, Practices, and Pedagogy	3

**Math Requirement (4-6 credits)**

MATH 115	Trigonometry and	3
MATH 125	Applied Calculus	3
	or	
MATH 124	Applied Calculus with Trigonometry	4
	or	
MATH 152	Calculus I	4

**Related Requirements (9 credits)**

PSY 236	Life-Span Development	3
HIST 161	American History to 1877	3
	or	
HIST 162	American History from 1877 to Present	3
EDF 215	Education in a Multicultural Society	3

These courses may be used to fulfill general education requirements.

**Professional Education (27 credits)**

SPED 315	Introduction to Educating Learners with Exceptionalities	3
EDTE 316	Principles of Learning in Diverse Settings (Secondary)	4
LLA 440	Literacy instruction in the Secondary School	3
EDSC 425	Multicultural, Interdisciplinary Teaching at the Secondary Level	3
SCI 417	Science Methods in Secondary School	3
SCI 418	Fieldwork in Secondary Science Education	1
SCI 419	Student Teaching Seminar	1
EDSC 435	Secondary Education Student Teaching	9

**Total Credit Hours: 120**

This major is designed for students who wish to teach biology at the secondary level. The program includes consideration of all major concepts and areas of biology. Within some of the areas, students may select different courses to build on knowledge gained in their first and second years of study. Students are continuously encouraged to see connections in biological events from the standpoint of all sciences. The specialization also includes a professional education component. Because of the breadth of required courses, it is also possible for students in secondary education to enter a variety of other careers in research, health, and industry, as well as graduate study.

A student who majors in biology is not required to complete a minor but is urged to minor in one of the other laboratory sciences or general science.

**Portfolio Requirement**

All majors in the Department of Biology are required to complete a student portfolio. Minimally, the student portfolio must include a current resume, a current

Student Graduation Evaluation (available from the Department of Biology) or transcript, a narrative describing the student's goals for undergraduate education and graduate educational or career plans, and writing samples from one or more upper-level courses in the major. To fulfill the portfolio requirement in biology, the student portfolio must be reviewed with one or more faculty members in biology as a course requirement in BIO 200, as a required component of BIO 390, 391, 491, and all independent studies and internships, and prior to application for graduation, as evidenced by submission of a Portfolio Requirement Completed form (available from the Department of Biology and signed by the major advisor) to the biology chair.

### **CHEMISTRY, B.S. (CERTIFIABLE FOR SECONDARY TEACHING)**

A minor is not required with this major.

This program is designed for those students seeking state certification for teaching chemistry at the secondary level, and includes a student-teaching component in the senior year at an area school.

#### **CHEMISTRY MAJOR (31-32 CREDITS)**

##### **Chemistry Core (25 credits)**

CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 200	Foundations of Analytical Chemistry	3
CHEM 201	Foundations of Analytical Chemistry Laboratory	1
CHEM 210	Organic Chemistry I - Foundations	3
CHEM 211	Organic Chemistry I Laboratory - Foundations	1
CHEM 212	Organic Synthesis	3
CHEM 213	Organic Chemistry II Laboratory - Synthesis	1
CHEM 260	Foundations of Inorganic Chemistry	3
CHEM 316	Spectrometric Identification of Organic Compounds	3
CHEM 238	Introduction to Research	1-6
CHEM 332	Chemical Literature	1
CHEM 432	Chemistry Seminar	1

##### **Directed Electives (3 credits) from courses below**

CHEM 321	Physical Chemistry of Thermodynamics & Kinetics	3
CHEM 322	Physical Chemistry of Quantum & Statistical Mechanics	3

CHEM 320	Biophysical Chemistry	3
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##### **Directed Electives (3 to 4 credits) from course below**

CHEM 354	Foundations of Biochemistry	3
CHEM 402	Instrumental Methods in Analytical Chemistry	4
CHEM 406	Environmental Chemistry	3
CHEM 485	Topics in Chemistry	3

##### **Math and Science Related Requirements (18-19 credits)**

BIO 121	General Biology I	4
	or	
BMS 102	Introduction to Biomolecular Science	3
	and	
BMS 103	Introduction to Biomolecular Science Laboratory	1
	or	
ESCI 121	The Dynamic Earth	3
PHYS 121	General Physics I	4
	or	
PHYS 125	University Physics I	4
PHYS 122	General Physics II	4
	or	
PHYS 126	University Physics II	4
SCI 320	The Nature of Science and Technology	3
MATH 152	Calculus I	4

##### **Additional Courses (9 credits)**

PSY 236	Life-Span Development	3
HIST 161	American History to 1877	3
	or	
HIST 162	American History from 1877 to Present	3
EDF 215	Education in a Multicultural Society	3

These courses may be used to fulfill general education requirements.

##### **Professional Education (30 credits)**

SPED 315	Introduction to Educating Learners with Exceptionalities	3
EDTE 316	Principles of Learning in Diverse Settings (Secondary)	4
EDSC 425	Multicultural, Interdisciplinary Teaching at the Secondary Level	3
EDSC 435	Secondary Education Student Teaching	9
LLA 440	Literacy instruction in the Secondary School	3
SCI 414	Interdisciplinary Science, Practices, and Pedagogy	3
SCI 417	Science Methods in Secondary	3

	School	
SCI 418	Fieldwork in Secondary Science Education	1
SCI 419	Student Teaching Seminar	1

**Total Credit Hours: 120**

**EARTH SCIENCES, B.S. (CERTIFIABLE FOR SECONDARY TEACHING)**

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A minor is not required with this major.

**MAJOR REQUIREMENTS (31 CREDITS)**

**Earth Science Core (27-28 credits)**

ESCI 121	The Dynamic Earth or	3
ESCI 131	Environmental Earth Science	3
ESCI 125	The Dynamic Earth Laboratory or	1
ESCI 135	Environmental Earth Science Laboratory	1
ESCI 141	Earth and Life History	3
ESCI 145	Earth and Life History Laboratory	1
ESCI 129	Meteorology: Earth's Weather	4
AST 208	Planetary Astronomy	4
AST 209	Stellar and Galactic Astronomy	4

**In addition the following is required:**

AST 278 Observational Astronomy - 4 credits

Or

GSCI 290 Field Methods in Geology - 3 credits

and 3 to 4 credits of GSCI/AST electives at 300-level or above to reach 31 credits as approved by the faculty advisor.

**Science Related Requirements (22 credits)**

CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 260	Foundations of Inorganic Chemistry	3
CHEM 201	Foundations of Analytical Chemistry Laboratory	1
PHYS 121	General Physics I	4
PHYS 122	General Physics II	4
SCI 420	History and Nature of Science	3
SCI 414	Interdisciplinary Science, Practices, and Pedagogy	3

**Math Requirements (7 credits)**

STAT 104	Elementary Statistics	3
MATH 152	Calculus I	4

**Related Requirements**

HIST 161	American History to 1877 or	3
HIST 162	American History from 1877 to Present	3
PSY 236	Life-Span Development	3

EDF 215: This course may be double counted in general education, study area 3

**Professional Education (27 credits)**

EDTE 316	Principles of Learning in Diverse Settings (Secondary)	4
SPED 315	Introduction to Educating Learners with Exceptionalities	3
EDSC 425	Multicultural, Interdisciplinary Teaching at the Secondary Level	3
EDSC 435	Secondary Education Student Teaching	9
LLA 440	Literacy instruction in the Secondary School	3
SCI 417	Science Methods in Secondary School	3
SCI 418	Fieldwork in Secondary Science Education	1
SCI 419	Student Teaching Seminar	1

**Total Credit Hours: 120**

**ENGLISH, B.S. (CERTIFIABLE FOR SECONDARY TEACHING)**

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A minor is not required with this major.

**ENGLISH MAJOR REQUIREMENTS (54 CREDITS)**

**Core Requirements (24 credits)**

CINE 201	The Language of Film	3
LING 200	Introduction to Linguistics	3
LING 300	Language Acquisition	3
ENG 203	Survey of World Literature: Ancient to Early Modern or	3
ENG 204	Survey of World Literature: 17th Century to the Present	3
ENG 205	Survey in British Literature: Middle Ages to the 18th Century	3
ENG 210	Survey of American Literature: Pre-Civil War	3

ENG 211	Survey of American Literature: Civil War to the Present	3	ENG 421	Field Work in Secondary English Education	1
ENG 298	Introduction to Literary Studies	3	EDSC 435	Secondary Education Student Teaching	9
<b>Upper-Level Courses (18 credits)</b>					
ENG 220	Shakespeare	3	ENG 435	Student Teaching Seminar	1
ENG 461	Shakespeare: Major Comedies	3	<b>Additional Requirements (9 credits)</b>		
ENG 462	Shakespeare: Major Tragedies and	3	HIST 161	American History to 1877	3
ENG 492	Literature for Young Adults	3	or		
ENG 398	Topics in Literary Theory and Research	3	HIST 162	American History from 1877 to Present	3
	(On American Lit)		PSY 236	Life-Span Development	3
	And one additional 300-400 level British Literature course (3 cr)		EDF 215	Education in a Multicultural Society	3
	or		<b>Total Credit Hours: 120</b>		
ENG 398	Topics in Literary Theory and Research	3	All studies courses (ENG 348, ENG 358, ENG 388, ENG 448, ENG 449, ENG 458, and ENG 488) may be taken twice under different topics. Further substitutions within area requirements are permitted only with prior approval of the advisor and the department chair.		
	(On British Lit)		<b>FRENCH, B.S. (CERTIFIABLE FOR SECONDARY TEACHING)</b>		
	And one additional 300-400 level American Literature course (3 cr)		<hr/>		
	And one additional 300-400 level American Literature course (3 cr)				

ADD NEW COURSE ABOVE: One 300-400 level World Literature course (3 cr)

At least one literature course other than ENG 492 must be at the 400 level

**Pedagogy (12 credits)**

A minimum grade of C is required in ENG 402, ENG 406, ENG 407, and ENG 408.

ENG 402	Advanced Composition & Technology in the English Classroom	3	FR 125	Intermediate French I	3
ENG 406	Teaching the Mechanics of Writing	3	FR 126	Intermediate French II	3
ENG 407	Literature for Teachers	3	FR 225	Intermediate French III	3
ENG 408	Teaching Writing in Middle and Secondary Schools	3	FR 226	Intermediate French IV	3
			FR 304	Introduction to French Literature	3

**Professional Education (27 credits)**

EDTE 316	Principles of Learning in Diverse Settings (Secondary)	4	FR 305	Introduction to Francophone Literature	3
SPED 315	Introduction to Educating Learners with Exceptionalities	3	FR 315	Aspects of Francophone Cultures	3
EDSC 425	Multicultural, Interdisciplinary Teaching at the Secondary Level	3	or		
LLA 440	Literacy instruction in the Secondary School	3	FR 316	Contemporary France	3
ENG 420	Teaching English in Secondary Schools	3	FR 335	Advanced French for Oral Practice	3
			FR 336	Advanced French Composition	3

A minor is not required with this major.

**FRENCH (36 CREDITS)**

**Major Core (24 credits)**

FR 125	Intermediate French I	3
FR 126	Intermediate French II	3
FR 225	Intermediate French III	3
FR 226	Intermediate French IV	3
FR 304	Introduction to French Literature	3
	or	
FR 305	Introduction to Francophone Literature	3
FR 315	Aspects of Francophone Cultures	3
	or	
FR 316	Contemporary France	3
FR 335	Advanced French for Oral Practice	3
FR 336	Advanced French Composition	3

**Major Directed Electives (12 credits)**

Directed electives 12

**Related Requirements (9 credits)**

These courses may also be used to fulfill general education requirements.

HIST 161	American History to 1877	3
	or	
HIST 162	American History from 1877 to Present	3
PSY 236	Life-Span Development	3



EDF 215 Education in a Multicultural Society 3 credits

**Professional Education (34 credits)**

SPED 315	Introduction to Educating Learners with Exceptionalities	3
EDTE 316	Principles of Learning in Diverse Settings (Secondary)	4
EDT 315	Educational Technology in the Secondary School Classroom	1
LLA 440	Literacy instruction in the Secondary School	3
EDSC 425	Multicultural, Interdisciplinary Teaching at the Secondary Level	3
EDSC 435	Secondary Education Student Teaching	9
WL 428	Methods and Materials for Teaching World Languages at Elementary School Level	3
WL 440	Student Teaching Seminar in Modern Languages	1
WL 490	Teaching World Languages II: Acquisition in Young Children for Teachers of World Languages	3

EDF 215 Education In a Multicultural Society 3 credits

This course may be used to fulfill General Education requirements.

**Total Credit Hours: 120**

All courses require admission to the Professional Program and a grade of C or better

**HISTORY, B.S. (CERTIFIABLE FOR SECONDARY TEACHING OF HISTORY AND SOCIAL STUDIES)**

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A minor is not required with this major.

**REQUIREMENTS**

15 credits must be at the 400 level. 490 is included in this.

**History Core (9 credits)**

HIST 101	History Matters	1
HIST 301	The Historical Imagination	4
HIST 490	Senior Seminar	4

**Non-Western History (6 credits above the 100-level; 3 credits must appear on the state-approved non-western history course list)**

**European History (6 credits above the 100-level)**

**U.S. History (12 credits above the 100 level)**

HIST 401	U.S. History for Teachers	3
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**History Electives (3 credits at 100 level)**

HIST 121 strongly recommended

**Modern World History**

HIST 410	World History for Teachers	3
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**Social Science**

PS 110	American Government & Politics	3
ECON 200	Principles of Macroeconomics	3
ECON 201	Principles of Microeconomics	3
GEOG 110	Introduction to Geography	3

ECON 200 and ECON 201 should be taken for General Education in Study Area II

**Professional Program Courses ( 28 credits)**

SPED 315	Introduction to Educating Learners with Exceptionalities	3
EDTE 316	Principles of Learning in Diverse Settings (Secondary)	4
EDT 315	Educational Technology in the Secondary School Classroom	1
LLA 440	Literacy instruction in the Secondary School	3
EDSC 425	Multicultural, Interdisciplinary Teaching at the Secondary Level	3
SSCI 415	Social Studies Methods at the Secondary Level	3
SSCI 416	Fieldwork in Secondary Social Studies Education	1
EDSC 435	Secondary Education Student Teaching	9
SSCI 421	Social Studies Student Teaching Seminar	1

**Additional Requirements (6 credits)**

EDF 215	Education in a Multicultural Society	3
PSY 136	Life-Span Development	3

**Total Credit Hours: 51**

**ITALIAN, B.S. (CERTIFIABLE FOR SECONDARY TEACHING)**

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A minor is not required with this major.

**ITALIAN (36 CREDITS)**

**Major Core (24 credits)**

ITAL 125	Intermediate Italian I	3
ITAL 126	Intermediate Italian II	3
ITAL 225	Intermediate Italian III	3
ITAL 226	Intermediate Italian IV	3
ITAL 304	Introduction to Italian Literature I or	3
ITAL 305	Introduction to Italian Literature II	3
ITAL 315	Italian Civilization to 1861 or	3
ITAL 316	Italian Civilization from 1861 to the	3

	Present	
ITAL 335	Advanced Italian for Oral Expression	3

ITAL 336	Advanced Italian Composition	3
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**Major Directed Electives (12 credits)**

	Directed electives	12
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**Related Requirements (9 credits)**

These courses may also be used to fulfill general education requirements.

HIST 161	American History to 1877 or	3
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HIST 162	American History from 1877 to Present	3
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PSY 236	Life-Span Development	3
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EDF 215 Education in a Multicultural Society 3 credits

**Professional Education (34 credits)**

SPED 315	Introduction to Educating Learners with Exceptionalities	3
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EDTE 316	Principles of Learning in Diverse Settings (Secondary)	4
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EDT 315	Educational Technology in the Secondary School Classroom	1
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LLA 440	Literacy instruction in the Secondary School	3
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EDSC 425	Multicultural, Interdisciplinary Teaching at the Secondary Level	3
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EDSC 435	Secondary Education Student Teaching	9
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WL 428	Methods and Materials for Teaching World Languages at Elementary School Level	3
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WL 440	Student Teaching Seminar in Modern Languages	1
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WL 490	Teaching World Languages II: Acquisition in Young Children for Teachers of World Languages	3
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EDF 215 Education In a Multicultural Society 3 credits

These courses may be used to fulfill General Education requirements.

**Total Credit Hours: 120**

All courses require admission to the Professional Program and a grade of C or better.

For students with advanced preparation, appropriate substitutions will be made.

**MATHEMATICS, B.S. (CERTIFIABLE FOR SECONDARY TEACHING)**

A minor is not required with this major.

**REQUIREMENTS****Required Courses**

MATH 120	Problem Solving I	1
MATH 152	Calculus I	4
MATH 211	Clinical Experience in Mathematics Education I	1
MATH 218	Discrete Mathematics	4
MATH 220	Problem Solving II	1
MATH 221	Calculus II	4
MATH 228	Introduction to Linear Algebra	4
MATH 313	Number Systems from an Advanced Viewpoint	3
MATH 320	Problem Solving III	1
MATH 327	Curriculum & Technology in Secondary Mathematics I	3
MATH 328	Curriculum & Technology in Secondary Mathematics II	3
MATH 366	Introduction to Abstract Algebra	4
MATH 377	Introduction to Real Analysis	4
MATH 383	College Geometry	3
STAT 314	Introductory Statistics for Secondary Teachers	3

**and 5 additional credits from:**

MATH 222	Calculus III	4
MATH 311	Clinical Experience in Mathematics Education II	1
MATH 344	Mathematics and Diverse Cultures	3
MATH 355	Introduction to Differential Equations with Applications	4
MATH 411	Clinical Experience in Mathematics Education III	1
MATH 421	History of Mathematics	3
MATH 422	Introduction to Mathematical Software	1
MATH 440	Selected Topics in Mathematics	1-3
MATH 468	Symbolic Logic	3
MATH 469	Number Theory	3
MATH 477	Numerical Analysis	3
MATH 491	Advanced Vector Calculus	3
STAT 315	Mathematical Statistics I	3
STAT 416	Mathematical Statistics II	3
STAT 453	Applied Statistical Inference	3
STAT 455	Experimental Design	3
STAT 456	Statistical Computation	3
STAT 465	Nonparametric Statistics	3

**Related Requirements:(11 credits)****either**

CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1

CHEM 200	Foundations of Analytical Chemistry	3
CHEM 201	Foundations of Analytical Chemistry Laboratory or	1
PHYS 125	University Physics I	4
PHYS 126	University Physics II and	4
<b>either1</b>		
CS 151	Computer Science I or	3
CS 213	Applications of Computing I	3

**Professional Education (29 credits)**

SPED 315	Introduction to Educating Learners with Exceptionalities	3
EDTE 316	Principles of Learning in Diverse Settings (Secondary)	4
LLA 440	Literacy instruction in the Secondary School	3
EDSC 425	Multicultural, Interdisciplinary Teaching at the Secondary Level	3
EDSC 435	Secondary Education Student Teaching	9
MATH 414	Teaching Mathematics in the Middle School	3
MATH 415	Teaching Mathematics in the High School	3
MATH 426	Student Teaching Seminar	1

MATH 414: taken concurrently with EDTE 316

MATH 415: taken concurrently with EDSC 425

MATH 426: taken concurrently with EDSC 435

**Additional Requirements: (9 credits)**

HIST 161	American History to 1877 or	3
HIST 162	American History from 1877 to Present	3
PSY 136	Life-Span Development	3

EDF 215 Education in a Multicultural Society 3 credits

**Total Credit Hours: 120**

**PHYSICS, B.S. (CERTIFIABLE FOR SECONDARY TEACHING)**

A minor is not required with this major.

**PHYSIC MAJOR (33 CREDITS)**

**Major Requirements**

PHYS 125	University Physics I	4
PHYS 126	University Physics II	4

PHYS 220	Mechanics I	3
PHYS 250	Intermediate Lab I	1
PHYS 305	Foundations of Electricity and Magnetism	3
PHYS 320	Heat and Thermodynamics	3
PHYS 325	Optics	4
PHYS 331	Electronics I	3
PHYS 350	Intermediate Lab II	1
PHYS 425	Modern Physics	3
PHYS 450	Advanced Laboratory Techniques	1
PHYS 470	Quantum Mechanics I	3

**Math & Science Relate Requirements ( 27 credits)**

MATH 152 and MATH 221 may also be used to fulfill general education requirements in Study Area II.

CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 260	Foundations of Inorganic Chemistry	3
CHEM 201	Foundations of Analytical Chemistry Laboratory	1
MATH 152	Calculus I	4
MATH 221	Calculus II	4
MATH 222	Calculus III	4
SCI 420	History and Nature of Science	3
SCI 414	Interdisciplinary Science, Practices, and Pedagogy	3

**Additional Requirements (9 credits)**

These courses may also be used to fulfill general education requirements.

HIST 161	American History to 1877 or	3
HIST 162	American History from 1877 to Present	3
PSY 236	Life-Span Development	3

EDF 215 Education in a Multicultural Society 3 credits

**Professional Education (27 credits)**

EDTE 316	Principles of Learning in Diverse Settings (Secondary)	4
SPED 315	Introduction to Educating Learners with Exceptionalities	3
LLA 440	Literacy instruction in the Secondary School	3
SCI 417	Science Methods in Secondary School	3
EDSC 425	Multicultural, Interdisciplinary Teaching at the Secondary Level	3
SCI 419	Student Teaching Seminar	1
EDSC 435	Secondary Education Student Teaching	9

SCI 418 Fieldwork in Secondary Science Education 1

**Total Credit Hours: 120**

### **SPANISH, B.S. (CERTIFIABLE FOR SECONDARY TEACHING)**

A minor is not required with this major.

#### **SPANISH (36 CREDITS)**

##### **Major Core. For non-heritage speakers:**

SPAN 125 Intermediate Spanish I and 3  
 SPAN 126 Intermediate Spanish II 3  
 or  
 SPAN 128 Intensive Intermediate Spanish I 6  
 SPAN 225 Intermediate Spanish III 3  
 SPAN 226 Intermediate Spanish IV and 3  
 SPAN 335 Advanced Spanish Composition and Conversation 3

##### **For heritage speakers:**

SPAN 190 Language for Heritage Speakers of Spanish I 3  
 SPAN 191 Language for Heritage Speakers of Spanish II 3  
 SPAN 290 Hispanic Culture for Heritage Speakers of Spanish I 3  
 SPAN 291 Hispanic Culture for Heritage Speakers of Spanish II and 3  
 SPAN 335 Advanced Spanish Composition and Conversation 3

##### **Spanish and Spanish-American Literature and Cultures**

SPAN 300 Literary Analysis 3  
 SPAN 304 Introduction to Spanish Literature I or 3  
 SPAN 305 Introduction to Spanish Literature II 3  
 SPAN 315 Spanish Civilization 3  
 SPAN Latin American Civilization 3  
 316/LAS 316  
 SPAN Introduction to Spanish American Literature I or 3  
 375/LAS 375  
 or  
 SPAN Spanish American Literature II 3  
 376/LAS 376

##### **Related Requirements (9 credits)**

HIST 161 American History to 1877 or 3

HIST 162 American History from 1877 to Present 3

PSY 236 Life-Span Development 3

EDF 215 Education in a Multicultural Society 3

##### **Professional Education (34 credits)**

SPED 315 Introduction to Educating Learners with Exceptionalities 3

EDTE 316 Principles of Learning in Diverse Settings (Secondary) 4

EDT 315 Educational Technology in the Secondary School Classroom 1

LLA 440 Literacy instruction in the Secondary School 3

EDSC 425 Multicultural, Interdisciplinary Teaching at the Secondary Level 3

EDSC 435 Secondary Education Student Teaching 9

WL 428 Methods and Materials for Teaching World Languages at Elementary School Level 3

WL 425 Field Work in World Language Education 1

WL 429 Seminar in Modern Language Teaching Methods 3

WL 440 Student Teaching Seminar in Modern Languages 1

WL 490 Teaching World Languages II: Acquisition in Young Children for Teachers of World Languages 3

##### **Total Credit Hours: 120**

For students with advanced preparation, appropriate substitutions will be made.

##### **Specialization in Inter-University Spanish Language and Hispanic Cultures**

Students must complete 12 credits at one of our Spanish-speaking partner institutions abroad during one semester. The 12 credits may be taken in language, culture and/or literature as appropriate to the student's level of proficiency and upon recommendation of student's academic advisor at CCSU. These credits may apply to the core requirements of the major.

Note: Students of this specialization are strongly encouraged to complete their study abroad component during their sophomore year.

## All Level Subjects (PK-12)

### ART EDUCATION, B.S. (CERTIFIABLE FOR PK-12 TEACHING)

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A minor is not required with this major.

The philosophy of the Department of Art's Art Education program is to prepare well-educated and competent practitioners for teaching positions in the school districts of the capital region and the state of Connecticut. The B.S. in Art Education focuses on the development of those art teaching skills that will enable graduates to plan and implement an effective art program at the elementary, middle, and/or senior high school level.

#### ART EDUCATION MAJOR REQUIREMENTS (45 CREDITS)

Art 112 and Art 113 are double counted in Study Area I.

##### Art Education Core (36 credits)

ART 112	History of Art I	3
ART 113	History of Art II	3
ART 120	Design I	3
ART 124	Three-Dimensional Design	3
ART 130	Drawing I	3
ART 230	Drawing II	3
ART 240	Printmaking I	3
ART 252	Painting I	3
ART 260	Ceramics I	3
ART 261	Sculpture I	3
ART 263	Crafts I	3

and  
one additional three-credit art history course

##### Pre-Professional Program (6 credits)

ART 301	Art Education Theory and Practice I	3
EDTE 314	Applying Learning Theories in Diverse Settings (K-12 Programs)	3

EDF 215: Education in a Multicultural Society (3 credits) may be used to fulfill General Education Requirements.

##### Professional Education Programs (30 credits)

ART 302	Pre-Practicum in Art Education	1
ART 303	Practicum in Art Education I	2
ART 400	Art Education Theory and Practice II	3
ART 403	Art Education and Technology	3
EDSC 425	Multicultural, Interdisciplinary Teaching at the Secondary Level	3
SPED 315	Introduction to Educating Learners with Exceptionalities	3

ART 402	Practicum in Art Education II	1
ART 401	Student Teaching Seminar - Art	1
ART 491	Aesthetic and Critical Dialogue About Art	3
EDSC 428	Student Teaching - Elementary Art	5
EDSC 429	Student Teaching - Secondary Art	5

These courses require prior acceptance to the Professional Program for Teacher Certification.

##### Studio Specialization Area (9 credits)

9 credits in one media area are required; 3 credits from the required studio core can be used as a beginning studio specialization course

##### Directed Electives (3 credits)

3 credits, as necessary to meet program requirements, chosen in consultation with advisor

##### Related Requirements (9 credits)

HIST 161	American History to 1877 or	3
HIST 162	American History from 1877 to Present	3
PSY 236	Life-Span Development	3

EDF 215 Education in a Multicultural Society (3 credits)

These courses may be used to fulfill General Education requirements.

##### Total Credit Hours: 45

Students interested in art education should also read "Professional Program for Teacher Certification" in the School of Education and Professional Studies section on page 83 of this catalog.

A portfolio review is required of all BS in art education majors.

##### Portfolio Requirement

All art majors must submit a portfolio of works for consideration by the art faculty. Students whose portfolios do not meet standards will be required to take supplemental courses. No student will be allowed to proceed on to a 300-level (or higher) studio course without a successful portfolio review.

### SPECIAL EDUCATION, BS.ED. & MS ED.

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The accelerated Special Education program focuses on certifying teachers in an area in which the state has faced a shortage of qualified teachers. The undergraduate

portion of this accelerated program is designed to provide a strong interdisciplinary content major. Content-specific preparation is often lacking from special education teacher preparation programs. This aspect of our accelerated program coupled with an early and comprehensive approach to practice-based preparation (3 supervised practica and a yearlong residency) will ensure our candidates will be well prepared to meet the needs of K-12 schools. Students must complete the master's degree in order to become certified teachers by the State.

### Admissions Policy

First year students can apply to the BS ED Special Education through the regular CCSU admissions process. Eligible undergraduate students can apply for admission to the Five Year Accelerated B.S./M.S. in the Spring of their third year of full-time study. Selected students may be able to complete a B.S. in Special Education and a M.S. in Special Education in as few as 5 years of full time study. For accepted students, four graduate courses will double-count as four undergraduate SPED courses. Students apply in the Spring of their third year of full-time study and must meet the requirements specified below:

1. Completed 90 earned credit hours by the end of the Fall semester of their third year of full-time study. At least 12 credits must have been earned at CCSU.
1. Have at GPA of 2.7 or higher
1. Have at least a 3.00 grade point average in Special Education courses.
1. Have been accepted into the professional program
1. Students must maintain a cumulative undergraduate GPA of at least 3.00 to remain in Accelerate Central
2. Successful completion of the following courses, either the specified CCSU courses or their equivalents:

Students who are accepted into Accelerated Special Education Program will officially matriculate into the School of Graduate Studies the semester immediately following conferral of their Bachelor's degree, even if they have already taken graduate-level courses while completing their Bachelor's degree. Students wishing to defer their graduate studies must notify Graduate Admissions of this decision prior to the start of the term following the conferral of their bachelor's degree.

### SPECIAL EDUCATION, BS.ED. (120 CREDITS)

#### Major Requirements (48 credits)

LING 200	Introduction to Linguistics	3
LING 300	Language Acquisition	3
LING	TESOL Methods	3

406/LING 506		
LLA 315	Comprehensive Reading Instruction I	3
LLA 316	Comprehensive Reading Instruction II	3
LLA 412	Literacy instruction in the Elementary School	3
SPED 215	Diversity, Equity, and Inclusion through (dis)ability Perspectives	3
SPED 315	Introduction to Educating Learners with Exceptionalities	3
SPED 412	Teaching Students with Special Needs How to Access K-12 General Education Content	3
SPED 414/SPED 514	Cognitive Behavior Management and Social Skill Strategies	3
SPED 415	Assessment in Special Education	3
SPED 416	Instructional Programming for Students with Exceptionalities	3
SPED 417	Special Education Methods in Teaching Reading (K-12)	3
SPED 419	Special Education Methods in Content Area Instruction (K-12)	3
SPED 440	Classroom Assessment	3

#### Related Requirements (33 Credits)

GEOG 120	World Regional Geography	3
HIST 161	American History to 1877	3
HIST 162	American History from 1877 to Present	3
MATH 113	Structure of Mathematics I: Number Systems	3
MATH 213	Structure of Mathematics II: Probability & Geometry	3
PS 110	American Government & Politics	3
PSY 136	Life-Span Development	3
PSY 362	Child Psychology	3
WRT 202	Intermediate Composition	3
	or	
WRT 280	Tutoring Writing	3

#### Special Education Professional Education Core (21 credits)

SPED 421	Special Education Practicum #1 – Elementary	3
SPED 422	Special Education Practicum #2 – Secondary	3
SPED 443	Special Education Practicum #3 – Secondary	3
SPED 521	Student Teaching in Special Education - Elementary	3

SPED 522	Student Teaching in Special Education - Secondary	3
<b>SPECIAL EDUCATION, MS ED. (24 CREDITS)</b>		
<b>Required Courses</b>		
EPS 535	Special Topics in Educational Foundations	3
SPED 537	Executive Function, ADHD, and Learning	3
SPED 541	Person-Centered Planning and Transition	3
SPED 543	Collaboration and Special Education Case Management	3
SPED 581	Assistive Technology in Special Education	3
SPED 597	Capstone Intervention Project II	3
SPED 598	Research in Special Education	3
SPED 596	Capstone Intervention Project I	3

**Certification candidacy in spring semester of graduate year**

**Total Credit Hours: 120**

**DANCE EDUCATION WITH SPECIALIZATION IN TEACHER CERTIFICATION, B.S. (CERTIFIABLE FOR PK-12 TEACHING)**

This specialization is for those students looking to focus on teacher education in public and/or private schools and leads to teacher certification.

A minor is not required with this major.

**REQUIREMENTS**

This 75 credit program consists of 41 credits in Core lecture and skill classes and 34 credits in the Specialization in Teacher Certification

**Core Courses**

DAN 110	Introduction to Dance Education	2
EXS 207	Anatomy and Physiology in Exercise Science I	3
EXS 216	Biomechanics	3
DAN 151	Beginning Modern Dance	2
DAN 152	Beginning Ballet	2
DAN 157	Beginning Jazz Dance	1
DAN 200	Dance Practicum	1
DAN 200	Dance Practicum	1
DAN 230	Afro-Caribbean Dance and Culture	2
DAN 252	Intermediate Ballet	2
DAN 257	Intermediate Jazz Dance	1
DAN 299	Dance History	3
DAN 377	Modern Dance and Theory	2

DAN 234	Ballroom Dance	1
DAN 235	Movement for Performers	2
DAN 236	Principles of Choreography	2
DAN 272	Creative Dance in Education	2
DAN 398	Contemporary Dance Technique	2
DAN 477	Secondary Methods in Dance Education	3
DAN 480	Project: Dance	1
PE 416	Program Development in Physical Education, Dance Education and Health Education	3

**Specialization in Teacher Education (34 credits)**

EDF 215	Education in a Multicultural Society	3
EDTE 314	Applying Learning Theories in Diverse Settings (K-12 Programs)	3
DAN 298	Psycho-Social Aspects of Dance Education	3
PE 305	Assessments in Physical Education, Dance Education and Health Education	3
DAN 300	Elementary Methods in Dance Education	3
PE 320	Motor Development	3
SPED 315	Introduction to Educating Learners with Exceptionalities	3
EDT 315	Educational Technology in the Secondary School Classroom	1
EDSC 436	Student Teaching (Elementary Dance Education)	6
EDSC 437	Student Teaching (Secondary School Dance Education)	6

**Required General Education courses**

MUS 109	Fundamentals of Music	3
HIST 161	American History to 1877	3
	or	
HIST 162	American History from 1877 to Present	3
PSY 136	Life-Span Development	3
ANTH 170	Introduction to Cultural Anthropology	3
PHYS 111	Introductory Physics I	3
WRT 110	Introduction to College Writing	3
	or	
WRT 105	Enhanced Introduction to College Writing	3
	and	
WRT 105P	Enhanced Introduction to College Writing Workshop	2

COMM 115	Fundamentals of Communication or	3	MUS 335	Music History III	3
COMM 140	Public Speaking	3	MUS 250	Piano Class I	1
STAT 104	Elementary Statistics or	3	MUS 251	Piano Class II	1
STAT 200	Business Statistics or	3	MUS 350	Piano Class III	1
STAT 215	Statistics for Behavioral Sciences I	3	MUS 351	Piano Class IV	1
BIO 111	Introductory Biology or	3	<b>Required</b>		
BIO 121	General Biology I	4	MUS 269	Technology in Music Education	1
			MUS 367	Choral Conducting	2
			MUS 368	Instrumental Conducting	2
			MUS 390	Orchestration	3

**Total Credit Hours: 120**

Note: For more information on admission to the professional program see the page linked here.

### **MUSIC EDUCATION, B.S. (CERTIFIABLE FOR PK-12 TEACHING)**

The CCSU Department of Music is dedicated to the development of competent and aesthetically sensitive musicians, intellectually deepened by a broad liberal arts education. Within the context of the music education program, we prepare musicians for careers as the next generation of public school music teachers in Connecticut and beyond. At the same time our program prepares students with strategies to cultivate artistic leadership in their chosen field. We strive to foster in all students life-long connection and involvement with the art of music.

The performance and scholarship of our faculty serves as an artistic and intellectual resource for Connecticut.

A minor is not required with this major.

**REQUIREMENTS**

MUS 102 and three semesters of major ensemble are double counted in Study Area I.

**Core**

MUS 102	Fundamentals of Musicianship	3
MUS 114	Introduction to Music Technology	1
MUS 115	Aural Skills I	1
MUS 116	Aural Skills II	1
MUS 237	Diatonic Harmony	2
MUS 318	Chromatic Harmony I	2
MUS 215	Aural Skills III	1
MUS 216	Aural Skills IV	1
MUS 319	Chromatic Harmony II	2
MUS 408	Form and Analysis	2
MUS 235	Music History I	3
MUS 334	Music History II	3

**Six semesters of:**

Music Education students with a primary instrument in woodwinds, brass, or percussion are required to take MUS 142B (Wind Symphony Marching Band) in the Fall, and MUS 142A (Wind Symphony) in the Spring.

MUS 141 Chorus is the required ensemble for students with voice, piano, or classical guitar as the primary instrument.

String students are required to take MUS 143 Sinfonietta when offered, or another approved ensemble as a substitute.

MUS 141	Chorus or	1
MUS 142A	Band: Wind Symphony and/or	1
MUS 142B	Wind Symphony & Marching Band or	1
MUS 143	Sinfonietta	1

**Five of the six following:**

MUS 259	Vocal Methods	1
MUS 261	Woodwind Methods	1
MUS 262	Brass Methods	1
MUS 263	Percussion Methods	1
MUS 267	String Methods: Violin and Viola	1
MUS 268	String Methods: Cello and Double Bass	1

**Seven semesters of:**

MUS 178	Applied Music for Majors	1
MUS 278	Applied Music for Majors II	1
MUS 378	Applied Music for Majors III	1
MUS 478	Applied Music for Majors IV	1

MUS 178, MUS 278, MUS 378, and MUS 478 are one credit each. B.S. students are required to take two semesters of MUS 178, MUS 278, MUS 378, and one semester of MUS 478 for a total of 7 credits.

**Professional Education Requirements**

MUS 101	Practicum in Music Education	1
MUS 310	General Music Education	3



MUS 317	Secondary Music Methods	4
EDTE 314	Applying Learning Theories in Diverse Settings (K-12 Programs)	3
SPED 315	Introduction to Educating Learners with Exceptionalities	3
EDSC 425	Multicultural, Interdisciplinary Teaching at the Secondary Level	3
EDSC 420	Student Teaching - Elementary Music Education	4.5
EDSC 421	Student Teaching - Secondary Music Education	4.5
MUS 402	Student Teaching Seminar	1

**General Education Requirements**

Students in this program must take the following as part of their general education requirements:

HIST 161	American History to 1877 or	3
HIST 162	American History from 1877 to Present	3
PSY 236	Life-Span Development	3
EDF 215	Education in a Multicultural Society	3

**Total Credit Hours: 59**

Note: Students enrolled in MUS 177 must pay an extra fee of \$200 each semester. Students enrolled in MUS 178, MUS 278, MUS 378, or MUS 478 must pay an extra fee of \$400 each semester. This fee is non-refundable and subject to change. All students enrolled in MUS 178, MUS 278, MUS 378, or MUS 478 must perform in one student recital per year.

All music majors are required to enroll in MUS 090 every semester except while enrolled in either EDSC 420/EDSC 421.

All students must be enrolled in a major ensemble every semester in which they are enrolled as full-time music majors except the semester they student teach. All part-time students must be enrolled in a major ensemble for six semesters. The Department of Music reserves the right to assign students to major ensembles.

Music Education majors must pass all portions of the piano proficiency before student teaching.

The piano proficiency exam may be taken a total of four times, and students must demonstrate a minimum of proficiency in each category to pass. Most students should begin taking this exam during their sophomore year while

completing MUS 351 Piano Class IV. Five of the eight categories of the piano proficiency exam must be passed before acceptance into the professional program. All of the exam must be passed the semester before student teaching.

The piano proficiency exam may be taken a total of four times, and students must demonstrate a minimum proficiency in all 8 categories to pass. Most students should begin taking this exam during their sophomore year.

**The piano proficiency exam consists of the following:**

- Playing major and harmonic minor scales (up to 4 sharps and flats), two octaves, hands together;
- Playing a prepared intermediate-level piece from the recommended list, piece using a score;
- Playing a prepared intermediate-level piece from the recommended list, memorized;
- Playing the Star-Spangled Banner;
- Harmonizing a simple melody;
- Transposing the same melody up or down a major/minor second;
- Sight-reading a simple piano piece; and
- Sight-reading a simple accompaniment.

**PHYSICAL EDUCATION, B.S. (CERTIFIABLE FOR PK-12 TEACHING)**

A minor is not required with this major.

**PHYSICAL EDUCATION MAJOR REQUIREMENTS (57 CREDITS)**

57 credits in physical education skill and lecture courses as follows:

**Physical Education Major Courses**

DAN 272	Creative Dance in Education	2
EXS 208	Anatomy and Physiology in Exercise Science II	3
EXS 207	Anatomy and Physiology in Exercise Science I	3
EXS 407	Exercise Physiology and Applied Biomechanics	3
PE 111	Introduction to Physical Education	2
PE 273	Educational Games, Gymnastics & Dance	2
PE 274	Lifetime Activities 1	2
PE 276	Lifetime Activities 2	2
PE 279	Skills & Strategies for Invasion	2

PE 280	Games Skills & Strategies for Net and Wall Games	2
PE 281	Skills & Strategies for Individual Sports/Activities	2
PE 299	Psycho-Social Aspects of Physical Education	3
PE 305	Assessments in Physical Education, Dance Education and Health Education	3
PE 320	Motor Development	3
PE 374	Methods of Teaching Health- Related Fitness	3
PE 404 /PE 514	Methods of Teaching School Health Education	3
PE 405	Elementary Methods in Physical Education	3
PE 406/PE 516	Adapted Physical Education	3
PE 416	Program Development in Physical Education, Dance Education and Health Education	3
PE 417	Secondary Methods in Physical and Health Education	3
PE 422	Motor Learning and Skill Acquisitions	3

DAN electives 2 credits.

#### Professional Education Courses (16 credits)

EDT 315	Educational Technology in the Secondary School Classroom	1
EDTE 314	Applying Learning Theories in Diverse Settings (K-12 Programs)	3
EDSC 417	Student Teaching (Elementary P.E.)	6
EDSC 419	Student Teaching (Secondary School P.E.)	6

EDT 315, EDSC 417, and EDSC 419: Require admission to the professional program prior to enrollment.

#### Related Requirements (24 credits)

CHEM 161	General Chemistry	3
HIST 161	American History to 1877 or	3
HIST 162	American History from 1877 to Present	3
STAT 104	Elementary Statistics or	3
STAT 215	Statistics for Behavioral Sciences I or	3
STAT 200	Business Statistics	3
PHYS 111	Introductory Physics I	3
PSY 236	Life-Span Development	3

COMM 115	Fundamentals of Communication or	3
COMM 140	Public Speaking	3
BIO 111	Introductory Biology	3
EDF 215	Education in a Multicultural Society	3

**Total Credit Hours: 120**

### **TECHNOLOGY EDUCATION, B.S. (CERTIFIABLE FOR PK-12 TEACHING)**

The Technology Engineering Education K-12 program prepares graduates to teach in elementary, middle, secondary, and adult technology engineering education programs in Connecticut and throughout the US. Current teacher shortages in the discipline have prompted many school systems throughout the country to offer financial incentives in a bid to attract qualified Technology Engineering Education instructors to their systems. Technology Engineering Education graduates may also obtain positions as teachers in foreign countries, instructors/supervisors in human resource programs in industry or government agencies, and as industry professionals. The program is accredited by Council on Technology Teacher Education.

#### REQUIREMENTS

##### Technology & Engineering (47 credits)

TE 115	STEM Laboratory Management and Safety	3
TE 150	Fundamentals of Engineering and Technology for Teachers	3
TE 201	Children's Creativity & Engineering	3
TE 215	Materials Processing	3
TE 217	Laboratory Practices	4
TE 218	Electrical Applications for STEM	3
TE 221	Innovation & Invention	4
TE 245	Building Design & Construction	4
TE 310	Communication Systems	3
TE 340	Coding and Computational Thinking for STEM	3
TE 399	Teaching Technology and Engineering	3
TE 330	Transportation Design	4
TE 417	Robot Design & Construction	4
TE 498	Technology & Engineering Education Senior Design Project	3

Note: These courses may not be available each semester and are seldom available during the summer sessions; refer to the course description section of this catalog for information.

**General Education (43 credits minimum)**

These courses count toward the overall general education requirements.

Note: This major does not require a minor.

EDF 215	Education in a Multicultural Society	3
HIST 161	American History to 1877	3
	or	
HIST 162	American History from 1877 to Present	3
PE 144	College Wellness	2
PSY 136	Life-Span Development	3
STAT 104	Elementary Statistics	3
	or	
STAT 215	Statistics for Behavioral Sciences I	3
TE 101	Introduction to STEM Systems	3
WRT 110	Introduction to College Writing	3
PHYS 111	Introductory Physics I	3
	or	
PHYS 121	General Physics I	4
	or	
PHYS 125	University Physics I	4
MATH 115	Trigonometry	3
	or	
MATH 119	Pre-Calculus with Trigonometry	4
	or	
MATH 124	Applied Calculus with Trigonometry	4
	or	
MATH 135	Applied Engineering Calculus I	3
	or	
MATH 152	Calculus I	4

**Professional Education Requirements (30 credits)**

TE 299	Technology & Engineering Education Practicum	3
EDTE 314	Applying Learning Theories in Diverse Settings (K-12 Programs)	3
SPED 315	Introduction to Educating Learners with Exceptionalities	3
TE 400	Professional Practices and Responsibilities in Technology and Engineering Education (K-12)	3
EDSC 425	Multicultural, Interdisciplinary Teaching at the Secondary Level	3
LLA 440	Literacy instruction in the Secondary School	3
EDSC 431	Student Teaching I — Technology	5

	and Engineering Education	
EDSC 432	Student Teaching II Technology and Engineering Education	5
TE 419	Student-Teaching Seminar	1

NOTES: (1) EDTE 314 and TE 299 must be taken concurrently; (2) EDSC 425 and TE 400 must be taken concurrently. (Taking LLA 440, EDSC 425 and TE 400 together is strongly recommended.) (3) EDSC 431, EDSC 432, and TE 419 must be taken concurrently; students may not take any other courses during the semester they are enrolled in EDSC 431, EDSC 432, and TE 419. (4) Except for EDTE 314 and TE 299, each of these courses requires acceptance in the pre-professional education program. See "**Admission to the Professional Program**" below.

**Total Credit Hours: 120**

**Admission to the Professional Program**

Students must make formal application for admission to the Professional Program of Technology and Engineering Education after completion of 45 credits in course work. At least 15 of these credits must be in TE courses (different criteria apply to transfer students; contact the Office of the Dean of Education and Professional Studies for details). Applications are available from the Dean of Education and Professional Studies, Barnard Hall, and must be filed by September 10 or February 10. Acceptance is prerequisite to taking TE 400, TE 419, EDSC 425, EDSC 431, EDSC 432, LLA 440, and SPED 315. Students must maintain a minimum 3.00 grade point average in all TE and STEM courses. See the entry in this catalog for School of Education and Professional Studies, Admission to Professional Program for additional information.

## UNDERGRADUATE GENERAL EDUCATION PROGRAM

### Why is there a General Education program?

General education pushes students beyond the limits to their major to explore a broad range of courses. Whereas the major ensures that students are well educated in one specific discipline, the general education program ensures that students become broadly educated citizens--aesthetic discernment, empathy, curiosity, and rational thinking--this broad and varied education provides students a foundation on which to build their intellectual, personal, civic, social, and cultural lives during their undergraduate years and beyond.

### What is included in the General Education program?

As a regional, comprehensive, public university, CCSU is proud to offer to our students the study of the liberal arts that has for centuries been the hallmark of excellence in higher education. Students complete their general education by taking courses that provide instruction in both the current state of knowledge in the traditional academic domains--divided into the arts and humanities, the natural sciences including mathematics, and the social and behavioral sciences--as well as the current methodologies for advancing knowledge in these domains.

### How does the General education program benefit students?

A college education provides intellectual enrichment that prepares students for both lives and careers that will seldom follow a single consistent trajectory. The flexibility engendered by general education enables students to respond to a rapidly changing world. Multiple surveys of those who employ CCSU graduates indicate that employers value not simply students with specific vocational training, but students with a broad knowledge base who are agile thinkers, effective communicators, and independent learners--a profile long associated with the kind of breadth provided by a general education program.

### General Education Objectives

1. To develop an appreciation for, and enhance understanding of, the arts and humanities. Relevant outcomes include the ability to: engage in literary, philosophic, and artistic expression, response, analysis, and evaluation.
2. To develop global awareness, historical perspective, and appreciation of social and cultural diversity in the world. Relevant outcomes include the ability to: analyze an issue from the perspective of another cultural tradition or historical period; understand and respect cultural differences; read, write, speak, and understand a foreign language at an enhanced level.
3. To develop scientific understanding of the natural and social worlds. Relevant outcomes include the ability to: explain how scientists think, work, and evaluate the natural and social world; use techniques such as controlled observation, experiment, mathematical analysis of data, and production and interpretation of graphical and tabular data presentation; and demonstrate knowledge and appreciation of the natural and social world.
4. To develop critical thinking and critical reading skills. Relevant outcomes include the ability to: define a problem; assemble evidence to support a conclusion; assess the validity of a sustained argument; and analyze information to uncover underlying meanings, structures, and patterns.
5. To strengthen writing and communication skills. Relevant outcomes include the ability to: develop a chosen topic, organize specifics to support a main idea, use proper grammar, address a particular audience, and revise and edit to produce focused and coherent texts.
6. To strengthen quantitative skills. Relevant outcomes include the ability to: apply mathematical and statistical techniques as a means of analysis within a variety of disciplines, and assess the strengths and weaknesses of these techniques of analysis.
7. To develop information fluency and computer literacy. Relevant outcomes include the ability to: locate, evaluate, and effectively use information from a variety of sources; use computers for research, analysis, and expression; and analyze the effects of information technology on society.
8. To foster personal health and fitness through a wellness model. Relevant outcomes include the ability to: develop and/or maintain a level of physical activity and nutrition that meets public health standards; construct and implement a fitness/wellness program to improve quality of life and longevity; apply behavior modification strategies to maintain healthy lifestyle habits and psychological well-being; and build a

personal awareness of, and positive attitude towards, healthy living.

9. To recognize issues of social equity and social justice in the United States. Relevant outcomes include the ability to: recognize the diverse forms and effects of social and economic inequality; understand bias and discrimination based on individual and group factors such as race, color, religious creed, age, sex, national origin, ancestry, sexual orientation, and mental or physical disability.
10. To develop and encourage the practice of civic responsibility. Relevant outcomes include the ability to: involve oneself in campus, local, or other communities; take a public stance on a community issue (in either a classroom or public setting); understand and analyze public issues and public affairs from the perspective of the larger community

Note #1: A maximum of 8 credits in the study area portion and a maximum of 8 credits in the skill area portion of the general education program may be fulfilled by major and/or minor courses that are designated as applicable to general education, with no more than 8 credits total from any one field of study.

Note #2: Those students who have been admitted to the CCSU Honors Program will fulfill many of their General Education requirements through the Honors Program curriculum. For further information on the Program, see [www.ccsu.edu/honors](http://www.ccsu.edu/honors).

Note #3: When appropriate to subject matter, methodology, and class size, all courses designated for general education, in particular courses in literature, philosophy, the humanities, history, and the social and behavioral sciences, will require writing, including assigned papers and essay examinations.

### **Study Area I. Arts and Humanities**

9 credits in total are required, with no more than 6 credits in any one subject area. 3 of the credits must be in a literature course. Click here (p. 581) for a listing of courses that fulfill the literature requirement.

Courses that focus on creative expression and interpretations of human experience, or the appreciation and development of thought and ideas. In this study area, students will choose from courses in literature, philosophy, fine arts, and additional disciplines.

### **Study Area 1 – Literature Requirement**

Courses listed below have been designated as fulfilling the literature component of the general education literature requirements.

### **Study Area II. Social Sciences**

9 credits required in total, with at least 3 credits in history, and no more than 6 credits from any one discipline. Courses dealing with formal social structures (such as governments, interest groups, territorial entities, economic firms) in their historical and contemporary contexts. (In this study area, students will choose from courses in economics, geography, history, political science, and additional disciplines.

### **Study Area III. Behavioral Sciences**

6 Credits Required

Courses that focus on the interaction (s) between and among individuals and/or groups and social/cultural institutions. (In this study area, students will choose from courses in anthropology, psychology, sociology, and additional disciplines).

### **Study Area IV. Natural Sciences**

6-7 credits required, including one laboratory course.

Courses that focus on the scientific analysis of the natural world. (In this study area, students will choose from courses in biology, biomolecular science, chemistry, earth science, physics, and additional disciplines.

### **Skill Area I. Communication Skills**

All entering students are required to take WRT 105 (Enhanced Introduction to College Writing) or WRT 110 (Introduction to College Writing), which are introductory courses in expository writing, unless exempt due to previous coursework. A score of 550 or higher on the Writing portion of the SAT or 23 or higher on the English portion of the ACT is needed to enroll in WRT 110. Students with SAT Writing scores below 400 or ACT English scores below 18 will be required to complete WRT 100 (Fundamentals of Composition), which focuses on improvement of basic writing skills, prior to taking WRT 110. Students with SAT Writing scores between 400-540 or ACT English scores between 18-22 will be required to take the Writing Placement Test, which will place them in WRT 110, WRT 105, or WRT 100.

Six credits are required in total, including either WRT 105 or 110.\*

\*Students who have not completed WRT 110 prior to earning 61 credits are required to take both WRT 110 and WRT 202.

Courses designed to improve communications skills relevant for the successful pursuit of a university education and for the enhancement of career opportunities.

### **Skill Area II. Mathematics**

Six credits in total are required, including a mathematics or statistics course (numbered 102 or above).

General Education credits will not be given for both MATH 102 and MATH 103.

One additional course must be selected from the Skill Area II course list below.

### **Skill Area III. Foreign Language Proficiency**

The University language requirement can be satisfied in any one of the following ways:

1. Completion of a level-three high school foreign language.
2. Elementary proficiency as demonstrated by successfully completing a second-semester level CCSU foreign-language course (112 or 118). Students with no previous background in a language must take the first and second semesters (111 and 112, or 118); students who place out of 111 due to previous background in the language may satisfy the requirement by taking 112 only.
3. Passing the CLEP, a standardized examination which demonstrates knowledge of a foreign language equivalent to completion of a second-semester course or higher.
4. Successful completion of a foreign-language course at a level higher than the second- semester level.
5. Demonstration of native proficiency in a language other than English (requires evaluation of skill level by an appropriate faculty member and/or official documentation, and approval by the Chair of the Department of Modern Languages).

### **Skill Area IV. University Requirement**

Courses designed to foster personal well-being and the development of academic skills essential for the successful pursuit of a university education.

Students entering with fewer than 15 credits must take either PE 144 (College Wellness) or CCSU 103 (Career Pathways). It is recommended that they be taken in the student's first year. CCSU 103 is only open to first semester first-year students.

Those entering with 15 credits or more may complete this requirement with 2-3 additional credits from any of the other skill areas or with the other courses listed below. Please note: remedial courses (099), MATH 102 or MATH 103, and elementary language courses (111 or 112) will not fulfill this requirement.

### **International Requirement**

In view of the increasing relevance of the global context to the future of our students and their need for greater understanding of the world around them, each student must complete 6 credits in courses designated as international. The international designation applies to all courses that substantially contribute to the understanding of the cultural expressions or social, political, and economic conditions of a particular region or country other than the United States. It also applies to courses that systematically offer a comparative international perspective and/or explore contemporary global issues. International courses are indicated in the course description.

In addition, an international on-site education experience (e.g. faculty-led course abroad or semester-long study abroad) that results in approved CCSU transfer credit will fulfill the equivalent number of credits toward the International requirement (this shall apply even if the equivalent CCSU course(s) does not bear an International designation). See the Center for International Education for more information.

### **Equity, Justice, and Inclusion Requirement**

All students must complete one equity, justice, and inclusion (EJI) designated course as part of their program of study. The EJI requirement may be met through a general education (Study Area, Skill Area, or International Requirement), major, minor, or elective course in a student's program of study. Transfer students with 50 or more credits can waive the EJI requirement.

An EJI-designated course will use course content, course design (such as variety of methods of instruction, assessment, and assignment type), and classroom interactions to highlight obstacles to and strategies required to promote equity and social justice and inclusion in the United States. An EJI-designated course will integrate equity, social justice, and inclusion into the established course content through course design and heightened attention to classroom interactions and culture. An EJI-designated course will explore bias and discrimination in the United States.

**Note:** this requirement is in effect for students who are admitted or readmitted to CCSU in Fall 2021 and after.

## **First Year Experience**

**Required for all students who enter with fewer than 15 credits and to be taken in the student's first semester.**

This requirement is typically completed by a First-Year Experience (FYE) section of a course in general education and/or within a student's major/school. Those students who do not successfully complete an FYE course in their first semester will be required to successfully complete an FYE course in their second semester.

Note: CRM 101, FYS courses, and other experiences designated by the FYE steering committee can also fulfill the FYE requirement.

## UNDERGRADUATE GENERAL EDUCATION PROGRAM

### General Education Objectives

In addition to offering baccalaureate degrees, the University aims to provide students with the basic foundations for life-long learning as rational members of society, to awaken the pleasures of intellectual exploration and to elevate aesthetic sensibilities. This commitment to personal development depends on the acquisition and expansion of knowledge, intellectual processes, and techniques. The general education program seeks to realize the following objectives:

- Objective: To develop an appreciation for, and enhance understanding of, the arts and humanities. Relevant outcomes include the ability to: engage in literary, philosophic, and artistic expression, response, analysis, and evaluation.
- Objective: To develop global awareness, historical perspective, and appreciation of social and cultural diversity in the world. Relevant outcomes include the ability to: analyze an issue from the perspective of another cultural tradition or historical period; understand and respect cultural differences; read, write, speak, and understand a foreign language at an enhanced level.
- Objective: To develop scientific understanding of the natural and social worlds. Relevant outcomes include the ability to: explain how scientists think, work, and evaluate the natural and social world; use techniques such as controlled observation, experiment, mathematical analysis of data, and production and interpretation of graphical and tabular data presentation; and demonstrate knowledge and appreciation of the natural and social world.
- Objective: To develop critical thinking and critical reading skills. Relevant outcomes include the ability to: define a problem; assemble evidence to support a conclusion; assess the validity of a sustained argument; and analyze information to uncover underlying meanings, structures, and patterns.
- Objective: To strengthen writing and communication skills. Relevant outcomes include the ability to: develop a chosen topic, organize specifics to support a main idea, use proper grammar, address a particular audience, and revise and edit to produce focused and coherent texts.
- Objective: To strengthen quantitative skills. Relevant outcomes include the ability to: apply mathematical and statistical techniques as a means of analysis within a variety of disciplines, and assess the strengths and weaknesses of these techniques of analysis.
- Objective: To develop information fluency and computer literacy. Relevant outcomes include the ability to: locate, evaluate, and effectively use information from a variety of sources; use computers for research, analysis, and expression; and analyze the effects of information technology on society.
- Objective: To foster personal health and fitness through a wellness model. Relevant outcomes include the ability to: develop and/or maintain a level of physical activity and nutrition that meets public health standards; construct and implement a fitness/wellness program to improve quality of life and longevity; apply behavior modification strategies to maintain healthy lifestyle habits and psychological well-being; and build a personal awareness of, and positive attitude towards, healthy living.
- Objective: To recognize issues of social equity and social justice in the United States. Relevant outcomes include the ability to: recognize the diverse forms and effects of social and economic inequality; understand bias and discrimination based on individual and group factors such as race, color, religious creed, age, sex, national origin, ancestry, sexual orientation, and mental or physical disability.
- Objective: To develop and encourage the practice of civic responsibility. Relevant outcomes include the ability to: involve oneself in campus, local, or other communities; take a public stance on a community issue (in either a classroom or public setting); understand and analyze public issues and public affairs from the perspective of the larger community

Note #1: A maximum of 8 credits in the study area portion and a maximum of 8 credits in the skill area portion of the general education program may be fulfilled by major and/or minor courses that are designated as applicable to general education, with no more than 8 credits total from any one field of study.

Note #2: Those students who have been admitted to the CCSU Honors Program will fulfill many of their General Education requirements through the Honors Program



curriculum. For further information on the Program, see [www.ccsu.edu/honors](http://www.ccsu.edu/honors).

Note #3: When appropriate to subject matter, methodology, and class size, all courses designated for general education, in particular courses in literature, philosophy, the humanities, history, and the social and behavioral sciences, will require writing, including assigned papers and essay examinations.

### STUDY AREA I. ARTS AND HUMANITIES

9 credits in total are required, with no more than 6 credits in any one subject area. 3 of the credits must be in a literature course.

#### ARTS AND HUMANITIES COURSES:

Courses that focus on creative expression and interpretations of human experience, or the appreciation and development of thought and ideas. In this study area, students will choose from courses in literature, philosophy, fine arts, and additional disciplines.

ART 100	Search in Art	3
ART 110	Introduction to Art History	3
ART 112	History of Art I	3
ART 113	History of Art II	3
ART 120	Design I	3
ART 124	Three-Dimensional Design	3
ART 130	Drawing I	3
ART 216	Modern Art	3
ART 224	Illustration I	3
ART 230	Drawing II	3
ART 240	Printmaking I	3
ART 141	Photography I	3
ART 250	Watercolor Painting	3
ART 252	Painting I	3
ART 260	Ceramics I	3
ART 261	Sculpture I	3
ART 264	Design--Handicraft Materials and Techniques I	3
CHIN 304	Topics in Chinese Literature	3
CINE 201	The Language of Film	3
CINE 270/HUM 270	Studies of World Culture Through Cinema	3
DAN 234	Ballroom Dance	1
DAN 299	Dance History	3
DAN 398	Contemporary Dance Technique	2
DES 100	Design & Fonts	3
DES 122	Fundamentals of Graphic/Information Design	3

ENG 203	Survey of World Literature: Ancient to Early Modern	3
ENG 204	Survey of World Literature: 17th Century to the Present	3
ENG 205	Survey in British Literature: Middle Ages to the 18th Century	3
ENG 206	Survey of British Literature: Romanticism to the Present	3
ENG 210	Survey of American Literature: Pre-Civil War	3
ENG 211	Survey of American Literature: Civil War to the Present	3
ENG 212/AFAM 212	African-American Literature	3
ENG 213	Studies in American Literature	3
ENG 214	Studies in International Literature	3
ENG 215/WGSS 215	Introduction to Women Writers	3
ENG 216	Studies in British Literature	3
ENG 220	Shakespeare	3
ENG 250	Contemporary Literature	3
ENG 260	Introduction to Poetry	3
ENG 261	Introduction to Fiction	3
ENG 262	Introduction to Drama	3
ENG 347/LTN 347	Latino/a Literature	3
FR 304	Introduction to French Literature	3
FR 305	Introduction to Francophone Literature	3
HON 110	Western Culture I	4
HON 210	Western Culture II: Topics in Western Culture	4
HON 440	Writing & Research II	1
HUM 100	Search in the Humanities	3
HUM 230/IS 230	Topics in International Studies	3 OR 6
HUM 250	Topics in World Literature	3
HUM 270/CINE 270	Studies of World Culture Through Cinema	3
HUM 330/IS 330	Selected Topics in Global Cultures	3 OR 6
HUM 360/IS 360	International Studies Through Travel	3 OR 6
IS 230/HUM 230	Topics in International Studies	3 OR 6
IS 330/HUM 330/IS 330	Selected Topics in Global Cultures	3 OR 6
IS 360/HUM 360	International Studies Through Travel	3 OR 6

ITAL 304	Introduction to Italian Literature I	3	TH 111	Stagecraft	3
ITAL 305	Introduction to Italian Literature II	3	TH 117	Lighting	3
LTN 347/ENG 347	Latino/a Literature	3	TH 121	Costuming	3
MUS 100	Search in Music	3	TH 126	Makeup I	3
MUS 109	Fundamentals of Music	3	TH 135	Speaking Voice I	3
MUS 110	Listening to Classical Music	3	TH 143	Improvisation and Ensemble	3
MUS 111	Music of the World's People	3	TH 145	Acting I	3
MUS 112	Computer Applications to Music	3	TH 146	Theatre for Social Change	3
MUS 113	History of Jazz	3	TH 147	Theatre Design Fundamentals	3
MUS 214	Electro-Acoustic Music and Sonic Art	3	TH 222	History of Fashion	3
			TH 253	Script Analysis for the Theatre	3
				<b>Subtotal: 6</b>	
PHIL 100	Search in Philosophy	3	<b>LITERATURE REQUIREMENT FOR STUDY AREA I</b>		
PHIL 112	Introduction to Philosophy	3	Courses listed below have been designated as fulfilling the literature component of the general education literature requirements.		
PHIL 125	Introduction to Philosophy through Popular Culture	3	CHIN 304	Topics in Chinese Literature	3
PHIL 135	Nature, Mind, and Science	3	ENG 203	Survey of World Literature: Ancient to Early Modern	3
PHIL 144	Moral Issues	3	ENG 204	Survey of World Literature: 17th Century to the Present	3
PHIL 232	Medieval and Renaissance Philosophy	3	ENG 205	Survey in British Literature: Middle Ages to the 18th Century	3
PHIL 240	Ethical Problems in Business	3	ENG 206	Survey of British Literature: Romanticism to the Present	3
PHIL 241	Environmental Ethics	3	ENG 210	Survey of American Literature: Pre-Civil War	3
PHIL 243	Philosophy of Bioethics	3	ENG 211	Survey of American Literature: Civil War to the Present	3
PHIL 244	Introduction to the Philosophy of Social Justice	3	ENG 212/AFAM 212	African-American Literature	3
PHIL 248	Philosophy of the Arts	3	ENG 213	Studies in American Literature	3
PHIL 250	Introduction to Asian Philosophy	3	ENG 214	Studies in International Literature	3
PHIL 255	Philosophy of Religion	3	ENG 215/WGSS 215	Introduction to Women Writers	3
PHIL 260/AFAM 260	African Philosophy	3	ENG 220	Shakespeare	3
PHIL 275	Chinese Philosophy	3	ENG 250	Contemporary Literature	3
PHIL 344	Topics in Philosophical & Social Justice	3	ENG 260	Introduction to Poetry	3
PHIL 366	Existentialism	3	ENG 261	Introduction to Fiction	3
PS 232	Ancient and Medieval Political Thought	3	ENG 262	Introduction to Drama	3
REL 105	Development of Christian Thought	3	ENG 347/LTN 347	Latino/a Literature	3
REL 110	World Religions	3	FR 304	Introduction to French Literature	3
REL 250	Japanese Religion	3	FR 305	Introduction to Francophone Literature	3
REL 256	Religion, Philosophy, and Culture	3	HUM 250	Topics in World Literature	3
REL 257	Special Topics in Religion	3	ITAL 304	Introduction to Italian Literature I	3
SPAN 304	Introduction to Spanish Literature I	3			
SPAN 305	Introduction to Spanish Literature II	3			
SPAN 375/LAS 375	Introduction to Spanish American Literature I	3			
SPAN 376/LAS 376	Spanish American Literature II	3			
TH 110	Introduction to Theatre	3			

ITAL 305	Introduction to Italian Literature II	3
LTN 347/ENG 347	Latino/a Literature	3
SPAN 304	Introduction to Spanish Literature I	3
SPAN 305	Introduction to Spanish Literature II	3
SPAN 375/LAS 375	Introduction to Spanish American Literature I	3
SPAN 376/LAS 376	Spanish American Literature II	3

**Subtotal: 3**

**STUDY AREA II. SOCIAL SCIENCES**

9 credits required in total, with at least 3 credits in history, and no more than 6 credits from any one discipline. Courses dealing with formal social structures (such as governments, interest groups, territorial entities, economic firms) in their historical and contemporary contexts. (In this study area, students will choose from courses in economics, geography, history, political science, and additional disciplines.

AFAM 110	Introduction to African-American Studies	3
AFAM 250	Topics in African American Studies	3
CHIN 315	Topics in Chinese Culture	3
CRM 110	Introduction to the Criminal Justice System	3
ECON 200	Principles of Macroeconomics	3
ECON 201	Principles of Microeconomics	3
ECON 250	Contemporary Economic Issues	3
ET 399	Engineering Economy	3
FR 315	Aspects of Francophone Cultures	3
FR 316	Contemporary France	3
GEOG 100	Search in Geography	3
GEOG 110	Introduction to Geography	3
GEOG 120	World Regional Geography	3
GEOG 130	Introduction to Geographic Information Science	3
GEOG 220	Human Geography	3
GEOG 241	Introduction to Planning	3
GEOG 244	Economic Geography	3
GEOG 270	Geography of Hazards	3
GEOG 290	Geography of Tourism	3
GEOG 291	National Parks and World Heritage Sites	3
GEOG 333	Political Geography	3

GER 315	German Civilization to 1800	3
GER 316	German Civilization from 1800 to Present	3
HIST 100	Search in History	3
HIST 121	World Civilization I	3
HIST 122	World Civilization II	3
HIST 161	American History to 1877	3
HIST 162	American History from 1877 to Present	3
HIST 231	Ancient Mediterranean World	3
HIST 232	Medieval Europe	3
HIST 233	Renaissance and Enlightenment Europe	3
HIST 234	Modern Europe	3
HIST 271	Introduction to African History and Culture	3
HIST 281/LAS 281	History of Latin America to 1823	3
HIST 282/LAS 282	History of Latin America since 1823	3
HIST 291	Modern Middle East	3
HIST 298	History and Travel	1 to 3
HIST 375	History of Africa to 1800	3
HIST 376	History of Africa since 1800	3
HON 130	World Cultures I	4
HON 230	World Cultures II: Topics in World Cultures	4
HON 442	Writing & Research IV: Thesis Workshop	1
IS 225	The World as a Total System	3
IS 240	Caribbean Cultures	3
IS 245	Puerto Rico	3
ITAL 315	Italian Civilization to 1861	3
ITAL 316	Italian Civilization from 1861 to the Present	3
LAS 282/HIST 282	Latin American History Since 1823	3
LTN 110	Introduction to Latino Studies	3
PES 110	Introduction to the Study of Peace & War	3
PES 111	War & Peace through Films	3
PES 210	Topics in International Peace Studies	3
PS 104	The World's Political Systems	3
PS 110	American Government & Politics	3
PS 230	American State and Local Government	3
PS 235	International Relations	3
PS 260	Public Administration	3
PS 270	Law and Politics	3

PS 280	Religion & Politics	3
PS 315	Internet & Media Politics	3
PS 334	Modern Political Thought	3
SPAN 315	Spanish Civilization	3
SPAN 316/LAS 316	Latin American Civilization	3
SUST 140	Introduction to Sustainability	3
<b>Subtotal: 9</b>		

### **STUDY AREA III. BEHAVIORAL SCIENCES**

#### **6 Credits Required**

Courses that focus on the interaction(s) between and among individuals and/or groups and social/cultural institutions. (In this study area, students will choose from courses in anthropology, psychology, sociology, and additional disciplines.

AMS 110	Introduction to American Studies	3
ANTH 140	Introduction to Anthropology	3
ANTH 150	Introduction to Archaeology	3
ANTH 160	Introduction to Biological Anthropology	3
ANTH 170	Introduction to Cultural Anthropology	3
ANTH 200/AFAM 200	Dimensions of Diversity and Inequality	3
ANTH 210	The Ancient World	3
ANTH 215	The Unwritten World	3
ANTH 220	Introduction to Forensic Anthropology	3
ANTH 240	The Supernatural	3
ANTH 260	Anthropology of Food	3
ANTH 418	New England Archaeology	4
CEN 200	Introduction to Community and Civic Engagement	3
CEN 201	Practicum in Community and Civic Engagement	1
COMM 215	Introduction to Interpersonal Communication	3
COMM 216	Introduction to Intercultural Communication	3
COMM 230	Introduction to Mass Media	3
CM 110	The Built Environment and Global Society	3
CRM 220	Ideology & Violence	3
CRM 230	Law Enforcement & Society	3
CRM 245	Diversity and Criminal Justice	3
FYS 103	First Year Seminar - Behavioral Sciences	2-4

HON 220	Science and Society II: Social Sciences and Society	4
HON 250	Western/World Culture III: Comparative Topics	4
LING 200	Introduction to Linguistics	3
LING 230	The Study of Language	3
PSY 112	Introduction to Psychology	3
PSY 125	Environment & Behavior	3
PSY 200	Learning & Memory	3
PSY 234	Industrial and Organizational Psychology	3
PSY 136	Life-Span Development	3
PSY 241	Introduction to Health Psychology	3
PSY 281	Cognitive Psychology	3
SOC 110	Introductory Sociology	3
SOC 111	Social Problems	3
SOC 212	Race, Class, and Gender	3
SOC 233	The Family	3
SOC 240/WGSS 240	The Sociology of Gender	3
SW 100	Exploration in Social Work	3
WGSS 200	Introduction to Women, Gender and Sexuality Studies	3
WGSS 240	The Sociology of Gender	3
<b>Subtotal: 6</b>		

### **STUDY AREA IV. NATURAL SCIENCES**

6-7 credits required, including one laboratory course.

Courses that focus on the scientific analysis of the natural world. (In this study area, students will choose from courses in biology, biomolecular science, chemistry, earth science, physics, and additional disciplines.

ANTH 160	Introduction to Biological Anthropology	3
ANTH 161	Introduction to Biological Anthropology Laboratory	1
ANTH 250	Introduction to the Primates	3
AST 208	Planetary Astronomy	4
AST 209	Stellar and Galactic Astronomy	4
AST 113	The Cosmos	3
AST 278	The Night Sky	3
BIO 100	Search in Biology	3
BIO 101	Search in Biology with Lab	3
BIO 102	International Search in Biology	3
BIO 111	Introductory Biology	3
BIO 113	Laboratory Experience in Biology	1

BIO 120	Plants of Connecticut	3
BIO 121	General Biology I	4
BIO 122	General Biology II	4
BIO 132	Introductory Ecology	3
BIO 133	Laboratory in Introductory Ecology	1
BIO 171	Introduction to International Field Studies in Biology	1 TO 4
BIO 211	Concepts in Biology	3
BIO 230	Natural History	3
BMS 101	Search in Biomolecular Sciences with Lab	3
BMS 102	Introduction to Biomolecular Science	3
BMS 103	Introduction to Biomolecular Science Laboratory	1
BMS 113	Laboratory Experience in Biomolecular Science	1
BMS 201	Principles of Cell and Molecular Biology	4
CHEM 100	Chemistry in Context	3
CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 200	Foundations of Analytical Chemistry	3
CHEM 201	Foundations of Analytical Chemistry Laboratory	1
CHEM 210	Organic Chemistry I - Foundations	3
CHEM 211	Organic Chemistry I Laboratory - Foundations	1
CHEM 260	Foundations of Inorganic Chemistry	3
ESCI 100	Search in Earth Sciences	3
ESCI 102	Environmental Justice in the 21st Century	3
ESCI 121	The Dynamic Earth	3
ESCI 125	The Dynamic Earth Laboratory	1
ESCI 129	Meteorology: Earth's Weather	4
ESCI 131	Environmental Earth Science	3
ESCI 135	Environmental Earth Science Laboratory	1
ESCI 141	Earth and Life History	3
ESCI 145	Earth and Life History Laboratory	1
ET 241	Applied Statics and Strength of Materials	3
FYS 104	First Year Seminar - Natural Sciences	2-4
GEOG 272	Physical Geography	3
GEOG 275/SUST 275	Soils and Vegetation Sustainability	3
HON 120	Science & Society I	4
PHYS 111	Introductory Physics I	3

PHYS 121	General Physics I	4
PHYS 122	General Physics II	4
PHYS 125	University Physics I	4
PHYS 126	University Physics II	4
SCI 211	Earth and Physical Science	3
SUST 275/GEOG 275	Sustainable Soils & Vegetation	3

**Subtotal: 6-7**

**SKILL AREA I. COMMUNICATION SKILLS**

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All entering students are required to take ENG 105 (Enhanced Introduction to College Writing) or ENG 110 (Introduction to College Writing), which are introductory courses in expository writing, unless exempt due to previous coursework. A score of 550 or higher on the Writing portion of the SAT or 23 or higher on the English portion of the ACT is needed to enroll in ENG 110. Students with SAT Writing scores below 400 or ACT English scores below 18 will be required to complete ENG 099 (Remedial English), which focuses on improvement of basic writing skills, prior to taking ENG 110. Students with SAT Writing scores between 400-540 or ACT English scores between 18-22 will be required to take the Writing Placement Test, which will place them in ENG 110, ENG 105, or ENG 099.

**Required Courses**

Six credits are required in total, including either ENG 105 or 110.\*

\*Students who have not completed ENG 110 prior to earning 61 credits are required to take both ENG 110 and ENG 202.

Courses designed to improve communications skills relevant for the successful pursuit of a university education and for the enhancement of career opportunities.

CHIN 125	Intermediate Chinese I	3
CHIN 126	Intermediate Chinese II	3
CHIN 225	Intermediate Chinese III	3
CHIN 226	Intermediate Chinese IV	3
COMM 115	Fundamentals of Communication	3
COMM 140	Public Speaking	3
COMM 356	Professional Communication	4
COMM 280	Business and Professional Speaking	3
WRT 110	Introduction to College Writing	3
WRT 202	Intermediate Composition	3
WRT 265	Introduction to Creative Writing: A	3

	Survey of Forms	
WRT 280	Tutoring Writing	3
ENGR 290	Engineering Technical Writing and Presentation	3
ESL 108	Academic Writing I	3
ESL 109	Academic Writing II	3
FR 125	Intermediate French I	3
FR 126	Intermediate French II	3
FR 225	Intermediate French III	3
FR 226	Intermediate French IV	3
FYS 105	First Year Seminar - Communication Skills	2-4
GER 125	Intermediate German I	3
GER 126	Intermediate German II	3
GER 225	Intermediate German III	3
GER 226	Intermediate German IV	3
HON 140	Writing & Research I	4
HON 441	Writing & Research III: Honors Thesis	2
ITAL 125	Intermediate Italian I	3
ITAL 126	Intermediate Italian II	3
ITAL 225	Intermediate Italian III	3
ITAL 226	Intermediate Italian IV	3
JAPN 125	Intermediate Japanese I	3
JAPN 126	Intermediate Japanese II	3
JAPN 225	Intermediate Japanese III	3
JAPN 226	Intermediate Japanese IV	3
JRN 200	Introduction to Journalism	3
JRN 235	News Writing and Reporting I	3
WL 125	Intermediate Modern Language I	3
ML 126	Intermediate Modern Language II	3
WL 200	Topics in World Language Studies	0.5-3
POL 125	Intermediate Polish I	3
POL 126	Intermediate Polish II	3
SPAN 125	Intermediate Spanish I	3
SPAN 126	Intermediate Spanish II	3
SPAN 190	Language for Heritage Speakers of Spanish I	3
SPAN 191	Language for Heritage Speakers of Spanish II	3
SPAN 225	Intermediate Spanish III	3
SPAN 226	Intermediate Spanish IV	3
SPAN 261	Business Spanish	3
SPAN 290	Hispanic Culture for Heritage Speakers of Spanish I	3
SPAN 291	Hispanic Culture for Heritage Speakers of Spanish II	3
<b>Subtotal: 6</b>		

## SKILL AREA II. MATHEMATICS

Six credits in total are required, including a mathematics or statistics course (above 101 level) appropriate to the student's major.

One additional course in MATH, STAT, CS, or FYS 106 must be selected from the Skill Area II course list below.

CS 110	Introduction to Web Programming	3
CS 113	Introduction to Computer Programming	3
CS 151	Computer Science I	3
CS 213	Applications of Computing I	3
CS 214	Applications of Computing II	3
MATH 105	Survey of Mathematics for Liberal Arts	3
MATH 106	Mathematical Topics for Liberal Arts	3
MATH 110	Finite Mathematics	3
MATH 113	Structure of Mathematics I: Number Systems	3
MATH 115	Trigonometry	3
MATH 116	Pre-Calculus Mathematics	3
MATH 119	Pre-Calculus with Trigonometry	4
MATH 123	Applied Business Mathematics	3
MATH 124	Applied Calculus with Trigonometry	4
MATH 125	Applied Calculus	3
MATH 135	Applied Engineering Calculus I	3
MATH 136	Applied Engineering Calculus II	3
MATH 152	Calculus I	4
MATH 213	Structure of Mathematics II: Probability & Geometry	3
MATH 221	Calculus II	4
PHIL 221	Introduction to Modern Logic	3
STAT 104	Elementary Statistics	3
STAT 200	Business Statistics	3
STAT 201	Business Statistics II	3
STAT 215	Statistics for Behavioral Sciences I	3
STAT 216	Statistics for Behavioral Sciences II	3

**Subtotal: 6**

## SKILL AREA III. FOREIGN LANGUAGE PROFICIENCY

The University language requirement can be satisfied in any one of the following ways:

1. Completion of a level-three high school foreign language.

2. Elementary proficiency as demonstrated by successfully completing a second-semester level CCSU foreign-language course (112 or 118). Students with no previous background in a language must take the first and second semesters (111 and 112, or 118); students who place out of 111 due to previous background in the language may satisfy the requirement by taking 112 only.
3. Passing the CLEP, a standardized examination which demonstrates knowledge of a foreign language equivalent to completion of a second-semester course or higher.
4. Successful completion of a foreign-language course at a level higher than the second- semester level.
5. Demonstration of native proficiency in a language other than English (requires evaluation of skill level by an appropriate faculty member and/or official documentation, and approval by the Chair of the Department of Modern Languages).

**SKILL AREA IV. UNIVERSITY REQUIREMENT**

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Courses designed to foster personal well-being and the development of academic skills essential for the successful pursuit of a university education.

PE 144 (Fitness/Wellness Ventures) is required of all students entering with fewer than 15 credits, and it is recommended that it be taken in the student's first year.

Those entering with 15 credits or more may complete this requirement with 2-3 additional credits from any of the other skill areas or with the other courses listed below. Please note: remedial courses (099), MATH 101, and elementary language courses (111 or 112) will not fulfill this requirement.

CET 113	Introduction to Information Processing	3
CS 210	Computing and Culture	3
GRT 212	Graphics Technology Systems	3
LSC 150	Library Research in the Digital Age	1
LLA 140	Reading Efficiency	3

**Subtotal: 2-3**

**INTERNATIONAL REQUIREMENT**

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**International Courses**

In view of the increasing relevance of the global context to the future of our students and their need for greater understanding of the world around them, each student must complete 6 credits in courses designated as international. The international designation applies to all courses that substantially contribute to the understanding of the cultural expressions or social, political, and economic conditions of a particular region or country other than the United States. It also applies to courses that systematically offer a comparative international perspective and/or explore contemporary global issues. International courses are indicated in the course description.

In addition, an international on-site education experience (e.g. faculty-led course abroad or semester-long study abroad) that results in approved CCSU transfer credit will fulfill the equivalent number of credits toward the International requirement (this shall apply even if the equivalent CCSU course(s) does not bear an International designation). See the Center for International Education for more information.

The following is a list of courses that meet the international requirement:

ANTH 140	Introduction to Anthropology	CHIN 261	Business Chinese
ANTH 170	Introduction to Cultural Anthropology	CHIN 304	Topics in Chinese Literature [L]
ANTH 239	Work and Culture	CHIN 315	Topics in Chinese Culture
ANTH 240	The Supernatural	CHIN 335	Advanced Chinese for Oral Expression
ANTH 260	Food and Culture	CHIN 336	Advanced Chinese Composition
ANTH 424	Peoples and Cultures of Africa	CINE 270	Studies of World Culture Through Cinema
ANTH 426	People and Cultures of Eastern Europe	CINE 465	Global Cinema
ANTH 428	Cultures of Latin America	CM 110	The Built Environment and Global Society
ANTH 429	Global India	COMM 216	Introduction to Intercultural Communication
ANTH 452	Field School in Biological Anthropology	COMM 296	Global Studies in Communication
ART 110	Introduction to Art History	COMM 455	Global Visual Communication
ART 112	History of Art I	COMM 496	Field Studies in Communication
ART 113	History of Art II	DAN 234	Ballroom Dance
ART 210	Greek Art	DAN 299	Dance History
ART 215	The African Diaspora	DAN 398	Contemporary Dance Technique
ART 216	Modern Art	DES 419	History of Design
ART 218	Renaissance Art	ECON 430	International Economics
ART 412	Oriental Art	ECON 435	Economic Development
ART 494	Location Studies-Art	ENG 203	Survey of World Literature: Ancient to Early Modern [L]
BIO 102	International Search in Biology	ENG 204	Survey of World Literature: 17th Century to the Present [L]
BIO 132	Introductory Ecology	ENG 214	Studies in International Literature [L]
BIO 171	Introductory Field Studies in Biology	ENG 215	Introduction to Women Writers [L]
BIO 471	International Field Studies in Biology	ENG 262	Introduction to Drama [L]
CHIN 125	Intermediate Chinese I	ENG 347	Latino/a Literature [L]
CHIN 126	Intermediate Chinese II	ENG 363	Greek Literature
CHIN 225	Intermediate Chinese III	ENG 364	Latin Literature
CHIN 226	Intermediate Chinese IV	ENG 365	The Modern European Novel
		ENG 367	Global Novel
		ENG 465	Global Cinema



ENG 488	Studies in World Literature	GEOG 452	European Union
ETM 340	Geometric Dimensioning & Tolerancing	GEOG 459	Field Studies in Regional Geography
FIN 330	International Finance	GER 125	Intermediate German I
FR 125	Intermediate French I	GER 126	Intermediate German II
FR 126	Intermediate French II	GER 225	Intermediate German III
FR 225	Intermediate French III	GER 226	Intermediate German IV
FR 226	Intermediate French IV	GER 304	Introduction to German Literature I [L]
FR 304	Introduction to French Literature [L]	GER 305	Introduction to German Literature II [L]
FR 305	Introduction to Francophone Literature [L]	GER 315	German Civilization to 1800
FR 315	Aspects of French History & Culture	GER 316	German Civilization from 1800 to Present
FR 316	Contemporary France	GER 335	Advanced German for Oral Expression
FR 335	Advanced French for Oral Practice	GER 336	Advanced Structure & Idiom
FR 336	Advanced French Composition	GER 441	Advanced Oral Practice
FR 441	Advanced Oral Practice	HIST 121	World Civilization I
GEOG 120	World Regional Geography	HIST 122	World Civilization II
GEOG 220	Human Geography	HIST 231	Ancient Mediterranean World
GEOG 244	Economic Geography	HIST 232	Medieval Europe
GEOG 290	Geography of Tourism	HIST 233	Renaissance and Enlightenment Europe
GEOG 291	National Parks and World Heritage Sites	HIST 234	Modern Europe
GEOG 434	Mexico, Central America, and the Caribbean	HIST 251	East Asia to 1800
GEOG 435	Japan and Korea	HIST 252	East Asia since 1800
GEOG 436	South America	HIST 253	History of the South Pacific
GEOG 437	China	HIST 277	History of Christianity I
GEOG 438	Australia, New Zealand, and Oceania	HIST 278	History of Christianity II
GEOG 446	Sub-Saharan Africa	HIST 281	History of Latin America to 1823
GEOG 448	Russia and Neighboring Regions	HIST 282	History of Latin America since 1823
		HIST 291	Modern Middle East
		HIST 292	History of Judaism
		HIST 334	Women of Medieval Europe
		HIST 338	Medieval Outlaws and Outcasts
		HIST 341	English History to 1715
		HIST 342	English History since 1715

HIST 343	Modern Ireland: 1690-Present	IS 463	Topics in European Studies
HIST 344	History of Modern Germany		
HIST 347	History of Russia I	IS 464	Topics in Latin American Studies
HIST 348	History of Russia II	IS 465	Topics in Middle East Studies
HIST 353	History of Modern China		
HIST 354	History of Modern Japan	IS 490	Field Studies Abroad
HIST 356	History of East Central Europe since 1919	IS 497	Seminar in International Studies
HIST 373	The African Diaspora in the Caribbean since 1500	ITAL 125	Intermediate Italian I
HIST 375	History of Africa to 1800	ITAL 126	Intermediate Italian II
HIST 376	History of Africa Since 1800	ITAL 225	Intermediate Italian III
HIST 379	History of Poland: from the Piasts to Partition, 966-1795	ITAL 226	Italian Structure and Idiom
HIST 380	Modern Poland	ITAL 304	Introduction to Italian Literature I [L]
HIST 421	Britain at the Turn of the 20th Century	ITAL 305	Introduction to Italian Literature II [L]
HIST 452	World War II in Europe	ITAL 315	Italian Civilization to 1861
HIST 453	The Holocaust: A History	ITAL 316	Italian Civilization from 1861 to the Present
		ITAL 335	Advanced Composition and Diction
		ITAL 336	Advanced Structure and Idiom
HON 130	World Cultures I	ITAL 441	Advanced Oral Practice
HON 230	World Cultures II: Topics in World Cultures	ITAL 470	14th-Century Italian Literature
HON 250	Western/World Culture III: Comparative Topics	ITAL 476	16th-Century Italian Literature
HUM 230	Topics in International Studies	ITAL 488	Italian Life and Culture
HUM 250	Topics in European Literature [L]	JAPN 125	Intermediate Japanese I
HUM 330	Selected Topics in Global Cultures	JAPN 126	Intermediate Japanese II
HUM 360	International Studies Through Travel	JAPN 225	Intermediate Japanese III
IS 225	The World as a Total System	JAPN 226	Intermediate Japanese IV
IS 226	Intercultural Sensitivity	JAPN 335	Japanese for Oral Expression I
IS 230	Topics in International Studies	JAPN 336	Japanese for Oral Expression II
IS 240	Caribbean Cultural Patterns	JRN 370	Global News in Context
IS 245	Puerto Rico	LAS 235	International Relations
IS 330	Selected Topics in Global Cultures	LAS 282	Latin American History Since 1823
IS 360	International Studies Through Travel	LAS 316	Latin American Civilization
IS 461	Topics in African Studies	LAS 375	Spanish American Literature I [L]
		LAS 428	Cultures of Latin America
IS 462	Topics in East Asian Studies	LAS 436	Spanish American Literature I

LAW 390	Topics in International Business Law	PS 339	International Law
LING 230	The Study of Language	PS 345	International Terrorism
LTN 347	Latino/a Literature [L]	PS 380	International Conflict and Security
MATH 344	Mathematics in Diverse Cultures	PS 420	Government and Politics of Latin America
MGT 321	International Management	PS 421	Government and Politics of Africa
MGT 395	Field Studies in International Business	PS 425	Asian Politics
MGT 462	International Human Resource Management	PS 434	Government and Politics of the Middle East and North Africa
MGT 495	Seminar in International Business	PS 435	Russian and Eastern Europe
MKT 321	International Marketing	PSY 420	Cross-Cultural Psychology
MKT 495	Field Studies in International Marketing	REL 110	World Religions
ML 126	Intermediate Modern Language II	REL 250	Japanese Religion
ML 200	Topics in Modern Language Studies	REL 256	Philosophy, Religion, and Spirituality
MUS 110	Listening to Classical Music	SET 490	Topics in International Field Studies
MUS 111	Music of the World's People	SOC 424	Genocide and the Modern World
MUS 211	Ethnomusicology	SOC 426	Sociology of Revolution
MUS 235	Music History I	SOC 428	Globalization and Its Discontents
MUS 236	Music History II	SOC 462	Worlds in Motion: Gender, Race and Global Migration
MUS 335	Music History III	SOC 494	Sociological Fields Abroad
PES 345	Philosophy of War and Peace	SPAN 123	Basic Spanish Review
PHIL 211	Global Justice	SPAN 125	Intermediate Spanish I
PHIL 250	Introduction to Asian Philosophy	SPAN 126	Intermediate Spanish II
PHIL 260	African Philosophy	SPAN 128	Intensive Intermediate Spanish I
PHIL 275	Chinese Philosophy	SPAN 190	Language for Heritage Speakers of Spanish I
PHIL 332	The Age of Ideology	SPAN 191	Language for Heritage Speakers of Spanish II
PHIL 345	Philosophy of War & Peace	SPAN 225	Intermediate Spanish III
PHIL 350	Philosophy East & West	SPAN 226	Intermediate Spanish IV
PHIL 366	Existentialism	SPAN 261	Business Spanish
PHIL 376	Buddhist Philosophy	SPAN 290	Hispanic Culture for Heritage Speakers of Spanish I
POL 125	Intermediate Polish I	SPAN 291	Hispanic Culture for Heritage Speakers of Spanish II
POL 126	Intermediate Polish II	SPAN 300	Literary Analysis
PS 104	The World's Political Systems	SPAN 304	Introduction to Spanish Literature I [L]
PS 235	International Relations		
PS 336	West European Governments		
PS 338	International Organization		

SPAN 305	Introduction to Spanish Literature II [L]
SPAN 315	Spanish Civilization
SPAN 316	Latin American Civilization
SPAN 335	Advanced Spanish for Oral Expression
SPAN 336	Advanced Spanish Composition
SPAN 375	Spanish American Literature I [L]
SPAN 376	Spanish American Literature II [L]
SPAN 441	Cross-Cultural Communication
SW 440	Social Work Practice with African Populations
SW 441	Social Work Practice with Latinos
SW 442	The Social Consequences of Immigration
TH 222	History of Fashion
WGSS 334	Women of Medieval Europe
WGSS 335	Women, Marriage, and Family in Early Modern Europe
WGSS 462	World's in Motion: Gender, Race and Global Migration

## **FIRST YEAR EXPERIENCE**

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**Required for all students who enter with fewer than 15 credits and to be taken in the student's first semester.**

This requirement is typically completed by a First-Year Experience (FYE) section of a course in general education and/or within a student's major/school. Those students who do not successfully complete an FYE course in their first semester will be required to successfully complete an FYE course in their second semester.

Note: CRM 101, FYS courses, and other experiences designated by the FYE steering committee can also fulfill the FYE requirement.

## MASTER'S DEGREE PROGRAMS

### ACCOUNTING M.S

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#### Program Rationale

The Master of Science in Accounting (MSA), will provide students with in-depth working knowledge of advanced accounting issues and emerging technologies that are most relevant in the current business environment. Graduates will be equipped to succeed in a wide range of professional accounting careers in public accounting, industry, and government in today's highly competitive, global, and regulated environment. In addition, this program will prepare students to meet the educational requirements of most or all states for CPA licensure.

#### MSA Admission Requirements

An undergraduate degree in accounting is not required for admission to the MSA.

**Applicants with a bachelor's degree in accounting** must have received their degree from a regionally accredited institution of higher education (or the international equivalent). Applicants with an overall undergraduate GPA of 3.00 or higher and a GPA of 3.00 or higher in any post-baccalaureate coursework, may apply for full-time enrollment status (up to 3 or 4 courses per semester) or part-time (1 or 2 courses per semester). Applicants with an overall undergraduate GPA of 2.70 to 2.99 may apply for conditional (part-time) admission. Conditionally admitted students may request full-time status after successful completion of six (6) credits into the program with a GPA of 3.00 or higher.

**Applicants with a bachelor's degree other than in accounting** must have received their degree from a regionally accredited institution of higher education (or the international equivalent). This group of applicants has the following option prior to beginning class in the MSA:

Note: Successful completion of the following foundational courses is required before moving on to the MSA.

Completion of pre-requisite foundational CCSU courses or their equivalent:

- Introduction to Financial Accounting (AC 211)
- Introduction to Managerial Accounting (AC 212)
- Intermediate Financial Accounting I (AC 300)

- Accounting Analytics Professional Competencies (AC 335)
- Intermediate Financial Accounting II (AC 350)
- Intermediate Financial Accounting III (AC 400) or Advanced Accounting
- Cost Accounting (AC 301)
- U.S. Federal Income Taxation (AC 302)
- Accounting Information Systems (AC 340)
- Auditing (AC 445)

GPA admission requirements for this option are 2.70 or greater; however, a GPA of 3.0 or greater is required in the pre-requisite foundational CCSU coursework (or their equivalent) prior to moving on with coursework in the MSA program.

#### To All Applicants

It is highly recommended to apply early for admission to these programs. Decisions regarding applicants with equivalent coursework taken at CCSU will be made as if the applicant holds a CCSU BS in accounting; others will be considered on a case-by-case basis.

#### Items to submit to the Graduate Recruitment and Admissions Office:

- Online graduate application
- Application fee
- Official transcripts from each institution attended (except CCSU)
- Current resume
- Proof of professional license/designation (e.g., CPA, CMA, CIA, CISA, CFE, CFA) or advanced degree (e.g., JD, Master's, or Doctoral) or state CPA or Bar exam scores, if applicable.

Instructions for uploading a resume and proof of licenses/designations or exam scores (if applicable) can be found in the online graduate application.

#### International Students

In addition to the above, international applicants must meet University standards for international admission including submission of:

- TOEFL or IELTS scores

- Course-by-course evaluation of foreign credentials from a NACES member evaluation service
- Original translations of foreign academic records

### Conditional Admission

If conditionally admitted, students may take a maximum of six (6) credits per semester and must maintain a minimum GPA in the program of 3.00. Based on review after six (6) credits in the MSA program and a GPA of 3.00, students may be considered for a change in status from conditional admission to full admission.

### DEGREE REQUIREMENTS

The program is designed for part-time or full-time study.

#### Core Courses

A common core of 15 credits, including the required 0 credit core course AC 582 Capstone Seminar, which students complete toward the end of the degree.

AC 507	Advanced Accounting	3
AC 520	Managerial Analysis & Cost Control	3
AC 524	Accounting for Government and Non-Profit Institutions	3
AC 543	Advanced Accounting Analytics	3
AC 544/FIN 540	Financial Statement Analysis and Valuation	3
AC 582	Capstone Seminar	0

#### Electives

15 credits of approved graduate course work selected from the following approved courses:

AC 545	Advanced Assurance Services	3
AC 546	Advanced Forensic Accounting	3
AC 548	Contemporary Accounting Topics	3
AC 551	Evolution of Modern Accounting	3
AC 552	Taxation of Business Entities	3
AC 560	Taxes and Business Strategy	3
AC 598	Graduate Internship in Accounting	3
BUS 538	Business Quantitative Analytics	3

**Total Credit Hours: 30**

## APPLIED LINGUISTICS M.A.

### Program Rationale:

The Master of Arts degree in Applied Linguistics offers two tracks. One is in the Teaching of English to Speakers of Other Languages (TESOL), which prepares classroom teachers of English as an additional language at all levels, from children to adults and here in Connecticut or anywhere in the world. The second track is in Language

Policy and Planning (LPP), which prepares specialists in social and educational policy related to language for the public, non-profit, and private sectors.

The TESOL track prepares teachers to use effective methods to meet the varying instructional needs of students of English as an additional language while encouraging such students to maintain their native languages and cultural competencies. Students receive a thorough grounding in practical skills and methods of language teaching to develop communicative competence and appropriate academic skills in English and to become professionally competent on issues involving the nature of language and language acquisition and the role of language in society.

The LPP track prepares policy specialists with a thorough foundation in cognitive and social aspects of language that can inform a career guiding educational and institutional policies on language use, pedagogy, linguistic diversity, and multilingualism. Students also develop skills in the tailoring and critique of language policies (including language education policy) that can be implemented in a broad range of contexts.

### Program Learning Outcomes:

Graduates of the program in either track will be able to:

- 1) Analyze and interpret linguistic phenomena using current linguistic theory (what language is), including:
  - a) Use theories of syntax to gain substantial insights into the grammatical structure of sentences and related utterances in English and other languages
  - b) Use theories of phonology to gain substantial insights into the sound systems that underlie the articulation and comprehension of English and other languages
  - c) Use sociolinguistic theory to gain substantial insights into the use, diversity, status, and policy norms of English and other languages
- 2) Analyze and interpret linguistic phenomena using current theories of second language acquisition (how language is learned), including:
  - a) Use cognitive theories relevant to second language acquisition (SLA) to gain substantial insights into the stages and processes of language development in learners of all ages and backgrounds
  - b) Use social theories relevant to SLA to gain substantial insights into the language development of all social actors in a diverse range of contexts

3) Produce effective materials relevant to the practice of applied linguistics, including lesson plans for language learning and clearly articulated policy position papers.

In addition, students in the TESOL track will be able to:

- 4) Design, implement, and assess lessons and curricula in TESOL using current methods and best practices in the profession (how language is taught), including:
  - a) Evaluate a wide range of teaching methods and strategies and integrate them into lessons and curricula in a way that optimizes learning
  - b) Design lesson plans and broader curricular units based on institutional, governmental, or professional standards that connect learner needs to a variety of classroom activities
  - c) Implement lessons that are informed by immediate learner needs and that create opportunities for learners to construct knowledge in a supportive, interactive environment
  - d) Integrate the four language skills of listening, speaking, reading, and writing with a wide range of content knowledge in motivating lessons
  - e) Use a wide range of authentic and sheltered materials in lessons to address language and content objectives for a variety of learners
  - f) Use assessment tools, collaboration with colleagues, professional development opportunities, and institutional resources to improve student learning, augment teaching repertoires, and advocate for learners

Finally, students in the LPP track will be able to:

- 5) Design, implement, and assess institutional language policies based on current research and theory (how to guide language use), including:
  - a) Integrate a broad range of theories, models, and variables from the study and practice of language policy and planning
  - b) Address the complexities of individual and societal multilingualism within specific institutional contexts
  - c) Produce practical policy recommendations based on the needs of specific institutional contexts
  - d) Reflect on methods for assessing the effectiveness of policies and the fit between linguistic realities and goals

**Admission Requirements:**

To qualify for the Master of Arts degree program in Applied Linguistics, an applicant must meet the following

requirements: (1) have demonstrated an advanced level of proficiency in standard academic English (by submitting a completed copy of our program's English Proficiency Form), (2) have completed at least three credits of study in a second language (non-native speakers of English may use English to satisfy this requirement), and (3) have a GPA of 3.00 on a four-point scale both in overall undergraduate and (if applicable) graduate course work.

An applicant who does not meet the 3.00 GPA requirement but has a cumulative GPA at or above 2.40 might be admitted conditionally (based on additional evidence of academic potential provided in the Letter of Application) at the discretion of the department.

Applicants must submit the following to the Graduate Recruitment and Admissions Office:

- Graduate Application Form;
- Official TOEFL IBT score of 79 or higher, if required to do so based on the English Proficiency Form;
- Official undergraduate and (if applicable) graduate transcripts from every institution attended except CCSU; and
- Application fee.

Applicants must also submit to the English Department (Attn. TESOL Coordinator), at the same time that application materials are submitted to the Graduate Recruitment and Admissions Office:

- Letter of application detailing reasons for wishing to pursue graduate study in Applied Linguistics, the preferred track (TESOL or LPP), and career plans and goals in Applied Linguistics;
- A completed copy of the program's English Proficiency Form

No applications will be considered until all materials have been received. Applications will be evaluated by the department on an ongoing basis.

Before degree candidates register for course work they should read the program handbook and consult with their assigned advisors at the start of their programs. Additional information may be obtained from the advisor and in this catalog under General Information.

**COURSE AND CAPSTONE REQUIREMENTS:**

This program offers two Track options, either TESOL or LPP. For the capstone, the TESOL track allows two options, Plan A (36 credits, including a thesis) or Plan B (36 credits, plus a comprehensive examination), while the LPP track allows only one option, Plan A (30 credits, including a thesis). See the TESOL Program Handbook for additional details and requirements of these tracks and capstone options.

**Applied Linguistics Core (15 credits; required for either track):**

LING 500/LING 400	Advanced Linguistic Analysis	3
LING 507/LING 497	Second Language Acquisition Theory	3
LING 512/LING 412	Syntactic Theory	3
LING 513/LING 413	Phonological Theory	3
LING 515/LING 415	Language Policy and Planning Theory	3

**Track in Teaching English to Speakers of Other Languages (TESOL): Students must complete the Applied Linguistics Core, plus another 21 credits, including:**

LING 506/LING 496	Methods in TESOL I	3
LING 535/LING 435	Second Language Assessment	3
LING 596	Methods in TESOL II	3
LING 598	Research in Applied Linguistics	3

**One TESOL Elective, from the following (3 credits):**

LING 514/LING 414	Variation and Discourse Theory	3
LING 530/LING 430	Advanced Topics in Applied Linguistics	3
LING 531/LING 431	English Historical Linguistics	3
LING 533	Second Language Composition	3
LING 537/LING	Advanced Issues in Multilingualism	3

437 LING 538/LING 438	Methods in Second Language Content Instruction	3
LING 550/LING 450	Internship	3
RDG 581	Language Arts Instruction for the English Learner	3

**One Education Elective, from the following (3 credits):**

EPS 500	Contemporary Educational Issues	3
EPS 516	School and Society	3
EPS 524	Foundations of Contemporary Theories of Curriculum	3
EPS 525	History of American Education	3
EPS 528	Comparative and International Education	3
EPS 538	The Politics of Education	3
EPS 583	Sociological Foundations of Education	3

**TESOL Capstone (3 credits, either Plan A or Plan B), as follows:**

LING 599	Thesis	3
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or Comprehensive Exam and one additional TESOL Elective course, as approved by advisor.

**Track in Language Policy and Planning (LPP): Students must complete the Applied Linguistics Core, plus another 15 credits, including TWO LPP Electives from the following:**

LING 506/LING 496	Methods in TESOL I	3
LING 514/LING 414	Variation and Discourse Theory	3
LING 530/LING 430	Advanced Topics in Applied Linguistics	3
LING 531/LING 431	English Historical Linguistics	3
LING 537/LING 437	Advanced Issues in Multilingualism	3
LING 550/LING 450	Internship	3

**Plus, one general policy elective from the following (or as approved by the advisor):**

EPS 525	History of American Education	3
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EPS 528	Comparative and International Education	3
EPS 538	The Politics of Education	3
EPS 583	Sociological Foundations of Education	3
PS 501	Advanced Studies in International Law	3
<b>LPP Capstone (6 credits, Plan A only), as follows:</b>		
LING 598	Research in Applied Linguistics	3
LING 599	Thesis	3

**Total Credit Hours: 36**

**Additional Information** (for both tracks)

All planned programs and course sequences should be approved by a TESOL advisor prior to registration. Degree candidates must file a planned program before completing 16 credits of graduate course work.

Students in the TESOL track may elect Plan A only with the approval of an advisor and second reader in the program. Plan A students take LING 598 first and then LING 599 while writing the thesis. The Graduate Studies Office provides a useful Handbook about Thesis preparation and formatting.

Plan B students take one additional elective course from the TESOL Elective list above. Comprehensive Exams involve five questions, which are scored up to 20 points each. A student must earn a minimum of 80 points total on the five questions in order to pass the exam. If a student fails, the entire exam must be retaken. The exam is offered only twice per year and can be attempted only three times. Students may not switch to Plan A after a failed attempt at the exam.

It is expected that a degree candidate will have control of the English language beyond mere communicative adequacy. It shall be the joint decision of the TESOL faculty whether a degree candidate's control of spoken and/or written English is appropriate to the profession. The faculty will recommend various remedies for any candidate whose proficiency in Standard English is deemed deficient.

**ATHLETIC TRAINING M.S.**

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The MSAT program prepares students to become healthcare practitioners who collaborate with other medical professional in providing optimal care for patients involved in active lifestyles. The curriculum and clinical experiences prepare students for the Board of Certification (BOC) exam required to become a Certified Athletic Trainer (ATC). The MSAT curriculum focuses on

professional content and hands-on application with a varied patient population. In addition to quality classroom instruction, students will be provided with ample opportunities to develop clinical skills under the supervision of an athletic training preceptor. Patient contact will include student-athletes at CCSU and non-athletic/non-orthopedic patients outside of CCSU. The MSAT program requires continuous enrollment and progression.

**Program Learning Outcomes:**

1. Knowledge (Cognitive)
  - Demonstrate the acquisition of knowledge and understanding necessary for the safe practice as a health care professional in the areas of prevention, clinical evaluation, diagnosis, immediate care, treatment and rehabilitation.
  - Demonstrate the ability to document findings of initial evaluations, management plans, and referrals.
2. Knowledge (Skills and Application)
  - Demonstrate the acquisition of the established necessary skills that are the basis for clinical proficiency.
  - Demonstrate the ability to investigate, integrate concepts and problem solve in order to communicate the assessment findings to the patient and other health care team members.
  - Demonstrate the ability to use comprehensive therapeutic judgment and the ability to identify modifying influences or deviations from the norm.
3. Practice Ethically, Professionally and Compassionately
  - Demonstrate the ability to provide health care services of an athletic trainer to a variety of patient populations without prejudice to age, activities, gender, and social or cultural difference.
  - Demonstrate the ability to function as a health care provider during challenging situations by remaining composed and professional, while affording quality compassionate care to the patient.
  - Practice confidentiality and abide by professional ethical standards of the profession.
4. Professional Development and Collaboration
  - Practice with the intent to advance personal professional knowledge and clinical skills by remaining current in the profession through participation in seminars and research, in order to best serve the patient population through the practice of evidence-based medicine.
  - Participate in advocating the athletic training profession through engagement with local community

events by volunteering time and professional skills.

- Practice with a commitment to share the knowledge and skills of the athletic trainer in support of joint collaboration efforts that lead to improving the quality of patient care.

### Admissions Requirements:

There are 2 paths to gain admission to the MSAT. CCSU students enrolled in the 3+2 accelerated program can apply to the Master's Degree in Athletic Training in their junior year. Students who already hold a Bachelor's Degree, preferably in exercise science or a related field, apply directly to the MSAT. Candidates for admission will be considered based on the following criteria:

- 1) Minimum undergraduate GPA of 2.70, preferably a 3.00 on a 4.00 scale (where A is 4.00)
- 2) A letter of application demonstrating a command of the English language which includes detailed reasons for wishing to pursue graduate study in athletic training
- 3) Two letters of recommendation, preferably one of which is from an instructor who can attest to the applicant's preparedness for graduate study in athletic training
- 4) Successful completion (C- or better) of the following courses, either the specified CCSU courses or their equivalents:
  - a. Human Anatomy and Physiology with labs (8 credits)
    - (EXS 207, EXS 208, EXS 211, EXS 212 or BIO/BMS 318 and BIO/BMS 319 at CCSU)
  - b. Biomechanics/Kinesiology or Physics (3 credits)
    - (EXS 216 or PHYS 111 at CCSU)
  - c. Human Nutrition (3 credits)
    - (EXS 307 or BIO 401 at CCSU)
  - d. Exercise Physiology (3 Credits)
    - (EXS 408 at CCSU)
  - e. Courses in Biology, Chemistry, Physics, Psychology (3 Credits each)

Instructions for uploading the letter of application, and for obtaining and submitting the letters of recommendation, will be found within the online application.

The application deadline for Summer admission is April 1.

### Admission Process:

Students submit an application to the Graduate Recruitment & Admissions Office. The Program Director is notified electronically once a student has a complete application for the MSAT. A complete application consists of undergraduate transcripts, essay, 2 letters of recommendation. The program director reviews the applicant's material in conjunction with other MSAT faculty. The program director sends a decision to the Graduate Recruitment & Admissions Office with a recommendation who then officially notifies the applicant.

## REQUIREMENTS

### Requirements List

ATR 500	Pre-Clinical in Athletic Training	1
ATR 501	Clinical I: Acute Care & Emergency Medicine	3
ATR 502	Clinical II: Orthopedics	3
ATR 503	Clinical III: Rehabilitation	1
ATR 504	Clinical IV: PPE/Pre-Season Experience	2
ATR 505	Clinical V: General Medical	3
ATR 506	Clinical VI: Non-Sport & Adolescent	6
ATR 512	Principles of Professional Practice	3
ATR 513	Organization & Administration in Sports Medicine	3
ATR 517/EXS 417/ATR 517	Prevention and Care in Sports Medicine	3
ATR 518	Clinical Application of Prevention & Care in Sports Medicine	1
ATR 519	Seminar in Emergency Medicine in Sport	1
ATR 521/EXS 421/ATR 521	Pharmacology in Sports Medicine	3
ATR 527	Therapeutic Exercise	3
ATR 528	Clinical Exam & Diagnosis in Sports Medicine I	3
ATR 529	Clinical Exam & Diagnosis in Sports Medicine II	3
ATR 532	Psychosocial Aspects of Injury & Rehabilitation	3
ATR 540	Therapeutic Interventions	3
ATR 590	Capstone Experience in Athletic Training	3
EXS 519	Sport Biomechanics	3
PE 597	Research in Physical Education and	3

PE 598	Exercise Science I Research in Physical Education and Exercise Science II	3
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**Total Credit Hours: 60**

## **ART EDUCATION M.S.**

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### **Program Rationale:**

The Department of Art presently offers a broad-based master's degree which accommodates specializations in art education and/or studio arts (ceramics, painting, illustration, sculpture, printmaking, or others). Both concepts and technical excellence are stressed. The M.S. in Art Education program is designed primarily to meet the needs of experienced art educators who have completed an undergraduate program in the field. The program does not lead to teaching certification.

### **Program Learning Outcomes:**

Students accepted into the program are expected to:

- Engage in aesthetic inquiry to understand their creative practice and the practice of other artists through the process of creating, looking, reading, and writing about these practices; and
- Increase or develop an understanding of creative idea development, direction, and production by either: a) creating a significant, coherent, highly resolved body of work for exhibition, with accompanying exegesis, (Plan C) or b) writing a traditional thesis that applies methodologies appropriate for art education to examine topics and/or issues within the discipline (Plan A).

### **Admission Requirements:**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

In addition to fulfilling the admission requirements of the School of Graduate Studies, applicants must successfully pass a portfolio review and essay evaluation to be fully admitted into graduate programs in the Department of Art. Interested applicants can contact the Department of Art directly at 860-832-2620.

### **General Portfolio Requirements for All Applicants:**

The portfolio must consist of 15–20 slides or digital images of the applicant's artwork in a variety of media that demonstrate the applicant's best studio practice. It is important that no work submitted be copied from photographs or other works of art. Multiple views are recommended for original work in sculpture, ceramics, 3D design and/or crafts.

### **Master of Science in Art Education Portfolio Requirements:**

1. Applicants for Master of Science in Art Education must submit a variety of media that demonstrate their best studio practice.
2. Applicants who intend to focus on a particular studio area, such as drawing, ceramics, or painting, should also include a series of at least five pieces that show a consistent direction, for example, invented figure compositions, portraits, landscapes and/or abstractions.

### **Graduate Admission Essay**

Applicants must submit a completed essay describing their background and interest in the program. On the initial page, an applicant should include his or her name and the program to which he or she is applying (Master of Science in Art Education or Post-Baccalaureate). The essay should be two pages, double-spaced. In the essay, applicants should:

1. Give a brief account of their background in relation to education, occupation, and activities relevant to the field of art and art education;
2. Discuss the reasons for choosing an advanced degree in art, some of the ideas in which they are currently interested, and future areas they would like to explore; and
3. Include a brief discussion of the work that was submitted for the portfolio review.

### **Where to Submit Additional Application Materials**

Instructions for uploading the essay will be found within the online graduate application. The portfolio should be sent directly to the Department of Art:

Central Connecticut State University  
 Department of Art, Maloney Hall  
 RE: Graduate Admission Materials  
 1615 Stanley Street  
 New Britain, CT 06050

At the same time, the graduate application and official transcripts from each institution are to be submitted to the Graduate Admissions Office.

Contact: 860-832-2620

### **COURSE AND CAPSTONE REQUIREMENTS:**

33 credits, including thesis/Plan A or exhibition or project/Plan C

#### **Professional Education**

ART 500	Problems in Art Education	3
ART 598	Research in Art Education	3
ART 597	Exhibition Research (Plan C) or	3
ART 599	Thesis (Plan A)	3
<b>and one of the following:</b>		
EPS 500	Contemporary Educational Issues	3
EPS 516	School and Society	3
EPS 524	Foundations of Contemporary Theories of Curriculum	3
EPS 525	History of American Education	3
EPS 538	The Politics of Education	3
EPS 583	Sociological Foundations of Education	3

**Subtotal: 12**

#### **Art Concentration**

Department offerings, as approved by faculty advisor

**Subtotal: 21**

*Note: No more than nine credits at the 400 level, as approved by the graduate advisor, may be counted toward the graduate planned program of study.*

### **Degree Candidacy**

After completing 15 credits of coursework, the student must apply for Degree Candidacy. The student must present a resume, statement of purpose, and a portfolio of at least five pieces to a committee of the advisor and two other faculty members selected by the student and approved by the advisor. After 27 credits, the student must undergo a final review, including committee approval of the thesis (Plan A) or exhibition/special project (Plan C). The comprehensive exam option (Plan B) is not available. Please follow the directions on the

Policies and Degree Requirements page, linked here, concerning the planned program.

## **BIOLOGICAL SCIENCES: GENERAL PROGRAM M.A.**

### **Program Rationale:**

The master of arts programs provide study in the biological sciences for those graduate students desiring to major in biology. The programs are designed to fulfill the educational needs of biologists who desire further specialization and/or knowledge of recent advances in the field; students who seek a subject matter masters as an intermediate step toward preparation for work at the doctoral level; and teachers who are interested in specializing in a particular area, or updating their knowledge within the discipline of biology. Specialization may be in such areas as botany, zoology, physiology, ecology, and environmental studies. Each student will be assigned an advisor whose function will be to help the student plan a sound program.

### **Program Learning Outcomes:**

Graduate students will:

- demonstrate knowledge in general biology;
- describe scientific methodology and conduct experiments;
- demonstrate a thorough understanding of a specific area of biology;
- be able to read and comprehend primary literature;
- deliver effective oral presentations (poster or PowerPoint); and
- effectively communicate on research in written format.

### **Admission Requirements:**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. A minimum cumulative undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work is required.

### **Additional Materials Required:**

- Narrative statement

In your narrative statement, please include whether you would like to pursue a thesis or non-

thesis version of your degree (if applicable). If you wish to do a thesis, please identify a potential faculty member you might like to work with in our department. It may be helpful to view our faculty web pages or contact potential faculty members by phone or email to discuss your interests. You could also include in the narrative statement your interests in biology and how they developed, your career goals, and how you think a degree in the Biology Department at CCSU will further your education and prepare you for your career.

- Letters of recommendation by three college instructors familiar with your ability and record in biology and the related sciences

The Biology Department also **recommends** the following items;

- Graduate Record Examination scores for the aptitude and advanced biology tests are recommended but not required.

The graduate application, application fee, and official transcripts are to be submitted to the Graduate Recruitment and Admissions Office. Official transcripts must be sent directly to the Graduate Recruitment and Admissions Office from each institution attended except Central Connecticut State University.

Instructions for uploading the statement and for obtaining and submitting the recommendation letters will be found within the online application.

When an applicant's admission folder is complete, it will be forwarded to the department chair. The Departmental Graduate Committee will make a recommendation for acceptance. Students who are accepted will be assigned an advisor at the time of acceptance. If applicable, a thesis advising committee will be assigned after the student begins the program of study.

**COURSE AND CAPSTONE REQUIREMENTS:**

Note: Additional work, as described in the course syllabi, will be required for graduate credit in 400-level courses. Students may take no more than nine credits of 400-level courses.

**Biological Sciences: General Program, MA**

There are two options (Plan A and Plan B) leading to the Master of Arts degree, both of which require 30 credits.

Both Plan A and B require BIO 500 and BIO 540 in addition to 19-20 credits of directed electives in biology or related fields as approved by advisor.

**Plan A: Thesis caption (Two Options)**

BIO 599	Thesis	3 OR 6
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or

BIO 598	Research in Biology and	3
BIO 599	Thesis	3 OR 6

Plan A requires **thesis defense seminar** for both options.

Plan A requires a minimum total of 6 credits for both options.

**Plan B: Comprehensive exam capstone**

BIO 590	Focused Study in Advanced Biology	1 TO 4
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and/or

BIO 591	Independent Research Project in Advanced Biology	1 TO 4
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and

BIO 598	Research in Biology	3
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Plan B requires a Comprehensive Exam.

Plan B requires a minimum total of 6 credits (including BIO 598).

**BIOLOGICAL SCIENCES: ECOLOGY AND ENVIRONMENTAL SCIENCE M.A.**

**30 credits**

**Program Rationale:**

The master of arts programs provide study in the biological sciences for those graduate students desiring to major in biology. The programs are designed to fulfill the educational needs of biologists who desire further specialization and/or knowledge of recent advances in the field; students who seek a subject matter masters as an intermediate step toward preparation for work at the doctoral level; and teachers who are interested in specializing in a particular area, or updating their knowledge within the discipline of biology. Specialization may be in such areas as botany, zoology, physiology,

ecology, and environmental studies. Each student will be assigned an advisor whose function will be to help the student plan a sound program.

### Program Learning Outcomes:

Graduate students will:

- demonstrate knowledge in general biology;
- describe scientific methodology and conduct experiments;
- demonstrate a thorough understanding of a specific area of biology;
- be able to read and comprehend primary literature;
- deliver effective oral presentations (poster or PowerPoint); and
- effectively communicate on research in written format.

### Admission Requirements:

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. A minimum cumulative undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work is required.

### Additional Materials Required:

- Narrative statement. In your narrative statement, please include whether you would like to pursue a thesis or non-thesis version of your degree (if applicable). If you wish to do a thesis, please identify a potential faculty member you might like to work with in our department. It may be helpful to view our faculty web pages or contact potential faculty members by phone or email to discuss your interests. You could also include in the narrative statement your interests in biology and how they developed, your career goals, and how you think a degree in the Biology Department at CCSU will further your education and prepare you for your career.
- Letters of recommendation by two college instructors familiar with your ability and record in biology and the related sciences. In cases where acquiring letters from college instructors creates undue hardship for an applicant, it may be acceptable to use letters from past or present supervisors. Please email the Chair of the Biology Department Graduate Studies Committee if you require further clarification or feel this applies to your situation.

The Biology Department also **recommends** the following items;

- Graduate Record Examination scores for the aptitude and advanced biology tests are recommended but not required.

The graduate application, application fee, and official transcripts are to be submitted directly to Graduate Recruitment and Admissions Office from each institution attended except Central Connecticut State University.

Instructions for uploading the statement and for obtaining and submitting the recommendation letters will be found within the online application.

When an applicant's admission folder is complete, it will be forwarded to the department chair. The Departmental Graduate Committee will make a recommendation for acceptance. Students who are accepted will be assigned an advisor at the time of acceptance. If applicable, a thesis advising committee will be assigned after the student begins the program of study.

Contact: 860-832-2645

### REQUIREMENTS

#### Biology Course Component

BIO 500	Seminar in Biology	1 TO 2
BIO 515	Foundations of Ecology	3
BIO 540	Topics in Advanced Biology	3 TO 4

with a topic focus appropriate to the specialization (may be repeated with different topics).

#### Biology electives: 16-17 additional credits in biology or related fields approved by an Ecology and Environmental Science Advisor.

Appropriate courses in the biology electives may include:

BIO 508	Coastal Ecology	3
BIO 509	Coastal Ecology Laboratory	1
BIO 540	Topics in Advanced Biology	3 TO 4
BIO 571	Advanced Field Studies in Biology	1 TO 4
BIO 590	Focused Study in Advanced Biology	1 TO 4
BIO 598	Research in Biology	3

BIO 305	Ecology	4
BIO 421	Marine Invertebrate Biology	4
BIO 516/BIO 425	Advanced Biology of Marine and Freshwater Algae	4
BIO 434	Ecology of Inland Waters	4
BIO 436	Environmental Resources and Management	3
BIO 538/BIO 438	Advanced Aquatic Pollution	4
BIO 440	Evolution	3
BIO 444	Plant Taxonomy	3

**Research**

**Plan A: Thesis capstone (Two Options)**

BIO 599	Thesis	3 OR 6
	or	
BIO 598	Research in Biology and	3
BIO 599	Thesis	3 OR 6

Plan A requires **thesis defense seminar** for both options.

Plan A requires a minimum total of 6 credits for both options.

**Plan B: Comprehensive exam capstone**

BIO 590	Focused Study in Advanced Biology	1 TO 4
	and/or	
BIO 591	Independent Research Project in Advanced Biology	1 TO 4
BIO 598	Research in Biology	3

Plan B requires a Comprehensive Exam.

Plan B requires a minimum total of 6 credits (including BIO 598).

**BIOLOGICAL SCIENCES: GENERAL PROGRAM  
M.S.**

**Program Rationale:**

The General Program is for those who wish to expand their background in the broad area of biology or who wish to specialize in a particular aspect of this discipline. Students who as undergraduates majored in areas other than biology may also pursue a master's degree in this program.

The planned program of graduate study will be developed by a student and his or her advisor and will be based upon the student's undergraduate record and educational needs.

**Program Learning Outcomes:**

Graduate students will:

- demonstrate knowledge in general biology;
- describe scientific methodology and conduct experiments;
- demonstrate a thorough understanding of a specific area of biology;
- be able to read and comprehend primary literature;
- deliver effective oral presentations (poster or PowerPoint); and
- effectively communicate on research in written format.

**Admission Requirements:**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum cumulative undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

**Additional Materials Required:**

- Narrative statement

In your narrative statement, please include whether you would like to pursue a thesis or non-thesis version of your degree (if applicable). If you wish to do a thesis, please identify a potential faculty member you might like to work with in our department. It may be helpful to view our faculty web pages or contact potential faculty members by phone or email to discuss your interests. You could also include in the narrative statement your interests in biology and how they developed, your career goals, and how you think a degree in the Biology Department at CCSU will further your education and prepare you for your career.

- Letters of recommendation by two college instructors familiar with your ability and record in biology and the related sciences. In cases where acquiring letters from college instructors creates undue hardship for an applicant, it may be acceptable to use letters from past or present supervisors. Please email the Chair of the Biology Department Graduate Studies Committee

if you require further clarification or feel this applies to your situation.

The Biology Department also **recommends** the following items;

- Graduate Record Examination scores for the aptitude and advanced biology tests are recommended but not required.

The graduate application, application fee, and official transcripts are to be submitted to the Graduate Recruitment and Admissions Office. Official transcripts must be sent directly to the Graduate Recruitment and Admissions Office from each institution attended except Central Connecticut State University.

Instructions for uploading the statement and for obtaining and submitting the recommendation letters will be found within the online application.

Contact: 860-832-2645

### **COURSE AND CAPSTONE REQUIREMENTS (30 CR)**

#### **Biology Requirements**

BIO 500	Seminar in Biology	1 TO 2
BIO 598	Research in Biology	3

#### **Elective Courses as required for 30 credits**

EPS 500	Contemporary Educational Issues or	3
EPS 516	School and Society or	3
EPS 524	Foundations of Contemporary Theories of Curriculum or	3
EPS 525	History of American Education or	3
EPS 538	The Politics of Education or	3
EPS 583	Sociological Foundations of Education	3

or BIO or BMS electives as approved by advisor.

Note: Additional work, as described in the course syllabi, will be required for graduate credit in 400-level courses. Students may take no more than nine credits of 400-level courses.

#### **Research**

##### **Plan A: Thesis capstone (Two Options)**

BIO 599	Thesis	3 OR 6
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Plan A requires a **thesis defense seminar** for both options.

##### **Plan B: Comprehensive exam capstone**

Plan B requires an **oral comprehensive exam**.

**Total Credit Hours: 30**

### **BIOLOGICAL SCIENCES: GLOBAL SUSTAINABILITY M.A.**

#### **Program Rationale:**

The master of arts programs provide study in the biological sciences for those graduate students desiring to major in biology. The programs are designed to fulfill the educational needs of biologists who desire further specialization and/or knowledge of recent advances in the field; students who seek a subject matter masters as an intermediate step toward preparation for work at the doctoral level; and teachers who are interested in specializing in a particular area, or updating their knowledge within the discipline of biology. Specialization may be in such areas as botany, zoology, physiology, ecology, and environmental studies. Each student will be assigned an advisor whose function will be to help the student plan a sound program.

#### **Program Learning Outcomes:**

Graduate students will:

- demonstrate knowledge in general biology;
- describe scientific methodology and conduct experiments;
- demonstrate a thorough understanding of a specific area of biology;
- be able to read and comprehend primary literature;
- deliver effective oral presentations (poster or PowerPoint); and
- effectively communicate on research in written format.

#### **Admission Requirements:**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. A minimum cumulative undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work is required.

#### **Additional Materials Required:**



- Narrative statement

In your narrative statement, please include whether you would like to pursue a thesis or non-thesis version of your degree (if applicable). If you wish to do a thesis, please identify a potential faculty member you might like to work with in our department. It may be helpful to view our faculty web pages or contact potential faculty members by phone or email to discuss your interests. You could also include in the narrative statement your interests in biology and how they developed, your career goals, and how you think a degree in the Biology Department at CCSU will further your education and prepare you for your career.

- Letters of recommendation by three college instructors familiar with your ability and record in biology and the related sciences  
The Biology Department also **recommends** the following items;

- Graduate Record Examination scores for the aptitude and advanced biology tests are recommended but not required.

The graduate application, application fee, and official transcripts are to be submitted to the Graduate Recruitment and Admissions Office. Official transcripts must be sent directly to the Graduate Recruitment and Admissions Office from each institution attended except Central Connecticut State University.

Instructions for uploading the statement and for obtaining and submitting the recommendation letters will be found within the online application.

Contact: 860-832-2645

30 credits

**COURSE AND CAPSTONE REQUIREMENTS:**

**Sustainability component**

SUST 500	Social, Political, and Ethical Dimensions of Global Sustainability	3
SUST 501	Contemporary Challenges in Environmental Sustainability	3
SUST 502	Science for Sustainability	3

**Biology course component**

**Core**

BIO 500	Seminar in Biology	1 TO 2
BIO 515	Foundations of Ecology	3
BIO 540	Topics in Advanced Biology	3 TO 4

**Remaining 7-8 credits from the following as approved by the student's major advisor:**

BIO 508	Coastal Ecology	3
BIO 509	Coastal Ecology Laboratory	1
BIO 540	Topics in Advanced Biology	3 TO 4
BIO 571	Advanced Field Studies in Biology	1 TO 4
BIO 590	Focused Study in Advanced Biology	1 TO 4
BIO 598	Research in Biology	3
BIO 305	Ecology	4
BIO 421	Marine Invertebrate Biology	4
BIO 516/BIO 425	Advanced Biology of Marine and Freshwater Algae	4
BIO 434	Ecology of Inland Waters	4
BIO 436	Environmental Resources and Management	3
BIO 538/BIO 438	Advanced Aquatic Pollution	4
BIO 440	Evolution	3
BIO 444	Plant Taxonomy	3

**Research**

**Plan A: Thesis capstone (Two Options)**

BIO 599	Thesis	3 OR 6
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or

BIO 598	Research in Biology and	3
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BIO 599 Thesis 3 OR  
6

Plan A requires **thesis defense seminar** for both options.

Plan A requires a minimum total of 6 credits for both options.

**Plan B: Comprehensive exam capstone**

BIO 590 Focused Study in Advanced Biology 1 TO  
4

and/or

BIO 591 Independent Research Project in 1 TO  
Advanced Biology 4

BIO 598 Research in Biology 3

Plan B requires a Comprehensive Exam.

Plan B requires a minimum total of 6 credits (including BIO 598).

**BIOLOGICAL SCIENCES: WILDLIFE AND  
CONSERVATION BIOLOGY M.S.**

**30 Credits**

**Program Rationale:**

The specialization in Wildlife and Conservation Biology is designed to train students for professional careers as wildlife or conservation biologists, lab technicians, or provide adequate preparation for entry into a Ph.D. program. Students in the program will acquire the necessary background and research skills to measure, monitor, and protect the world's biodiversity. Students will learn to conduct supervised research, network with other professionals, gain relevant field and lab skills, and experience teaching.

The specialization in Wildlife and Conservation Biology has several unique aspects that separate it from other graduate programs. The specialization will be administered through the Biology Department at CCSU, however, to capitalize on the expertise currently found throughout the CSU system, faculty from all four CSU's may serve on thesis committees. Students will also be able to take suitable coursework at more than one of the CSU campuses. Coursework in the specialization will be interdisciplinary and incorporate performance-based assessment to verify the acquisition of critical skills. It is a research thesis only program and each thesis will be required to have a collaborative component with a state or federal agency or non-profit organization. Each thesis is

also required to have at least one clear deliverable that is directly associated with the conservation component of the project.

**Overall Learning Goals/Principal Learning Outcomes for the Program:**

- 1) Students will develop expertise in field and lab methods used in wildlife and conservation biology
- 2) Students will increase their scientific literacy in wildlife and/or conservation biology
- 3) Students will experience the stressful physical conditions they may encounter in future careers during rigorous field work (**Varies depending on student's career path**)
- 4) Students will develop the necessary written skills to publish scientific research in reports and in scientific journals
- 5) Students will construct and deliver an oral presentation at a professional conference
- 6) Students will gain practical grant writing experience
- 7) Students will gain practical teaching experience by preparing and teaching lecture and labs

**Requirements during program:**

- 1) Thesis Proposal, Written thesis with oral defense
- 2) Planned Program including required coursework from core and electives
- 3) Small internal/external grant submission
- 4) Teach two lectures and one lab under supervision
- 5) Present at a professional conference (oral or poster)
- 6) Physical fitness test (**Only for those that wish to pursue careers that require fieldwork**)

**Admission Requirements:**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. A minimum cumulative undergraduate GPA of 3.0 on a 4.00 point scale (where A is 4.00), or its equivalent, and overall good standing (3.00 GPA) in all post-baccalaureate course work is required.

Graduate Record Examination (GRE) General (No minimum will be required)

Narrative statement describing formative experiences that lead to your interest in wildlife conservation or conservation biology.

Letters of recommendation by two college instructors or supervisors (where applicable), familiar with your ability and record in biology and the related sciences.

Sufficient preparation in the biological sciences (See Prerequisites below). Note that any deficiencies will have to be made up at the beginning of the graduate program.

**Prerequisite Courses (Candidates admitted without the required prerequisite courses will be considered Conditionally Accepted and are required to make these up at the beginning of the program. Note that only one 400 level course may be used in the planned program.)**

**Subject Area Preparation**

General Ecology. Satisfied by BIO 405 Ecology or equivalent\*

Genetics: Satisfied by BIO 484/BIO 584, BMS 306 or equivalent\*

Introduction to Statistics. Satisfied by STAT 104 Elementary Statistics or equivalent\*

\*Students that are attempting to meet the prerequisite requirements by taking equivalent courses that are not listed above are strongly encouraged to discuss their choices with the program coordinator before and during the application process.

*Additional Recommended*

\*\*A course in animal or plant physiology (BIO 449).

\*\*If you plan to apply to the federal government for a position in a wildlife-related field.

The graduate application, application fee, and official transcripts are to be submitted directly to Graduate Recruitment and Admissions Office from each institution attended except Central Connecticut State University.

Instructions for uploading the statement and for obtaining and submitting the recommendation letters will be found within the online application.

When an applicant's admission folder is complete, it will be forwarded to the department chair. The Departmental Graduate Committee will make a recommendation for acceptance. Students who are accepted will be assigned an advisor at the time of acceptance. If applicable, a thesis advising committee will be assigned after the student begins the program of study.

Contact: Dr. Paul Hapeman, 860-832-2671

**REQUIREMENTS (30 CREDITS)**

**Core Courses (11-12 Credits)**

BIO 500	Seminar in Biology	1 TO 2
BIO 587	Advanced Wildlife Techniques	4
BIO 598	Research in Biology	3
GEOG 501	Geographic Information Systems: Basics and Beyond	3

**Example Biology Electives, 12-13 credits of the following:**

BIO 584	Advanced Conservation Genetics	4
BIO 586	Advanced Conservation Biology	3
BIO 582	Advanced Mammalogy	4
BIO 469	Entomology	4
BIO 420	Ornithology	4
BIO 507	Advanced Stream Ecology	4
BIO 508	Coastal Ecology and	3
BIO 509	Coastal Ecology Laboratory	1
BIO 540	Topics in Advanced Biology	3 TO 4

The following elective courses could also be taken at other CSU campuses:

BIO 555 Herpetology, 4 credits, WCSU

BIO 502 Population and Community Ecology, 3 credits, SCSU

BIO 525 Ichthyology, 3 credits, SCSU

BIO 513 Coastal Ecosystem Management, 3 credits, SCSU

BIO 540 Topics in Advanced Biology courses should be selected with a topic focus appropriate to the specialization (may be repeated with different topics).

**Research**

**Plan A: Thesis Capstone**

BIO 599	Thesis	3 OR 6
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Plan A requires research-based thesis and thesis defense seminar.

Plan A requires 6 credits.

**Total Credit Hours: 30**

**BIOLOGICAL SCIENCES: HEALTH SCIENCES SPECIALIZATION M.S.**

**30-31 credits**

**Program Rationale:**

The MS Biological Sciences: Health Sciences Specialization is for those who wish to expand their background in the areas of human biology in preparation for research or work at the doctoral level or in health professions, as well as for teachers wishing to specialize or update their knowledge in the area of human biology.

**Program Learning Outcomes:**

Graduate students will:

- demonstrate knowledge in general biology;
- describe scientific methodology and conduct experiments;
- demonstrate a thorough understanding of a specific area of biology;
- be able to read and comprehend primary literature;
- deliver effective oral presentations (poster or PowerPoint); and
- effectively communicate on research in written format.

**Admission Requirements:**

Applicants must hold a bachelor’s degree from a regionally accredited institution of higher education. Applicants must also have a minimum cumulative undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

**Additional Materials Required:**

- Narrative statement. In your narrative statement, please include whether you would like to pursue a thesis or non-thesis version of your degree (if applicable). If you wish to do a thesis, please identify a potential faculty member you might like to work with in our department. It may be helpful to view our faculty web pages or contact potential faculty members by phone or email to discuss your interests. You could also include in the narrative statement your interests in biology and how they developed, your career goals, and how you think a degree in the Biology Department at CCSU will further your education and prepare you for your career.
- Letters of recommendation by two college instructors familiar with your ability and record in biology and the related sciences. In cases where acquiring letters from college instructors creates undue hardship for an applicant, it may be acceptable to use letters from past or present supervisors. Please email the Chair of the Biology

Department Graduate Studies Committee if you require further clarification or feel this applies to your situation.

The Biology Department also **recommends** the following items;

- Graduate Record Examination scores for the aptitude and advanced biology tests are recommended but not required. The graduate application, application fee, and official transcripts are to be submitted to the Graduate Recruitment and Admissions Office. Official transcripts must be sent directly to the Graduate Recruitment and Admissions Office from each institution attended except Central Connecticut State University.

Contact: 860-832-2645

Instructions for uploading the statement and for obtaining and submitting the recommendation letters will be found within the online application.

**COURSE AND CAPSTONE REQUIREMENTS:**

**Major Field Requirements**

BIO 412/BMS 412	Human Physiology	3
BIO 413/BMS 413	Human Physiology Laboratory	1
BIO 500	Seminar in Biology	1 TO 2
BIO 518/BIO 414	Advanced Pathophysiology and Applied Physiology	3
BMS 506	Cellular Metabolism and Energetics	3
CHEM 550	Basic Organic and Biological Chemistry and BIO or BMS Electives as approved by Health Sciences Advisor or Department Chair	3

**Subtotal: 0**

No more than 7 credits may be taken as BMS courses. (This 7 credit limit does not include BIO/BMS 412/413).

**Research**

**Plan A: Thesis capstone (Two Options)**

BIO 599	Thesis	3 OR
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		6
	or	
BIO 598	Research in Biology	3
	and	
BIO 599	Thesis	3 OR
		6

Plan A requires a **thesis defense seminar** for both options.

Plan A requires a total of 6 credits for both.

**Plan B: Comprehensive exam capstone**

BIO 598	Research in Biology	3
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Plan B requires a Comprehensive Exam.

Note: Additional work, as described in the course syllabi, will be required for graduate credit in 400-level courses. Students may take no more than nine credits of 400-level courses.

**BIOMOLECULAR SCIENCES M.S.**

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**Program Rationale:**

The Master of Science in Biomolecular Sciences is designed to fulfill the educational needs of biologists who desire further specialization and/or knowledge of recent advances in cell and molecular aspects of biology, students who seek an immersion in cell and molecular biology as an intermediate step toward preparation for work at the doctoral level, and teachers who are interested in their knowledge in molecular and cellular biology.

**Program Learning Outcomes:**

Graduate students will:

- demonstrate knowledge in biomolecular science, including an understanding of:
- the connection between molecular properties and cellular activities,
- the connection between cellular activities and biological responses,
- cellular structure and function, including chemical composition, physiochemical and functional organization of organelles, and basic cellular metabolism,
- major cellular processes, including DNA replication, gene regulation, protein structure and function, cell signaling, and differentiation,

- the role of molecular and cellular processes in human health and disease,
- contemporary techniques used in cell and molecular biology;
- be able to evaluate papers from the scientific literature and present oral and written critiques;
- develop research questions and the approach they will use to address that question; and
- successfully complete a research project, analyze and evaluate the data generated and present their findings in both an oral and written format.

**Admission Requirements:**

Applicants must hold a bachelor’s degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work. Applicants should follow the procedure of the Graduate Recruitment and Admissions Office described at <http://www.ccsu.edu/grad/>. Applicants who do not meet the GPA standards may be considered for Conditional Admission; see <http://www.ccsu.edu/grad/admission/conditional.html> for more information.

Applicants should follow the procedures of the Graduate Recruitment and Admissions Office described at <http://www.ccsu.edu/grad/>

**Additional Materials Required:**

Applicants must also submit a narrative statement (about 500 words) describing their academic and career goals, and their reasons for entering this graduate program.

Instructions for uploading the statement will be found within the online graduate application.

**COURSE AND CAPSTONE REQUIREMENTS:**

Each student will be assigned a graduate committee that will help the student plan a sound program of study.

There are two options (Plan A and Plan B) leading to the Master of Arts in Biomolecular Sciences degree, both of which require a total of 30 credits, made up of a Course Component and a Capstone Component.

**TOTAL CREDITS FOR PROGRAM IS 30 CREDITS**

**Course Component**

BMS 501 Fundamentals of

	Biomolecular Science	
BMS 540	Advanced Topics in Biomolecular Science	1 to 4
<b>and biomolecular course electives (19-22 credits in BMS or related fields) from the following courses or others as approved by the advisor:</b>		
BMS 412/BIO 412	Human Physiology	3
BMS 505	Molecular Biology	4
BMS 506	Cellular Metabolism and Energetics	3
BMS 516	Medical Microbiology	3
BMS 540	Advanced Topics in Biomolecular Science	1 to 4
BMS 562	Advanced Developmental Biology	3
BMS 590	Focused Study in Advanced Biomolecular Sciences	1 - 4
CHEM 456	Toxicology	3
CHEM 458	Advanced Biochemistry	3
BIO 449	Plant Physiology	3
BMS 550	Advanced Epigenetics of Clinical and Model Systems	3

BMS 412, BMS 506, BIO 449: with optional lab

#### Capstone Component

##### Plan A:

BMS 599	Thesis	3
BMS 591	Independent Research Project in Biomolecular Sciences Thesis defense or	1-4

##### Plan B:

BMS 591	Independent Research Project in Biomolecular Sciences Comprehensive Exam	1-4
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**Total Credit Hours: 30**

## **BUSINESS ADMINISTRATION M.B.A.**

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#### Program Rationale:

The Master of Business Administration (MBA) Program is designed to fulfill the educational needs of students and working professionals whose career paths are directed toward business analytics, finance, or accounting.

#### MBA Admission Requirements:

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education with an undergraduate GPA of 2.70 or higher and a minimum

GPA of 3.00 or higher in any post-baccalaureate coursework.

Admitted students with an undergraduate business degree will proceed directly into the 30-credit MBA program. Admitted students without an undergraduate business degree will need to complete foundational learning as determined by the program director before proceeding into graduate-level coursework.

All applicants must submit:

- Online Application
- Application fee
- Official transcripts directly from each institution attended except from CCSU
- Professional Resume

International Applicants must also submit:

- TOEFL or IELTS scores
- Course-by-Course evaluation of foreign credentials from a NACES member evaluation service
- Original translations of foreign academic records

Recommended Materials:

- Evidence of CPA, CMA, CFA, or other professional licenses
- Up to three letters of recommendation
- Personal Statement

The graduate application, application fee, and official transcripts are to be submitted to the Graduate Recruitment and Admissions Office. Official transcripts must be sent directly to the Graduate Recruitment and Admissions Office from each institution attended except Central Connecticut State University. Instructions for uploading the resume will be found within the graduate online application.

Applications are reviewed holistically for evidence predicting potential success in graduate business education. Meeting the minimum published admission criteria does not guarantee admission. Occasionally, applicants who do not meet all published admission criteria may be granted conditional admission based on the strength of their overall application.

**REQUIREMENTS**

The program is designed for part-time or full-time study.

**Prerequisite Foundational Courses**

may be waived based on prior education or experience.

AC 500	Financial and Managerial Accounting	3
FIN 500	Managerial Finance	3
LAW 500	Business Law and the Legal Environment	3
MGT 500	Management of Contemporary Organizations	3
MKT 500	Marketing Management	3
MC 500	Advanced Managerial Communication	3
MIS 500	Management Information Systems	3
BUS 505	Quantitative Methods For Business	3

**Course and Capstone Requirements:**

**Core Courses**

A common core of 18 credits:

AC 531	Accounting Information for Decision Making	3
MIS 531	Strategic IT Alignment	3
FIN 531	Corporate Finance	3
MGT 531	Managing and Leading in the Contemporary Organization	3
MKT 531	Strategic Marketing	3
BUS 538	Business Quantitative Analytics	3

**Tracks - Career Pathways**

9 credits of approved graduate course work in accounting, business, finance, marketing, management, management Information systems, supply chain, or general business (a combination of approved graduate courses)

**Accounting Track - Career Pathway**

9 credits total from the following electives.

AC 507	Advanced Accounting	3
AC 520	Managerial Analysis & Cost Control	3
AC 524	Accounting for Non-Profit Institutions	3
AC 543	Advanced Accounting Analytics	3
AC 544/FIN 540	Financial Statement Analysis and Valuation	3
AC 545	Advanced Assurance Services	3
AC 546	Advanced Forensic Accounting	3
AC 548	Contemporary Accounting Topics	3
AC 551	Evolution of Modern Accounting	3
AC 552	Taxation of Business Entities	3
AC 560	Taxes and Business Strategy	3

**Business Analytics Track - Career Pathway**

9 credits total from the following electives.

BUS 540	Business Intelligence and Analytics	3
BUS 542	Web Analytics	3
BUS 544	Business Process Modeling	3
BUS 546	Applications of Business Analytics	3
BUS 548	Business Decision Models	3
AC 543	Advanced Accounting Analytics	3
MKT 570	Marketing Analytics	3

**Finance Track- Career Pathway**

9 credits total from the following electives.

FIN 535	Advanced Financial Management	3
FIN 540/AC 544	Financial Statement Analysis and Valuation	3
FIN 545	Real Estate Finance & Investment	3
FIN 550	Money, Capital Markets and Banking	3
FIN 555	International Finance	3
FIN 560	Commercial Lending	3
FIN 570	Investments and Securities Analysis	3
FIN 580	Derivatives and Risk Management	3
FIN 590	Finance Seminar	3

**Marketing Track- Career Pathway**

9 credits total from the following electives.

MKT 540	Customer Experience Design	3
MKT 550	Graduate Seminar in Marketing	3
MKT 560	Strategic Brand Marketing	3
MKT 570	Marketing Analytics	3

**Supply Chain Management Track- Career Pathway**

9 credits total from the following electives.

MGT 560	Supply Chain Management	3
SCLM 562	Supply Chain Strategy	3
SCLM 564	Quality Systems Management	3
SCLM 566	Distribution and Warehouse Management	3
BUS 598	Special Topics in Business	3

**Management Track- Career Pathway**

MGT 550	Strategic Human Resources Management	3
MGT 556	Strategic Leadership	3
MGT 560	Supply Chain Management	3
MGT 570	Business Policy and Strategy	3
MGT 575	Special Topics in Management	3

**General Business Track- Career Pathway**

A combination of 9 credits of graduate course work in accounting, business, finance, marketing, management ,

management information systems or law from the the following graduate courses

MIS 552	Managing Projects in the Supply Chain	3
AC 507	Advanced Accounting	3
AC 520	Managerial Analysis & Cost Control	3
AC 524	Accounting for Non-Profit Institutions	3
AC 543	Advanced Accounting Analytics	3
AC 544/FIN 540	Financial Statement Analysis and Valuation	3
AC 545	Advanced Assurance Services	3
AC 546	Advanced Forensic Accounting	3
AC 548	Contemporary Accounting Topics	3
AC 551	Evolution of Modern Accounting	3
AC 552	Taxation of Business Entities	3
AC 560	Taxes and Business Strategy	3
BUS 540	Business Intelligence and Analytics	3
BUS 542	Web Analytics	3
BUS 544	Business Process Modeling	3
BUS 546	Applications of Business Analytics	3
BUS 548	Business Decision Models	3
BUS 594	Independent Study In Business	3
BUS 598	Special Topics in Business	3
LAW 550	Advanced Business Law & Ethical Leadership	3
FIN 535	Advanced Financial Management	3
FIN 540/AC 544	Financial Statement Analysis and Valuation	3
FIN 545	Real Estate Finance & Investment	3
FIN 550	Money, Capital Markets and Banking	3
FIN 555	International Finance	3
FIN 560	Commercial Lending	3
FIN 570	Investments and Securities Analysis	3
FIN 580	Derivatives and Risk Management	3
FIN 590	Finance Seminar	3
MGT 573/MGT 473	Advanced Organizing and Managing for Innovation	3
MIS 555	Enterprise and The Supply Chain	3
MKT 540	Customer Experience Design	3
MKT 550	Graduate Seminar in Marketing	3
MKT 560	Strategic Brand Marketing	3
MKT 570	Marketing Analytics	3
MGT 550	Strategic Human Resources Management	3
MGT 556	Strategic Leadership	3
MGT 560	Supply Chain Management	3
MGT 570	Business Policy and Strategy	3

MGT 575	Special Topics in Management	3
MGT 574	New Venture Challenge: Lean Launch Methodology	3

### **Integrative Capstone Experience**

All students must successfully complete the integrative capstone experience.

BUS 580	Applied Business Research or	3
BUS 581	Graduate Special Project and	3
BUS 582	Graduate Capstone Seminar	0

**Total Credit Hours: 30**

## **COMPUTER INFORMATION TECHNOLOGY M.S.**

### **Program Rationale:**

Toward the goal of preparing information technology (IT) practitioners for the 21st century, the MS CIT program integrates disciplines of the IT field, including computer science, and networking and telecommunications, providing the student with both breadth and depth of knowledge and skill-based expertise in this field.

### **Program Learning Outcomes:**

Students in the program are expected to demonstrate:

- theoretical and conceptual mastery of a broad base of computer science, and networking and telecommunications skills required for successful careers in the IT field;
- application-based mastery of a broad base of computer science and/or networking and telecommunications skills required for successful careers in the IT field; and
- the ability to conduct and present applied research through a research team project.

### **Admission Requirements:**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work. Applicants must submit a graduate application along with official transcripts from all colleges and universities attended to the Graduate Recruitment and Admissions.

### **Additional Materials Required:**



Applicants must submit a resume and two letters of recommendation to be used in reviewing CIT-related work. At least one letter of recommendation must come from an individual who can attest to the applicant's work experience; the second letter may be from an individual who can attest to the applicant's academic ability and commitment. Instructions for uploading the resume and for obtaining and submitting the recommendation letters will be found within the graduate online application.

Contact: 860-832-2710

**COURSE AND CAPSTONE REQUIREMENTS**

**Common Core Courses**

CS 500	Computer Science for Computer Information Technology	3
CET 501	Applied Networking Technology I and either	3
CS 501	Foundations of Computer Science or	3
CET 502	Applied Networking Technology II	3

Students select from one of two specializations- Computer Science or Networking and Telecommunications Technology.

**Specialization 1- Computer Science**

**Core Courses:**

CS 501	Foundations of Computer Science	3
CS 502	Computing and Communications Technology	3

**Electives:**

Students select 15--18 credits of electives with advisor. These elective courses can be any combination of 500-level CS courses numbered from CS 505 to CS 594 and the 400-level CS courses listed below. A maximum of 9 credits at the 400-level can be applied. All 400-level credits require the prior permission of advisor.

CS 407	Advanced Topics in Computer Science	1-3
CS 409/CYS 409	Advanced CS Topics in Cybersecurity	3
CS 423	Computer Graphics	3
CS 460	Database Concepts	3
CS 462	Artificial Intelligence	3
CS 463	Algorithms	3
CS 464	Programming Languages	3
CS 481	Operating Systems Design	3
CS 490	Computer Communications Networks & Distributed Processing	3
CS 492/CYS	Computer Security	3

492

**Capstone**

Students may register for the Special Project (Plan C) course upon completion of core requirements and at least three specialization courses.

CIT 595	Capstone in Computer Information Technology	3
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**Specialization 2- Networking and Telecommunications Technology**

**Core Courses:**

CET 502	Applied Networking Technology II	3
CET 559	Applied Network Security	3
CET 594	Research Design	3

**Electives:**

CET 402	Topics in Computer Electronics Technology	1-3
CET 405	Applied Topics in Computer Electronics Technology	3
CET 407/CYS 407	IT Topics in Cybersecurity	3
CET 443	Electronic Communications	3
CET 449	Advanced Networking	3
CET 453	Microcomputers	3
CET 479	Network Administration	3
CET 507	Advanced Topics in IT Cybersecurity	3
CET 513	Computer Applications for the Professional	3
CET 533	Digital Transmission in Telecommunications	3
CET 543	Telecommunications Systems	3
CET 549	Health Information Network	3
CET 568/CET 468	Applied Blockchain Technology	3
CET 569	Network Security Management	3
CET 589/CET 489	Web Services and Security	3
CET 596	Technological Problems and Issues	1-3
TM 500	Product Life Cycle Management	3
TM 551	Project Management	3
TM 561	Application of Lean Principles	3
TM 572	Innovative Leadership	3

**Capstone**

Students may select either Special Project (Plan C) or Comprehensive Exam (Plan B).

Students selecting plan C may register for the Special Project course upon completion of core requirements and at least three specialization courses.

CIT 595 Capstone in Computer Information Technology 3

or

Comprehensive Exam

**Total Credit Hours: 33**

Note: A maximum of 6 credits at the 400-level is allowed with prior permission of advisor.

### **CONSTRUCTION MANAGEMENT M.S.**

The mission of the Master level Construction Management program is to help create leaders capable of managing construction- and construction-related departments and companies. The program emphasizes student/industry interaction, experiential learning, and related research to help students achieve the knowledge and skills they need to make contributions to their disciplines, companies, and the rapidly changing world. The aim of graduate education is to provide students with the environment to develop knowledge and skills to make contributions to their disciplines and to the rapidly changing world. It is the program's objective to help develop the construction management workforce at all levels.

**Program Learning Outcomes:**

Students in the program will be expected to:

- analyze a financial balance sheet for a construction company, understanding how each component impacts financial decisions made by the company;
- analyze an annual income statement for a construction company and use it as a tool for projecting company trends;
- perform a construction project risk assessment;
- evaluate bond and insurance proposals for both construction companies and projects;
- analyze a basic construction contract and be able to assess it against other contracts;
- comprehend the various options available for dispute resolution in the construction industry;
- understand the impacts of different project delivery systems on the construction process; and

- conduct research on technology-based issues and prepare technical papers in support of that research.

**Admissions Requirements:**

The application for admission to graduate study requires:

- Completion of a bachelor's degree from a regionally accredited institution of higher education.
- A minimum cumulative undergraduate GPA of 2.70 on a 4.00 scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work is required.

Applicants with a cumulative undergraduate GPA of 2.40 - 2.69 or without a construction management background may be considered for conditional admission.

As part of the application and admission process, the applicant must request that official undergraduate and graduate transcripts be submitted from every institution attended except Central Connecticut State University. The admission application and official transcripts must be submitted to the Graduate Recruitment and Admissions Office.

Application Deadline for the M.S. Construction Management program are as follows:

Domestic students must apply by the following application deadlines:

- August 1 for Fall Semester
- December 1 for Spring Semester
- May 1 for Summer Term

International students must apply by the following application deadlines (summer term is not available to international students):

- May 1 for Fall Semester
- November 1 for Spring Semester

The Construction Management Masters program is a 33 credit program consisting of 12 credits of common core, 18-21 credits of electives selected jointly by the student and advisor, and a zero-credit Plan B (Comprehensive Exam) capstone or a 3-credit Plan C (CM 595: Planned Research Project).

**COURSE AND CAPSTONE REQUIREMENTS:**

**Common Core (12 Credits)**

CM 505	Construction Project Delivery Systems	3
CM 555	Construction Project Control	3
CM 594	Research Methods in Construction	3

MGT 531	Management Managing and Leading in the Contemporary Organization	3
TM 572	or Innovative Leadership	3

**Elective Courses (18-21 Credits)**

Elective courses are subject to the following constraints:

- Not more than 9 credits of non-construction management courses; and
- Not more than 6 credits of courses at the 400 level unless specifically approved in writing by the departmental graduate studies committee; and
- A maximum of 9 credits may be selected from: Business Management, Engineering Technology (Civil or Mechanical), Natural Sciences, Technology Management

- A minimum of 9 credits from the following list:

CM 425	Applied Structural Systems	3
CM 435	Construction Superintendency	3
CM 455	Construction Project Management	3
CM 515	Construction Law	3
CM 520	Construction Materials and Methods	3
CM 535	Sustainable Buildings	3
CM 540	Lean Construction	3
CM 550	Automation and Emerging Technologies in Construction	3
CM 570	Construction Accounting and Engineering Economics	3
CM 575	Construction Financial Management	3
CM 580	Construction Safety Management	3
CM 585	Advanced Construction Law	3
CM 590	Advanced Field Studies in the Built Environment	3
CM 596	Topics in Construction Management	3

CM 596: May be repeated for up to 9 credits for different topics.

**Capstone (0-3 Credits)**

	Comprehensive Exam or	
CM 595	Applied Research in Construction Management	3

**Total Credit Hours: 33**

**COUNSELOR EDUCATION WITH SPECIALIZATION IN CLINICAL PROFESSIONAL COUNSELING M.S.**

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The Clinical Professional Counseling specialization prepares students to pursue employment in a variety of mental health and rehabilitation agencies. Students may choose a track in Clinical Mental Health Counseling, Clinical Rehabilitation Counseling, or Clinical Addictions Recovery Counseling. The Clinical Professional Counseling specialization provides the foundational coursework necessary for individuals interested in certification as Certified Rehabilitation Counselors (CRC) and/or meeting State of Connecticut Department of Public Health requirements for becoming a Licensed Professional Counselor (LPC) and Licensed Alcohol and Drug Counselors (LADC). There are additional post-master's training requirements for both LPC and LADC candidates. The Clinical Professional Counseling is dually accredited in specializations of Clinical Mental Health Counseling and Clinical Rehabilitation Counseling by the Council on Accreditation of Counseling and Related Educational Programs (CACREP).

**Program Learning Outcomes:**

Students in the program will be expected to:

- Exhibit behaviors and attitudes appropriate to the clinical professional counseling profession;
- Demonstrate pertinent and professionally relevant knowledge in the eight professional counseling standards of the Council for Accreditation of Counseling and Related Educational Programs (CACREP) as well as the eight core areas established by the National Board of Certified Counselors (NBCC).
- Demonstrate professional behaviors and practice in professional and rehabilitation counseling settings;
- Demonstrate knowledge of current ethical and legal guidelines that influence one's behavior as a counselor; and
- Demonstrate core skills that provide the foundations to understand the professional and rehabilitation counseling process and become more aware of one's interpersonal interactions.

Admission Requirements for Clinical Professional Counseling

Applicants must hold a bachelor’s degree from a regionally accredited institution of higher education. Admissions to the School Counseling, Clinical Professional Counseling, and Student Development in Higher Education programs are made on a competitive basis only one time per year. All applications must be completed and received by February 1 for fall admission. Candidates for admission will be considered on the basis of the following criteria:

- 1) Grade point average: Minimum 2.70 grade point average (GPA) for all undergraduate courses and a 3.00 for all graduate courses, based on a 4.00 point scale where A is 4.00.
- 2) Three recommendations from individuals able to testify to the student’s suitability as a prospective counselor.
- 3) A 2–3 page typewritten (double spaced) essay describing the following:
  - a) Reasons for entering the counseling profession.
  - b) Personal and professional experiences that influenced you to pursue the counseling profession.
  - c) Personal characteristics you believe will contribute to your success as a counselor.
- 4) A personal interview by the program’s faculty admissions committee. The committee will assess the student’s personal attributes and life experiences that might contribute to the student’s potential for success as a professional counselor.

The admissions application, application fee, and official transcripts from each college/university (except CCSU) where any course has been taken must be sent directly to the Graduate Recruitment and Admissions Office.

Instructions for uploading the essay and for obtaining and submitting the recommendation letters will be found within the graduate online application.

Contact: 860-832-2154

**COURSE AND CAPSTONE REQUIREMENTS**

**Core**

CNSL 500	The Dynamics of Group Behavior	3
CNSL 501	Theories and Techniques in Counseling	6
CNSL 503	Supervised Clinical Professional Counseling Practicum	3
CNSL 504	Professional Studies in Counseling	3

CNSL 505/MFT 505	Counseling and Human Development Across the Lifespan	3
PSY 512	or Seminar in Developmental Psychology	3
CNSL 521	Career Counseling and Development	3
CNSL 522	Appraisal Procedures in Counseling	3
CNSL 568	CNSL 568 Foundations of Addictions Counseling	3
CNSL 569	Foundations of Clinical Mental Health Counseling	3
CNSL 594	Supervised Clinical Professional Counseling Internship	3
CNSL 598	Research Methods in Counseling	3
CNSL 594	(two semesters fall & spring for a total of 6 credits)	

**Students in the Clinical Mental Health Counseling track are required to take an additional 24 credits to equal 63 credits:**

CNSL 525	Multicultural Counseling	3
CNSL 560	Introduction to Rehabilitation Counseling	3
CNSL 561	Advanced Rehabilitation Counseling	3
CNSL 563	Medical Aspects of Rehabilitation Counseling	3
CNSL 572	Assessment, Treatment and Recovery in Counseling	3
CNSL 571	Mindfulness-Based Mental Health Counseling	3
CNSL 573	Counseling Families	3
CNSL 575	Counseling Individuals with Co-occurring Mental Health and Substance Use Disorders	3
CNSL 599	Thesis or Comprehensive Exam	3

CNSL 599 Students take a Thesis (Plan A) 3 OR Comprehensive Exam (Plan B) 0.

**Students in the Clinical Rehabilitation Counseling track are required to take an additional 21-24 credits to equal 60-63 credits.:**

CNSL 525	Multicultural Counseling	3
CNSL 560	Introduction to Rehabilitation	3

CNSL 561	Counseling Advanced Rehabilitation	3
CNSL 563	Counseling Medical Aspects of Rehabilitation	3
CNSL 564	Counseling Rehabilitation and Disability Case Management Practices	3
CNSL 572	or Assessment, Treatment and Recovery in Counseling	3
CNSL 571	Mindfulness-Based Mental Health Counseling	3
CNSL 573	Counseling Families	3
CNSL 575	Counseling Individuals with Co- occurring Mental Health and Substance Use Disorders	3
CNSL 599	Thesis or Comprehensive Exam	3

CNSL 599 Students take a Thesis (Plan A) 3 OR  
Comprehensive Exam (Plan B) 0.

**Students in the Clinical Addictions Recovery Counseling track are required to take an additional 24 credits to equal 63 credits.:**

CNSL 525	Multicultural Counseling	3
CNSL 560	Introduction to Rehabilitation Counseling	3
CNSL 561	Advanced Rehabilitation Counseling	3
CNSL 563	Medical Aspects of Rehabilitation Counseling	3
CNSL 571	Mindfulness-Based Mental Health Counseling	3
CNSL 572	Assessment, Treatment and Recovery in Counseling	3
CNSL 573	Counseling Families	3
CNSL 575	Counseling Individuals with Co- occurring Mental Health and Substance Use Disorders	3
CNSL 599	Thesis or Comprehensive Exam	3

CNSL 599 Students take a Thesis (Plan A) 3 OR  
Comprehensive Exam (Plan B) 0.

**Students in the Gerontology Counseling track are required to take an additional 21 credits:**

CNSL 525	Multicultural Counseling	3
CNSL 560	Introduction to Rehabilitation	3

CNSL 561	Counseling Advanced Rehabilitation	3
CNSL 563	Counseling Medical Aspects of Rehabilitation	3
CNSL 571	Counseling Mindfulness-Based Mental Health	3
GERO 510	Policy, Aging, and Ethics	3
PSY 511	Psychology of Aging	3

**Plan A: Thesis**

Students in the Clinical Mental Health track or Clinical Addictions Recovery Counseling electing to do a thesis (Plan A) will be exempt from one course as determined with the advisor.

**Plan B: Comprehensive Examination**

Students take the national examination: Counselor Preparation Competency Examination (CPCE)

**Total Credit Hours: 60**

**COUNSELOR EDUCATION WITH SPECIALIZATION IN SCHOOL COUNSELING M.S.**

**Program Rationale:**

The School Counseling Program prepares students for professional careers as counselors in elementary, middle, and high schools. Emphasis is on a comprehensive and developmental model of school counseling that is described in the National Standards for School Counseling of the American School Counseling Association and a document entitled "Best Practices for School Counseling in Connecticut." The curriculum follows the standards of the Council for the Accreditation of Counseling and Related Education Programs (CACREP) and the certification requirements of the Connecticut State Department of Education.

**Program Learning Outcomes:**

Students in this program will be expected to:

- demonstrate knowledge of theory, practice, and ethical standards relative to the practice of school counseling;
- demonstrate appropriate counseling techniques and interventions for use within the academic, career, and personal/social domains;
- demonstrate the ability to consult and collaborate with teachers, staff, administrators, and community-

based organizations in understanding and meeting the needs of all students;

- promote understanding and appreciation for diverse populations and cultures; and
- demonstrate knowledge of federal and state laws pertinent to the role, function, and services of the school counselor.

**Admission Requirements for School Counseling:**

Applicants must hold a bachelor’s degree from a regionally accredited institution of higher education. Admissions to the School Counseling, Clinical Professional Counseling, and Student Development in Higher Education programs are made on a competitive basis only one time per year. All applications must be completed and received by February 1 for fall admission. Candidates for admission will be considered on the basis of the following criteria:

1. Grade point average: Minimum 2.70 grade point average (GPA) for all undergraduate courses and a 3.00 for all graduate courses, based on a 4.00 point scale where A is 4.00
2. Three recommendations from individuals able to testify to the student’s suitability as a prospective counselor
3. A 2–3 page typewritten (double spaced) essay describing the following:
  - a. Reasons for entering the counseling profession.
  - b. Personal and professional experiences that influenced you to pursue the counseling profession.
  - c. Personal characteristics you believe will contribute to your success as a counselor.
4. A personal interview by the program’s faculty admissions committee. The committee will assess the student’s personal attributes and life experiences that might contribute to the student’s potential for success as a professional counselor.

The admissions application, application fee, and official transcripts from each college/university (except CCSU) where any course has been taken must be sent directly to the Graduate Recruitment and Admissions Office.

Instructions for uploading the essay and for obtaining and submitting the recommendation letters will be found within the graduate online application. (Contact: 860-832-2154)

Effective July 1, 2010, Connecticut law requires all students in teacher/educator certification programs to undergo state and national criminal history background checks before participating in school-based field experiences. The procedures for obtaining the background checks and the length of time they are valid will be established by the State Department of Education and cannot be changed. You Will be responsible for the cost of the background check and will be provided with the necessary consent forms and other documents needed to conduct it. As part of the background check, you will need to be fingerprinted. If you fail to pass the background check, you may be unable to complete your chosen degree program at Central Connecticut State University. The University will not be responsible for your inability to complete your chose degree program.

Graduate students who are not currently employed in the Public School will need to complete the background check before being placed in field experiences or doing research in the schools. Current school employees with background checks in place but who are placed in field experiences or do research outside of the district where they are employed may also be required to complete a new background check.

Contact: 860-832-2154

**COURSE AND CAPSTONE REQUIREMENTS**

Graduates are prepared for positions as counselors in public and private schools. The program is designed to meet the certification requirements of the State of Connecticut and the Council for Accreditation of Counseling and Related Educational Programs.

**Core Courses**

CNSL 500	The Dynamics of Group Behavior	3
CNSL 501	Theories and Techniques in Counseling	6
CNSL 503	Supervised Clinical Professional Counseling Practicum	3
CNSL 505/MFT 505	Counseling and Human Development Across the Lifespan	3
SPED 501	Education of the Exceptional Learner	3
CNSL 571	Mindfulness-Based Mental Health Counseling	3
CNSL 572	Assessment, Treatment and Recovery in Counseling Electives (3 credits of advisor-approved electives)	3

All students must do a graduate level elective (3 credits) after meeting with their adviser.

**Specialized Courses**

CNSL 504	Professional Studies in Counseling	3
CNSL 506	Counseling Children & Adolescents	3
CNSL 520	Professional School Counseling I	3
CNSL 521	Career Counseling and Development	3
CNSL 522	Appraisal Procedures in Counseling	3
CNSL 524	Collaborative Consultation in Schools	3
CNSL 525	Multicultural Counseling	3
CNSL 526	Professional School Counseling II	3
CNSL 568	CNSL 568 Foundations of Addictions Counseling	3
CNSL 591	Supervised School Counseling Internship	3

CNSL 591: three credits for two semesters

**Research**

CNSL 598	Research Methods in Counseling	3
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**Capstone**

**Plan A:**

CNSL 599	Thesis	3
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**Plan B:**

Comprehensive Exam

(consists of a major case presentation done in conjunction with the student's internship experience)

**Prerequisite Courses for Plan B (To be completed while in the program):**

Fingerprint Based Background Check

**Total Credit Hours: 63**

**COUNSELOR EDUCATION WITH SPECIALIZATION IN STUDENT DEVELOPMENT IN HIGHER EDUCATION M.S.**

**Program Rationale:**

The mission of the student development master's degree program is to prepare graduates to function effectively as student development specialists in rapidly changing institutions of higher education. Students are trained to understand and to meet the developmental needs of college students, taking into account worldviews and expectations which are influenced by age, ethnic background, national origin, gender, sexual orientation, disability status, and other "non-traditional" perspectives. Graduates are prepared to function as student affairs

professionals in higher education settings, such as student activities, academic advising, career counseling, orientation, first-year experience programs, residence halls, and learning centers.

**Program Learning Outcomes:**

Students in the program are expected to:

- demonstrate knowledge of theory, practice, and ethical standards relative to the practice of student development in higher education;
- demonstrate appropriate counseling, advising, and group facilitation techniques for use with students, staff, and faculty in higher education;
- demonstrate the ability to collaborate with colleagues throughout their institutions for purposes of creating and assessing learning experiences for students;
- identify a wide range of world views based on culture and life experience, including their own, and use this understanding to communicate effectively across cultural and personal differences; and
- demonstrate knowledge of federal and state laws pertinent to roles and functions of student affairs professionals and to the responsible management of colleges and universities.

**Admission Requirements for Student Development in Higher Education**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Admissions to the School Counseling, Clinical Professional Counseling, and Student Development in Higher Education programs are made on a competitive basis only one time per year. All applications must be completed and received by February 1 for summer admission. Candidates for admission will be considered on the basis of the following criteria:

1. Grade point average: Minimum 2.70 grade point average (GPA) for all undergraduate courses and a 3.00 for all graduate courses, based on a 4.00 point scale where A is 4.00
2. Three recommendations from individuals able to testify to the student's suitability as a prospective counselor.
3. A 2–3 page typewritten (double spaced) essay describing the following:
  - a. Reasons for entering the counseling profession.
  - b. Personal and professional experiences that

influenced you to pursue the counseling profession.  
 c. Personal characteristics you believe will contribute to your success as a counselor.

4. A personal interview by the program’s faculty admissions committee. The committee will assess the student’s personal attributes and life experiences that might contribute to the student’s potential for success as a professional counselor.

The admissions application, application fee, and official transcripts from each college/university (except CCSU) where any course has been taken must be sent directly to the Graduate Recruitment and Admissions Office.

Instructions for uploading the essay and for obtaining and submitting the recommendation letters will be found within the graduate online application.

Contact: 860-832-2154

**COURSE AND CAPSTONE REQUIREMENTS**

**Core Courses**

CNSL 500	The Dynamics of Group Behavior	3
CNSL 501	Theories and Techniques in Counseling	6
CNSL 503	Supervised Clinical Professional Counseling Practicum	3

**Subtotal: 12**

**Directed Electives**

CNSL 521	Career Counseling and Development	3
CNSL 525	Multicultural Counseling	3
CNSL 530	Student Development in Higher Education	3
CNSL 531	Student Services in Higher Education	3
CNSL 532	Program Design in Student Services	3
CNSL 533	Legal, Financial, and Policy Issues in Student Affairs	3
CNSL 592	Supervised Internship in Higher Education	3
CNSL 592	Supervised Internship in Higher Education	3
CNSL 598	Research Methods in Counseling Additional course as approved by advisor	3 3

**Subtotal: 30**

CNSL 598 may be waived by advisor based on undergraduate record of statistics and research.

CNSL 592 is to be taken 2 semesters.

**Capstone**

**Subtotal: 0**

**Plan A:**

CNSL 599	Thesis or	3
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**Plan B:**

Comprehensive Exam

(consists of a major case presentation done in conjunction with the student's internship experience)

Subtotal: 0

**Total Credit Hours: 42-45**

**CRIMINAL JUSTICE ADMINISTRATION MA**

The Master of Arts in Criminal Justice Administration is specifically designed for working professionals in the Criminal Justice System and related fields. The foundation of the program is a Leadership Certificate that will provide students with core knowledge and skills to be effective leaders at any organizational level. Upon completion of the Leadership Certificate, students can then choose from the remaining certificate and elective courses geared toward their professional area of expertise to complete requirements for the master’s degree.

To complete the M.A. in Criminal Justice Administration, students must complete the Criminal Justice Leadership certificate (12 credits), and 18 additional credits of electives to reach 30 credits in total. A comprehensive exam is required.

The program is offered in a fully online format.

The foundation of the program is a Criminal Justice Leadership Certificate that will provide students with core knowledge and skills to be effective leaders at any organizational level.

**Admissions Requirements**

Applicants must hold a bachelor's degree from an accredited institution of higher learning. In addition to the standard University graduate admissions requirements, the department requires:



- Students must have a minimum of 3 years of full-time work experience in Criminal Justice or a related field, or currently serve in a verifiable leadership role/position within a criminal justice agency with no less than 2 years of CJ experience.
- A minimum grade point average (GPA) of 3.00 on a 4.00 scale. Applicants may also be considered for conditional admission if they have a 2.70 to 2.99 GPA and/or commensurate work experience.
- Resume

**MASTER'S DEGREE (30 CREDITS)**

**Leadership Certificate Core (3 Credits)**

CJ 571	Applied Research and Data Interpretation	3
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**Leadership Certificate Electives (9 Credits)**

CJ 573	Managing Criminal Justice Employees	3
CJ 575	Developing Criminal Justice Organizations	3
CJ 574	Effective Criminal Justice Leadership	3
CJ 580	Criminal Justice Policy Implementation and Effectiveness	3

Choose from the courses listed above

**Electives (18 Credits)**

Upon completion of the Leadership Certificate, students can choose from elective courses geared toward their professional area of expertise. The electives can be used to earn additional certificates, but certificate completion is optional.

**Advanced Detective Certificate**

CRM 480	Death Investigations	3
CJ 581	Sexual Assault Investigation	3
CJ 582	Police Involved Shootings & Crime Scene Investigations	3
CJ 583	Interview & Interrogation	3
CJ 584	Expectation of Privacy	3
CJ 585	Financial Crime Investigation	3

Select 12 credits from the courses listed above to earn the Advanced Detective Certificate. These courses will also count as electives for the Master of Arts in Criminal Justice Administration.

**Victim's Advocacy Certificate**

CJ 531	Women and Criminal Behavior	3
CJ 532	Domestic Violence	3
CJ 537	Mental Health and the Criminal Justice System	3
CJ 538	Victimization & The Criminal Justice System	3
CJ 541	Hate Crimes: Prevention & Advocacy	3
CJ 578	Special Topics in Criminal Justice	3

Select 12 credits from the courses listed above to earn the Victim's Advocacy Certificate. These courses will also count as electives for the Master of Arts in Criminal Justice Administration.

**Forensic Counseling Certificate**

CJ 530	Offender Profiles	3
CJ 535	Forensic Counseling	3
CJ 539	Delinquency: Causation and Intervention	3
CJ 560	Sexual Offending	3
CJ 561	Risk Assessment	3
CJ 578	Special Topics in Criminal Justice	3

Select 12 credits from the courses listed above to earn the Forensic Counseling Certificate. These courses will also count as electives for the Master of Arts in Criminal Justice Administration.

**Total Credit Hours: 30**

**CRIMINAL JUSTICE M.S.**

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**Program Rationale:**

The master of science degree is designed to provide students with the knowledge and skills required for leadership positions in the criminal justice system and continued study at the doctoral level. The criminal justice graduate program strongly emphasizes the application of theory and research in executive decision-making, policy development and analysis, and the treatment of offenders.

**Program Learning Outcomes:**

Upon completion of this program students will be able to:

- Analyze and evaluate data relevant to criminal justice policies and programs;
- Discuss and explain research findings in a manner that is consistent with standards expected at professional conferences and meetings;

- Describe the functions of the different components of the criminal justice system and how they interact with, and influence, each other; and
- Critique theories of crime and the intervention models developed to address criminal behavior

### Admissions Requirements:

Admission to the Master of Science degree program in Criminal Justice is made on a competitive basis two times per year. Applications for fall semester must be completed and received by June 1. Applications for spring semester must be completed and received by November 1. The number of students accepted in any semester is dependent on available openings in the program, which may fluctuate from semester to semester.

Applicants may be notified by June 30 (fall admission) and November 30 (spring admission) regarding acceptance decisions. Applicants accepted into the program will be contacted and asked to confirm their intentions to enter program.

Applicants must hold a bachelor's degree from a regionally accredited institution of higher learning. In addition to the standard University graduate admission requirements, the department requires:

1. A minimum grade point average (GPA) of 3.00 on a 4.00 scale. Applicants may also be considered conditionally with a 2.70 to 2.99 GPA.
2. One undergraduate social science research methods course with a grade of "C" or better
3. One undergraduate elementary statistics course with a grade of "C" or better
4. A formal application essay that focuses on (a) academic and work history, (b) reasons for pursuing graduate studies in criminal justice, and (c) future career goals
5. Resume

Consideration in the admission process is given to selecting applicants from diverse areas of criminal justice field (e.g., law enforcement, corrections, alternative sanctions, treatment and rehabilitation, and analysis). Students who do not meet these requirements may request consideration for admission with special requirements. No students may register for graduate-level criminal justice courses without first being admitted to the program.

The admissions application (apply online), application fee, and official transcripts from each college/university (except CCSU) where any course has been taken must be sent directly to the Graduate Recruitment and Admissions Office.

Instructions for uploading the essay and resume will be found within the online graduate application.

**Contact: 860-832-3005**

### COURSE AND CAPSTONE REQUIREMENTS

#### Core Courses:

CJ 501	Nature of Crime	3
CJ 510	Law, Criminal Justice, and Issues of Inequality	3
CJ 520	Effective Practices in the Administration of Justice	3
CJ 533	Criminal Justice Research Methods	4
CJ 534	Data Analysis in Criminal Justice	4
CJ 594	Capstone Seminar	1

#### Elective Courses (choose three):

CJ 525	Evaluation Strategies for Criminal Justice Programs and Policies	3
CJ 530	Offender Profiles	3
CJ 535	Forensic Counseling	3
CJ 539	Delinquency: Causation and Intervention	3
CJ 560	Sexual Offending	3
CJ 573	Managing Criminal Justice Employees	3
CJ 575	Developing Criminal Justice Organizations	3
CJ 577	Advanced Independent Reading and Research in Criminal Justice	1- 3
CJ 578	Special Topics in Criminal Justice	3
CJ 580	Criminal Justice Policy Implementation and Effectiveness	3
CJ 550	Drugs and Society	3
CJ 555	Controlling Anger and Aggression	3
CRM 480	Death Investigations	3
CJ 581	Sexual Assault Investigation	3
CJ 582	Police Involved Shootings & Crime Scene Investigations	3
CJ 583	Interview & Interrogation	3
CJ 584	Expectation of Privacy	3
CJ 585	Financial Crime Investigation	3

Elective courses are designed to allow students to develop knowledge and skills in areas that specifically match their

individual academic and career interests. Students desiring a concentration in behavioral sciences and the offender are encouraged to consider courses such as CJ 530, CJ 535, CJ 539, CJ 550, CJ 555, and CJ 560. Students desiring a concentration in organizational functioning are encouraged to consider courses such as CJ 525, CJ 573, CJ 575, and CJ 580.

**Capstone Project (choose one):**

CJ 597	Agency Collaborative Project	3
	or	
CJ 599	Thesis	3

The capstone project is an original piece of research conducted by the student and completed under the supervision of a faculty advisor.

Note: No more than nine credits at the 400 level, as approved by the graduate advisor, may be counted toward the graduate planned program of study.

**DATA SCIENCE M.S.**

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**Program Rationale:**

This program is designed for the person who loves data and wants to learn how to uncover actionable results from large data sets using a data scientific framework. Starting with the first course, students will learn data science by applying it on real-world, large data sets, gaining expertise in state-of-the-art data modeling methodologies, so as to prepare them for information-age careers in data science, analytics, data mining, statistics, and actuarial science.

There are five tracks in this program. Four of these provide specialized skills, and the fifth allows a student to sample a variety of data science and computational techniques.

**Program Learning Outcomes:**

Students in the program will be expected to:

- Apply data science using a systematic process, by implementing an adaptive, iterative, and phased framework to the process, including the research understanding phase, the data understanding phase, the exploratory data analysis phase, the modeling phase, the evaluation phase, and the deployment phase;
- Evaluate the true consequences of making false positive or false negative decisions.
- Demonstrate proficiency with leading open-source analytics coding software such as R and Python, as well as commercial platforms;

- Understand and apply a wide range of clustering, estimation, prediction, and classification algorithms including k-means clustering, classification and regression trees, logistic regression, k-nearest neighbor, multiple regression, and neural networks; and
- Learn more specialized techniques in bioinformatics, text analytics, algorithms, and other current issues.

**Program Prerequisites:**

Applicants to the Masters of Science in Data Science program are expected to have completed one semester of statistics ( such as STAT 104, STAT 200, or STAT 215) with grade of B or better, or permission of the Data Science Program Coordinator. First-semester courses in statistics are regularly offered by CCSU both online and in classroom.

**Admission Requirements:**

Students must hold a Bachelor's degree from a regionally accredited institution of higher education. The undergraduate record must demonstrate clear evidence of ability to undertake and pursue studies successfully in a graduate field.

A minimum undergraduate GPA of 3.00 on a 4.00 scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work is required. Conditional admission may be granted to candidates with undergraduate GPAs as low as 2.40.

In addition to the materials required by the School of Graduate Studies, the following is required by the program:

A formal application essay of 500-1000 words that focuses on (a) academic and work history, and (b) reasons for pursuing the Master of Science in Data Science, and (c) where and how the applicant has completed the program prerequisite. The essay will also be used to demonstrate a command of the English language.

One letter of recommendation either from the academic or work environment.

The application to the Data Science program is filled out online. All transcripts should be sent to the Graduate Admissions Office. Instructions for uploading the essay and submitting the recommendation letters will be found within the graduate online application.

Instructions for uploading the essay and submitting the recommendation letters will be found within the graduate online application.

**COURSE AND CAPSTONE REQUIREMENTS****Core Courses**

The following five courses are required of all students.

DATA 511	Introduction to Data Science	4
DATA 512	Predictive Analytics: Estimation and Clustering	4
DATA 513	Predictive Analytics: Classification	4
DATA 514	Multivariate Analytics	4
DATA 599	Special Project (Plan C)	3

**Bioinformatics Track**

For students selecting the bioinformatics track, the following three classes are required.

DATA 521	Introduction to Bioinformatics	4
DATA 522	Mining Gene and Protein Expression Data	4
DATA 525	Biomarker Discovery	4

Other appropriate graduate courses, with permission of advisor.

**Text Analytics Track**

For students selecting the text analytics track, there are two required classes and one elective. The latter can be any non-core, 500-level DATA course.

DATA 531	Text Analytics with Information Retrieval	4
DATA 532	Text Analytics with Natural Language Processing	4

Other appropriate graduate courses, with the permission of the advisor.

**Advanced Methods Track**

For students selecting the advanced methods track, the following three classes are required.

DATA 541	Advanced Estimation Methods	4
DATA 542	Advanced Clustering Methods	4
DATA 543	Advanced Classification Methods	4

Other appropriate graduate courses, with the permission of the advisor.

**Computational Track**

CS 508	Distributed Computing	3
CS 570	Topics in Artificial Intelligence	3
CS 580	Topics in Database Systems and Applications and either	3
CS 463	Algorithms or	3

CS 525	Advanced Algorithms	3
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Other appropriate CS graduate courses, with the permission of the advisor.

**General Data Science Track**

Excluding the common core, a total of at least twelve credits of courses from the other tracks and/or electives.

**Elective Courses**

DATA 551	Predictive Modeling for Insurance Data	4
DATA 565	Web Data Science	4
STAT 534	Applied Categorical Data Analysis	3

**Total Credit Hours: 31**

**EARLY CHILDHOOD EDUCATION M.S.**

**The MS in Early Childhood Education program at Central Connecticut State University is not being offered by the Department of Literacy, Elementary, and Early Childhood Education at this time.**

Contact: H. R. Abadiano (860) 832-2180

**EDUCATIONAL LEADERSHIP M.S.**

The MS Educational Leadership program is no longer accepting applicants. Prospective students should contact the Dept. of Educational Leadership at (860) 832-2130 for information about new program options.

The MS Educational Leadership Cohort program in Jamaica is also not available for new applications. Prospective students in Jamaica should

contact Sam Sharpe Teacher's College coordinator, Karla Rodney at Karlarodney@yahoo.com or Mico University coordinator, Pauline White at themicouniversitycollege@yahoo.com to provide your name, home address, and email address in order to receive future correspondence regarding new program options.

**Program Rationale:**

The master's degree in educational leadership is designed to prepare teacher leaders who are capable of enhancing the effectiveness of their organizations.

**Program Learning Outcomes:**

Students in the program are expected to:

- design, implement, and evaluate instructional programs to promote student learning;
- develop learning programs that are responsive to cultural and learning differences;
- conduct fair, equitable, and effective classroom supervision;
- design, implement, and evaluate professional development activities that promote teacher learning;
- use standardized and classroom-based student performance data to improve student learning; and
- understand, interpret, and critique educational research.

**Admissions Requirements:**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

The graduate application, application fee, and official transcripts are to be submitted to the Graduate Recruitment and Admissions Office. Official transcripts must be sent directly to the Graduate Recruitment and Admissions Office from each institution attended except Central Connecticut State University.

Contact: 860-832-2130

**REQUIREMENTS**

**Strand I Educational Leadership**

**Subtotal: 36**

**Required Courses**

ED 598	Introduction to Research in Education	3
EDL 523	Instructional Leadership and Coaching	3
EDL 551	Curriculum Leadership	3
EDL 555	Leadership for Social Justice	3
EDL 594	Practicum I in Educational Leadership	3
EDL 595	Practicum II in Educational Leadership	3

**Subtotal: 27**

**Electives**

**Subtotal: 9**

**Capstone Requirement:**

Comprehensive Exam

**Strand 2 Teacher and Curriculum Leadership**

**Subtotal: 30**

**Required Courses**

ED 520	Instructional Programs for Diverse Learners	3
ED 598	Introduction to Research in Education	3
EDL 523	Instructional Leadership and Coaching	3
EDL 531	Collaboration and Professional Development	3
EDL 555	Leadership for Social Justice	3
ED 591	Curriculum, Instruction, and Assessment I	3
ED 592	Curriculum, Instruction, and Assessment II	3

**Subtotal: 21**

**Capstone Requirement:**

embedded in ED 591 and ED 592

**Elective courses**

Students select advisor-approved elective courses to complete their graduate programs.

**Subtotal: 9**

Note: While students may take some courses as non-matriculated students, they must be accepted into the program before taking a fourth 500-level course. 500-level courses beyond the third course will not count toward program completion.

**EDUCATIONAL TECHNOLOGY M.S.**

**Program Rationale:**

The educational technology program is an applied curriculum based on a balanced approach of theory (knowledge) and hands-on experience. The goal of this program is to provide leadership in ET for teachers in the public schools. Graduate students will gain knowledge and experience in the following areas:

- instructional design process;
- visual design;
- visual literacy;
- working with a range of software programs;
- working with a range of interactive delivery systems (video, audio, print, Web, multimedia, animation, etc.);
- applying design and production skills to various instructional outcomes;
- applying assessment rubrics (formative and summative evaluation) to completed instructional-based projects; and
- troubleshooting technology problems.

A unique feature of the educational technology program is that all courses build on one another to provide maximum relevance, linkage, and unity. The master's program in educational technology underscores the need for competency and mastery for each course to be based on knowledge and performance. Students are assessed on how well they are able to apply their skills and knowledge to course projects. The performance criteria are as follows:

- Content design: Does the project content reflect sound instructional strategies?
- Visual design: Does the overall look and appearance of the project capture the learners' attention and interest?
- Technical considerations: Are technical decisions such as programming and visual and audio manipulation functional? Does the project work?
- Evaluation: Does the program teach? Is there change in behavior?

#### Program Learning Outcomes:

Students are expected to:

- apply technology skills in the development of instruction;
- understand and apply instructional design process;

- apply production skills in the development of instruction;
- apply evaluation standards to various instructional programs;
- understand and apply the technology integration process;
- understand and apply inquiry skills in educational technology research; and
- demonstrate leadership skills in applying instructional technology in the work environments.

#### Admission Requirements:

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

The graduate application, application fee, and official transcripts are to be submitted to the Graduate Recruitment and Admissions Office. Official transcripts must be sent directly to the Graduate Recruitment and Admissions Office from each institution attended except Central Connecticut State University.

Contact: 860-832-2130

#### COURSE AND CAPSTONE REQUIREMENTS: 30 CREDITS

##### Core Courses

EDT 502	Design Tools	3
EDT 505	Inquiry in Educational Technology	3
EDT 515	Instructional Design	3
EDT 517	Message Design and Production	3
EDT 520	E-Learning	3
EDT 525	Instructional Video and Audio	3
EDT 530	Online Instruction	3
EDT 535	Interactive Multimedia I	3
EDT 536	Interactive Multimedia II	3

**Subtotal: 27**

##### Research and Capstone Requirements (Plan E: Special Project)

In the capstone final project (EDT 597), a graduate student completes a comprehensive instructional project that is larger and different from a classroom project. In this culminating experience the graduate

student demonstrates the ability to apply and integrate the skills acquired in the program as they independently design, develop, implement and assess the final project. The faculty serve as sounding boards throughout the final project.

Students begin the final project by submitting a comprehensive proposal. Before beginning EDT 597 Final Project, students must have completed at least 21 credits in the program including EDT 505 and EDT 525. Completion of the project requires use of a personal computer, an email account, and a current CCSU BlueNet account.

EDT 597	Final Project	3
<b>Subtotal:</b>		<b>3</b>

**Total Credit Hours: 30**

**ELEMENTARY EDUCATION M.S.**

**Program Rationale**

This program is designed for applicants who hold a Bachelor's degree (some exceptions apply) and wish to pursue graduate study that will prepare them to apply for Connecticut's initial certification in Elementary Education (grades 1-6).

**Program Learning Outcomes**

Program is aligned with the INTASC Standards

**Admission Requirements:**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

To apply to the MS in Elementary Education, applicants must submit an application for graduate admission to the CCSU Office of Graduate Admissions. The following should be submitted with the application:

- Official transcripts from each college and university attended (except Central Connecticut State University)
- Personal statement (no more than 500 words) that briefly describes the applicant's educational and professional background and the reasons for choosing to apply to the MS in Elementary Education
- Evidence of having taken PRAXIS I or SAT or ACT or GRE.

--Application fee paid directly to the CCSU Office of Graduate Admissions

The graduate application and application fee must be submitted to the Office of Graduate Admissions.

**Additional Requirements for Initial Certification by the Connecticut State Department of Education:**

The following are state requirements for certification, not University requirements for program admission. Often, these requirements are met during undergraduate or post-baccalaureate coursework.

--A minimum of 6 semester hours of credit in child and/or human growth and development.

--A minimum of 39 semester hours in general academic courses in the areas listed below

- English
- Natural Sciences
- Mathematics
- Social Studies
- Foreign Language or Fine Arts

A survey course in United States history, comprised of no fewer than three semester hours of credit, shall be included.

Applicants who meet the CCSU admission requirements, will be admitted to the MS in Elementary Education even if they do not meet one or more of the above state requirements. While in the program, admitted students will be advised on how to meet these and other state requirements for initial certification in Elementary Education.

**MAJOR REQUIREMENTS (33 CREDITS)**

Students must complete 33 credits of graduate level courses and a Comprehensive Exam (Plan B) OR Thesis (Plan A). Thesis (Plan A) requires an additional 3 credits of graduate level work.

**Required Courses (33 credits)**

EDEL 502	Focus on Diversity in Education	3
EDEL 508	Current Instructional Trends in Elementary Education	3
EDEL 512	Assessment of Learning	3

EDEL 515	Developmental Theories of Learning	3
EDEL 529	Analysis of Teaching	3
LLA 508	Teaching Literacy in the Content Areas	3
LLA 509	Comprehensive Reading Instruction	3
LLA 520	Seminar in Literacy Research	3
SPED 501	Education of the Exceptional Learner	3
EDEL 530	Internship	6

**Total Credit Hours: 33**

### **ENGINEERING TECHNOLOGY M.S. - THIS PROGRAM IS SUSPENDED UNTIL FURTHER NOTICE.**

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#### **Program Rationale:**

The Master of Science in Engineering Technology is designed for the working professional who has a BS in Engineering Technology or Engineering and desires further development and/or knowledge of recent advances in established or emerging technologies in the Civil/Construction or Manufacturing/Mechanical specializations.

The Master of Science in Engineering Technology with a specialization in Civil/Construction Engineering Technology is designed for the working professional to continue his or her education at night at CCSU. The program will extend the knowledge of students into areas of established and emerging technologies in Architecture/Engineering/

Construction (AEC) industries, including the study of Geographic Information Systems (GIS), Global Positioning Systems (GPS), site development, urban hydrology, construction engineering administration, and infrastructure rehabilitation and management.

The Master of Science in Engineering Technology with a specialization in Manufacturing/Mechanical Engineering Technology provides students with academic experience in applied engineering methods in the areas of mechanical and manufacturing. Specialization areas focus on advanced materials, manufacturing and assembly, project administration, and technical management. Technical electives include mechanical design and analysis, manufacturing methods, materials, quality control, and applied engineering management. The program is designed to provide applied engineering methods to aid graduates and engineers in remaining current with

technology, improve productivity, and assist with advancement into leadership positions in industry.

#### **Program Learning Outcomes:**

Master of Science in Engineering Technology students will be expected to:

- identify, formulate, and solve technical problems;
- design and conduct experiments and to analyze and interpret data;
- execute a project to meet desired needs; and
- communicate effectively in oral, written, visual, and graphic modes.

#### **Admission Requirements:**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

Applicants meeting the Graduate School admissions standards will be considered for acceptance to the Masters of Science in Engineering Technology program provided they meet the additional acceptance criteria in both section I and II:

I) Undergraduate degree: All applicants shall have completed a four-year degree from an accredited university program from one of the following programs:

- A) A four year Bachelor of Science program with a major in Engineering Technology or Engineering; or  
 B) A four year degree in Construction Management, Architecture, Mathematics, Computer Science, or the Physical Sciences (i.e., Earth Science, Biology, Chemistry, Physics or Biomolecular), with added undergraduate course work completed so the applicant is in substantial conformance with the requirements in section II.

II) Undergraduate course work: All applicants will have completed the following courses in part A, and the courses in Part B or C of this section. Courses must be from an accredited university program and each course shall consist of a minimum of three semester hours.

A) Required undergraduate courses for both the Civil/Construction and Mechanical/Manufacturing specializations:

- 1) Mathematics: Calculus I and Calculus II
- 2) Mathematics: One of the following courses: Statistics, Calculus III, Linear Algebra or Differential



Equations

- 3) Chemistry with a laboratory
- 4) Physics I
- 5) Engineering: Statics - Applied Mechanics I or Engineering Mechanics I
- 6) Strength of Materials or Mechanics of Materials
- 7) Applied Fluid Mechanics or Fluid Mechanics
- 8) Engineering materials: Materials of Construction or Materials Analysis

B) Required undergraduate courses for the Specialization in Civil/Construction:

- 1) Engineering Surveying
- 2) Structural Analysis
- 3) A minimum of three of items a through f:
  - (a) Soil Mechanics and Foundations
  - (b) Reinforced Concrete Structures
  - (c) Hydrology and Storm Drainage
  - (d) Structural Steel Design
  - (e) Transportation Engineering
  - (f) Environmental Technology

C) Required undergraduate courses for the Specialization in Mechanical/Manufacturing:

- 1) Thermodynamics
- 2) Manufacturing Processes
- 3) Solid Modeling CAD
- 4) Geometric Dimension and Tolerancing or Engineering Statistical Analysis of Operations
- 5) A minimum of two of items a through f:
  - (a) Machine Design
  - (b) Process Engineering
  - (c) Applied Finite Element Analysis
  - (d) Design for Manufacture, or Manufacturing System Design, or Mechanical Systems and Control, or Inventive Engineering Design, or Aerospace Structures and Materials
  - (e) Instrumentation
  - (f) Propulsion Systems

III) Conditional admission may be granted for an applicant who meets the Graduate School admission standards, and the standards in section I, but does not have all of the courses required in Section II. A maximum of three undergraduate courses will be allowed for conditional acceptance. The added undergraduate course work must be completed with a grade of B or better before full admission to the Master of Science in Engineering Technology program is granted. Additionally, students with a grade point average between 2.40 and 2.69 may be considered for conditional admission.

The graduate application, application fee, and official transcripts are to be submitted to the Graduate

Recruitment and Admissions Office. Official transcripts must be sent directly to the Graduate Recruitment and Admissions Office from each institution attended except Central Connecticut State University.

Contact: 860-832-1823

**COURSE AND CAPSTONE REQUIREMENTS**

**Foundation Studies**

Six credits are encumbered and six credits are electives selected from University courses approved for graduate study by the Engineering Department and the department offering the course.

ET 592	Research and Development of Experiments	3
STAT 453	Applied Statistical Inference Elective, to be approved by the graduate advisor	3
	Technical elective (ET, ETC, ETM, CM, or EMEC 400- or 500-level, approved by graduate advisor)	3

**Subtotal: 12**

**Engineering Technology Specialization:**

Student selects one Specialization and completes 15 credits of graduate courses in a planned program approved by advisor.

**Specialization-Civil/Construction Engineering Technology**

	ET or ETC (500-level elective approved by advisor)	
	ET, ETC, or CM (500-level elective approved by advisor)	3
	ET or ETC (400- or 500-level elective approved by advisor)	

**Subtotal: 15**

**Specialization-Manufacturing/Mechanical Engineering Technology**

	ET elective (one 500- or 400-level course)	3
	ET electives (two 500-level courses)	6

**Subtotal: 15**

**Capstone Requirement:**

The master candidate must select either Plan A, Thesis, or Plan C, Research in Engineering Technology, and each requires a written and oral defense of the research.

**Subtotal: 3**

**Plan A:**  
ET 599 Thesis 3

The preparation of analytical research and thesis under the supervision of a graduate advisor requires a written and oral defense.

**Plan C:**  
ET 598 Research in Engineering Technology 3

An applied engineering project conducted under the supervision of graduate advisor. Requires written report and oral defense. Extensive projects may be approved for up to 6 credits (in such case one, not two, ET 500-level electives will be required).

Subtotal: 30

**Total Credit Hours: 30**

## **ENGLISH M.A.**

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### **Program Rationale:**

The Master of Arts in English program is designed for students who wish to pursue the advanced study of British, American, and World literatures in English. The program offers two tracks, both of which provide students opportunity to refine and expand their knowledge of literature written in English and their facility with its criticism.

The “Literary Studies” track begins with an introduction to the theory and practice of literary criticism and research and continues with coursework allowing students to work with faculty in small classes to investigate the discipline of literary studies and the scope of British, American and World literatures from their beginnings to the present day. In this way, the MA program supports students' pursuit of careers in teaching at the K-12 level (or enhances the skills and qualifications of those already teaching); helps prepare students for further advanced study in a doctoral program; and gives them the tools necessary for other careers involving reading, research, critical writing, and textual analysis.

The “Online-Hybrid Track for Teachers” is designed specifically for practicing teachers, whether in public or private settings, who want to deepen their knowledge of the type of texts frequently assigned in middle- and high-school Literature courses. Students read widely and critically in the school literature canons, and beyond, and they work closely with faculty to develop their research and presentation skills. The “Online-Hybrid Track for Teachers” offers several advantages for existing educators:

- Graduate level study and research of American, British, and World literatures
- Available accelerated course schedule
- Summer online courses
- Capstone project geared toward practicing teachers

### **Program Learning Outcomes:**

Students will:

- construct a sound argument, supporting effectively and appropriately a valid claim about the material addressed;
- discuss effectively the literary aspects of a prose work or works, such as tone, point of view, characterization, imagery, etc.;
- employ technical language and appropriate literary terminology in service of a clear, effective treatment of material discussed;
- analyze a work or works effectively from the perspective of genre;
- offer persuasive and technically accurate close readings of poetry, including analysis of prosody and other formal features;
- construct an effective analysis of a work or works informed by the tenets of a literary theory;
- analyze a work or works effectively from the perspective of the cultural issues it addresses (gender, sexuality, race, ethnicity, class, etc.);
- analyze a work or works considering accurately their engagement with relevant historical periods;
- read effectively and incorporate successfully into their own arguments secondary material treating the works they address.

### **LITERARY STUDIES TRACK**

#### **Plan B (Comprehensive Examination)**

ENG 598	Research in English	3
ENG 500	Seminar in American Literature	3
ENG 501	Seminar in British Literature	3
ENG 522	Topics in Poetry and Prosody	3
ENG 540	Topics in Literature and Theory	3

15 credits of English electives at the 400 and 500 level, with no more than 6 credits at the 400 level, as approved by the faculty advisor. Students make take one of the following as an elective: ENG 509, ENG 510, or ENG 511.

ENG 598: To be completed during the first year of graduate study.

**Plan A (Thesis)**

ENG 598	Research in English	3
ENG 500	Seminar in American Literature	3
ENG 501	Seminar in British Literature	3
ENG 522	Topics in Poetry and Prosody	3
ENG 540	Topics in Literature and Theory	3
ENG 599	Thesis	3

12 credits of English electives at the 400 and 500 levels, with no more than 6 credits at the 400 level, as approved by the faculty advisor. Students make take one of the following as an elective: ENG 509, ENG 510, or ENG 511.

ENG 598: To be completed during the first year of graduate study.

**Online-Hybrid Track for Teachers**

ENG 509	American Canons and Cultures	3
ENG 510	British Canons and Cultures	3
ENG 511	World Canons and Cultures	3
ENG 598	Research in English	3
ENG 595	Special Project: Critical Case Study	3

15 credits of English electives at the 400 and 500 levels, with no more than 6 credits at the 400 level, as approved by the faculty advisor.

**Total Credit Hours: 30**

**GEOGRAPHY M.S.**

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**Program Rationale:**

The Master's program in Geography, whether the General Geography credential or the Global Sustainability Specialization, allows students to custom-design a program of study to provide the best possible preparation for their career choice or future PhD studies.

**Program Emphases:**

Graduate students in Geography may focus on any of the following areas:

- urban and regional planning
- environmental geography and sustainability
- travel and tourism
- cultural and world regional geography
- computer mapping or geographic information systems

**Program Goals and Learning Outcomes:**

The graduate program in Geography strives to achieve the following goals:

1. to create an environment in which students learn about the breadth, depth, and complexity of the human experience through the study of Geography;
2. to produce students who have an informed appreciation and understanding of geographical thought, its philosophical background and debates, and the interpretation of geographical literature;
3. to produce graduates who have an informed appreciation and understanding of the research methods in geography and the social sciences in general by completing a research thesis or project under academic supervision and guidance; and
4. to prepare students for professional careers or further studies and research in Geography.

Each Geography MS graduate will have achieved the following learning outcomes to a satisfactory level as judged by the appropriate performance indicators established for use in the program assessment of student achievement.

1. demonstrate an ability to develop a research proposal and carry out independent research
2. have an in-depth understanding and mastery of the literature in Geography and in at least one geographic subfield
3. demonstrate an ability to present and defend research work in oral, written and graphic forms
4. demonstrate technical skills in the collection, analysis and mapping of geographic data, critical-thinking skills, plus written and verbal communication skills
5. apply geographic knowledge and skills to a range of problems faced by businesses, industry, government, etc.
6. write effectively and persuasively about the key principles, theories, and issues of geography, especially in the student's area of specialization; thesis plan A students will be able to write at an advanced scholarly level.

**Admission Requirements:**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have an undergraduate GPA of 3.00 on a 4.00 point scale (where A is 4.00) or its equivalent, with the understanding that a student may be considered

for Conditional Admission with an undergraduate GPA of 2.40 to 2.99. Applicants must also be in good standing (3.00 GPA) in all post-baccalaureate course work.

Applicants must also submit an Academic Autobiography/Statement of Purpose, of approximately 500 words, describing the student's interest in graduate study of geography at CCSU, and the role the degree will play in his/her current and future career. The writing is expected to demonstrate skills adequate for coursework at the graduate level. Instructions for uploading the essay will be found within the graduate online application.

The M.S. degree programs are available to all individuals who meet the admissions requirements. The Graduate Record Examination is not an admission requirement. An undergraduate major or minor in geography is desirable but not required of applicants. However, those with deficient academic preparation may be asked to complete up to four courses of remedial work at the undergraduate level. Details are available from the Department of Geography.

The graduate application, application fee, and official transcripts are to be submitted to the Graduate Recruitment and Admissions Office. Official transcripts must be sent directly to the Graduate Recruitment and Admissions Office from each institution attended except Central Connecticut State University.

Contact: 860-832-2785

### **COURSE AND CAPSTONE REQUIREMENTS:**

Students enrolled in the graduate program must comply with all requirements in the current graduate catalog.

Students select Plan A, B, or C.

Total Credit Hours: 30

#### **Plan A**

GEOG 599 Thesis (Plan A) 3

#### **12 credits of core courses, including**

GEOG 530 Graduate Internship in Geography 3  
or

GEOG 542 Graduate Field Methods in Geography 3

GEOG 500 Graduate Studies in Geography 3

GEOG 598 Research in Geography 3

#### **Choose one of the following courses:**

GEOG 514 Studies in Systematic Geography 3

GEOG 516 Studies in Regional Geography 3

GEOG 518 Studies in Geographical Techniques 3

9-12 credits of geography electives selected in consultation with an advisor; and 3-6 credits of electives selected from other disciplines in consultation with an advisor. Thesis guidelines are available from the appropriate Dean's office.

#### **Plan C**

GEOG 595 instead of a thesis

Others may select Plan B, in which a comprehensive exam and GEOG 597 is completed instead of a thesis or special project. The 30 credits required are the same as in Plan A (thesis) and Plan C (special project) except that GEOG 597, as well as the comprehensive examination, substitutes for GEOG 599 and GEOG 595, respectively, in the Plan B (comp exam) option.

#### **Geography Electives:**

9 credits of directed electives in geography.

Up to 9 credit hours total may be 400-level courses that are listed in the graduate catalog.

### **GLOBAL SUSTAINABILITY SPECIALIZATION:**

30 credits total, plus any additional prerequisite courses.

#### **Program Rationale:**

The M.S. in Geography: Global Sustainability Specialization is designed to enable students to examine global environmental, social, and economic challenges facing society and to explore possible sustainable solutions to these challenges.

#### **Program Learning Outcomes:**

Graduate students will:

- Demonstrate the ability to explain sustainability in the global context.
- Demonstrate an empirical grasp of the human-environment relationship.
- Be able to apply geographic theories and methods to research and communicate sustainability issues.

#### **Course and Capstone Requirements:**

##### **Core Geography Courses**

GEOG 500 Graduate Studies in Geography 3

SUST 530 Graduate Internship in Sustainability 3  
or

GEOG 530	Graduate Internship in Geography or	3
SUST 542	Advanced Field Methods in Sustainability or	3
GEOG 542	Graduate Field Methods in Geography	3
GEOG 598	Research in Geography	3
GEOG 595	Special Project in Geography (Plan C) or	3
GEOG 599	Thesis (Plan A) or	3
GEOG 597	Geography Capstone Seminar (Plan B)	3
GEOG 599: (Plan A)		
GEOG 595: (Plan C)		
GEOG 597: (Plan B)		
<b>Specialization Courses</b>		
SUST 500	Social, Political, and Ethical Dimensions of Global Sustainability	3
SUST 501	Contemporary Challenges in Environmental Sustainability	3
SUST 502	Science for Sustainability	3

**9 credits of directed electives/courses whose primary focus is sustainability from any academic department.**

**Total Credit Hours: 30**

Each graduate student’s planned program of graduate study is custom designed to provide the best possible preparation for the career selected, and can include practical work experience to apply classroom theory.

**HISTORY M.A.**

CORE (18 credits) at 500 level; ELECTIVES (No more than 6 credits at the 400 level); CAPSTONE

**Program Rationale:**

The MA degree in history is offered for students who desire to do further historical study and research beyond the bachelor's degree. It serves students interested in graduate study of U.S., modern European, and comparative world history. The degree is designed to meet the varied needs and interests of students seeking an advanced degree in history. For secondary teachers, it fulfills Connecticut State Department of Education requirements and may lead to other employment opportunities. Some who earn the MA will use it as a foundation for undertaking doctoral work in history, law,

government, international affairs, and other relevant fields.

Because the majority of students in the master's program are employed full-time during the day, graduate courses are offered in the evening, usually on a one-night-a-week basis. This schedule allows students time to complete regular assignments, carry on research, and make regular progress toward the MA degree.

**Program Learning Outcomes:**

Students completing the MA will be expected to:

- demonstrate an understanding of historiography and its relevance for the study of history;
- develop historical arguments and present them effectively, orally and in writing;
- produce examples of various types of historical writing, such as book reviews, bibliographic essays, research papers, prospectus, and theses; and
- present original historical arguments using both primary and secondary sources.

**Admission Requirements:**

To be considered for admission to the M.A. in History, you must meet the following requirements:

1. Applicants must have an undergraduate (or combined undergraduate/graduate) GPA of 3.00 or higher, as well as a degree in history or related field. Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. If you do not meet this admission standard, please see the "NOTES" below.
2. Applicants must submit the following additional materials to the History Department: two letters of recommendation and two essays. Write a 500-word essay that discusses a scholarly monograph written by a historian that has influenced the way you think about the past, and write a 250-word essay that describes your career aspirations and any opportunities for career preparation that you have had.
3. The graduate application, application fee, and official transcripts must be submitted to the Graduate Recruitment and Admissions Office.
4. Instructions for uploading the essay and for obtaining and submitting the recommendation letters will be found within the graduate online application.

5. All application materials must be received by the application deadline.

**NOTES:**

1. If you have an undergraduate degree in history but are denied admission because you have an undergraduate (or combined undergraduate/graduate) GPA between 2.70 and 2.99, or for any other reason, then you may be considered for conditional admission. In order to be recommended for full admission, conditionally admitted students must complete HIST 501 or HIST 502 with a B+ or better.
2. If you have an undergraduate degree in history but are denied admission because you do not meet the GPA requirements for full admission or conditional admission, or for any other reason, then you must take 9 credits of 500-level history courses, including HIST 501 or HIST 502, as a non-matriculated student. (If you are later admitted to the program, then those courses will apply to your graduate degree.) In order to be considered for admission, you must earn a grade of B+ in all 9 credits of 500-level history courses and receive two positive letters of recommendation from CCSU History Department faculty. Once you have fulfilled those conditions, you should apply again for admission.
3. If you meet the GPA requirements for full admission to the graduate program but do not have an undergraduate degree in history, you should meet with the History Department chair or a History Department M.A. coordinator to determine the requisite courses needed for admission. At minimum, those students will receive a conditional admission and must complete HIST 501 OR HIST 502 with a B+ or better.

For more information, contact the History Program Coordinator, 860-832-2800

**COURSE AND CAPSTONE REQUIREMENTS (INCLUDING A THESIS)**

Admission criteria: Acceptance into the CCSU Graduate Program and approval of the History Department chair or M.A. coordinator.

**500-level history courses**

HIST 501	Thinking Historically	3
HIST 502	Writing History	3
HIST 599	Thesis (Plan A)	6
	Directed electives as approved by advisor	18

**Subtotal: 30**

HIST 501 and HIST 502: The student must complete HIST 501 and HIST 502 within the first year of academic study (6 credits).

**Total Credit Hours: 30**

Note: After receiving permission from the M.A. program advisor, a student may take up to 6 credits of HIST 495 or other graduate-level courses in a related discipline. Students should not enroll in any other 400 level courses as they will not count toward their planned program of study.

Candidates will be required to demonstrate the ability to translate material in their fields in one foreign language, except in those cases where, upon the request of a candidate in U.S. history, a substitute skill or subject is approved by the department. Candidates must make application in the department to take the language examination. Deadlines are October 10, for the fall examination; March 10, for the spring.

The fields of concentration available in the M.A. program are U.S. history, European history, and comparative world history. No more than six credits can be taken at the 400 level.

Although proficiency in a language other than English is not a program requirement, students should be aware that it may be necessary for certain research subjects.

**INFORMATION DESIGN M.A.****Admission to the Master's in Information Design program is suspended.****Program Rationale:**

The Master of Arts in Information Design prepares graduates to take leadership positions in the design industry, including graphic design, publishing, advertising, multimedia design, web design, digital imaging, and corporate information design.

Graduates are expected to meet the challenges presented by the theoretical, creative, and technical aspects of the rapidly changing field of visual design and its business applications through the development of the analytic and critical skills required to create, direct, present, and evaluate effective design solutions.

**Program Learning Outcomes:**

Students are expected to:

- Master advanced design theory, process and application;
- Develop analytic and critical skills required to create, direct, and evaluate effective design solutions; and
- Develop in-depth problem solving and research skills necessary for the creation and presentation of effective design solutions.

**Admission Requirements:**

Applicants for the Master of Arts degree in Information Design must hold a bachelor’s degree from a regionally accredited institution of higher education with a minimum undergraduate grade point average of 3.00 on a 4.00 scale. The undergraduate record must demonstrate clear evidence of ability to undertake and pursue successfully advanced study in the graduate field.

Applicants must also have completed 12 credits of undergraduate coursework in graphic design with a grade of “B” or better, of which three credits must be at the 400 level. These courses will be reviewed by the department for discipline-specific content as it relates to the M.A. in Information Design.

**Additional Materials Required:**

- Application essay.
- Slide or CD-ROM portfolio (10 examples of applicant’s graphic design work). The portfolio must meet department admissions committee approval for design quality. Collaborative projects must be clearly identified as such and include a detailed description of each student’s contribution.

Applicants must submit a graduate admissions application, application fee, and official transcripts from every college or university attended to the Graduate Recruitment and Admissions Office.

Instructions for uploading the essay will be found within the graduate online application. The portfolio must be sent directly to the attention of the Department of Design (Graphic/Information) Graduate Admissions Committee.

Note: Successful applicants will be expected to take a technical competency test prior to admission to DES designated courses requiring computer use.

Contact: 860-832-2557

**COURSE AND CAPSTONE REQUIREMENTS**

**Core Courses**

DES 499	Computer Applications for Graphic/Information Design	3
DES 501	Graphic/Information Design Theory I	3
DES 502	Graphic/Information Design Theory II	3
DES 520	Advanced History of Design	3
DES 598	Research Methods in Design	3

**Subtotal: 15**

**Specialization**

DES 503	Graphic/Information Design Practice I	3
DES 504	Graphic/Information Design Practice II	3
DES 537	Advanced Design Internship	3

**Subtotal: 9**

**Directed Elective**

DES, MIS, CS, COMM, MGT, MKT, BUS or ART course as approved by advisor

**Subtotal: 3**

**Capstone**

DES 597	Research Project (Plan C)	3
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**Subtotal: 3**

DES 597: (Plan C)

The capstone requirement is a research project supervised and approved by the graduate advisor and Graduate Faculty Committee. The research project also requires final approval by the dean, School of Graduate Studies.

**Note: Students enrolled in the following courses will be assessed a \$65 Design Lab Fee:**

DES 436	Graphic/Information Design III	3
DES 438	Graphic/Information Design IV	3
DES 439	Central Design	3
DES 465	Topics in Graphic/Information Design	3
DES 499	Computer Applications for Graphic/Information Design	3
DES 503	Graphic/Information Design Practice I	3

DES 504	Graphic/Information Design Practice II	3
DES 597	Research Project (Plan C)	3
DES 598	Research Methods in Design	3

Contact the department for additional information.

**Total Credit Hours: 30**

Note: Students are limited to six credits of DES designated course work per semester without permission of advisor and department chair.

Note: No more than nine credits at the 400 level, as approved by the graduate advisor, may be counted toward the graduate planned program of study.

## **INTERNATIONAL STUDIES M.S.**

International Studies is an interdisciplinary program designed to build student expertise in particular world regions and/or about diverse international issues including globalization; global population, migration, and health; international conflict, terrorism, governance, and law; imperialism, decolonization, and development; and the role of gender, race, and class in international contexts.

An MS degree in International Studies prepares students for a range of career possibilities in government service, in foundations and NGOs, and in the wide range of institutions offering services transnationally or otherwise working in global environments.

CCSU was designated as a Center for Excellence in International Education in 1986. Today, along with its Bachelor's and Master's degrees in International Studies, CCSU boasts a wide variety of study abroad programs and initiatives. The continuing enrichment, expansion, and refinement of the Bachelor of Arts and Master of Science programs in International Studies result from the institution's established commitment to global awareness and global citizenship.

### **COURSE AND CAPSTONE REQUIREMENTS**

30 credits in International Studies (Plan A or Plan C)

#### **1. Common Core**

IS 500	Advanced Practice in IS	3
IS 570	Modern World Issues	3

#### **2. Geographical Areas and Global Themes (18 credits)**

Students will select 6-12 Credits from each of our program's two focuses, for a total of 18 credits.

#### **Geographical Areas:**

12 credits for students who wish to develop a primary focus in a particular world geographical area.

9 credits for students who wish to balance area and global focuses.

6 credits for students who wish to complement their primary focus on a global theme.

Courses listed below are for **advisory** purposes only. Additional courses may be identified with the approval of the advisor. For example, IS 550 (Graduate Internship in International Studies), IS 590 (Graduate Field Study Abroad), IS 596 (Independent Studies in International Studies), and IS 597 (Seminar in International Studies) could be included in each area, depending on the topic of those courses when offered.

#### **2a. Geographical Areas:**

##### **Africa (6 to 12 credits)**

ANTH 416	Archaeology of Africa	4
ANTH 424	Peoples and Cultures of Africa	4
GEOG 446	Sub-Saharan Africa	3
HIST 431	Ancient Northeast Africa	3
HIST 432	History of South Africa	3
PS 421	Government and Politics of Africa	3
IS 596	Independent Studies	3
IS 597	Graduate Seminar in International Studies	3

For any course designated GEOG 4XX, graduate students must register for GEOG 516 to receive graduate credit.

For any course designated HIST 4XX, graduate students must register for HIST 495 to receive graduate credit.

##### **East Asia (6 to 12 credits)**

GEOG 435	Japan and Korea	3
GEOG 437	China	3
HIST 422	Topics in Japanese History	3
PS 425	Asian Politics	3
IS 596	Independent Studies	3
IS 597	Graduate Seminar in International Studies	3

For any course designated GEOG 4XX, graduate students must register for GEOG 516 to receive graduate credit.

For any course designated HIST 4XX, graduate students must register for HIST 495 to receive graduate credit.

##### **Europe (6 to 12 credits)**

GEOG 444	European Union	3
GEOG 448	Russia and Neighboring Regions	3
HIST 540	Seminar in European History	3
ITAL 571	20th-Century Italian Literature	3



PS 435	Central and Eastern European Politics	3
SPAN 571	Generation of '98	3
SPAN 572	20th-Century Spanish Literature	3
IS 596	Independent Studies	3
IS 597	Graduate Seminar in International Studies	3

For any course designated GEOG 4XX, graduate students must register for GEOG 516 to receive graduate credit.

For any course designated HIST 4XX, graduate students must register for HIST 495 to receive graduate credit.

**Latin America (6 to 12 credits)**

ANTH 428/LAS 428	Cultures of Latin America	4
GEOG 434/LAS 434	Mexico, Central America, and the Caribbean	3
GEOG 436/LAS 436	South America	3
HIST 583	Seminar in Latin American History	3
PS 420/LAS 420	Government and Politics of Latin America	3
SPAN 545	The Spanish-American Essay	3
SPAN 588	Topics in the Contemporary Spanish-Speaking World	3
IS 596	Independent Studies	3
IS 597	Graduate Seminar in International Studies	3

For any course designated GEOG 4XX, graduate students must register for GEOG 516 to receive graduate credit.

For any course designated HIST 4XX, graduate students must register for HIST 495 to receive graduate credit.

**Middle East (6 to 12 credits)**

PS 434	Government and Politics of the Middle East and North Africa	3
PS 439	U.S. Middle East Policy	3
IS 596	Independent Studies	3
IS 597	Graduate Seminar in International Studies	3

For any course designated HIST 4XX, graduate students must register for HIST 495 to receive graduate credit.

**2b. Global Themes (6 to 12 credits)**

12 credits for students who wish to develop a primary focus on a particular global theme.

9 credits for students who wish to balance global and area focuses

6 credits for students who wish to complement their primary focus on a geographical area.

Courses below are for **advisory** purposes only. Additional courses may be approved by your advisor. For example, IS 550 (Graduate Internship in International Studies), IS 590 (Course Abroad), IS 596 (Independent Studies in International Studies), IS 597 (Seminar in International Studies), HIST 580 (Seminar in Non-Western World History), and HIST 585 (Modern World History) could be included in each **Global Theme** depending on the topic.

**Global Themes**

**Communication and Diversity in the Global Context (6 to 12 credits)**

COMM 543	Intercultural Communication	3
ENG 486	World Literature and Film	3
EPS 528	Comparative and International Education	3
PSY 520	Global Psychology	3
SPAN 441	Cross-Cultural Communication	3
WGSS 469	Readings in Women, Gender, and Sexuality Studies	3
IS 596	Independent Studies	3

**Energy, Resources, and Environment (6 to 12 credits)**

COMM 451	Environmental Communication	3
GEOG 433	Issues in Environmental Protection	3
GEOG 473	Geography of Natural Resources	3
GSCI 450	Environmental and Engineering Geology	3
SUST 500	Social, Political, and Ethical Dimensions of Global Sustainability	3
SUST 501	Contemporary Challenges in Environmental Sustainability	3
SUST 502	Science for Sustainability	3
IS 596	Independent Studies	3

For any course designated GEOG 4XX, graduate students must register for GEOG 516 to receive graduate credit.

**Governance, Security, and Human Rights (6 to 12 credits)**

CJ 510	Law, Criminal Justice, and Issues of Inequality	3
COMM 454	Communication and Social Change	3
HIST 420	Imperialism	3
PS 445	Public Policy Analysis and Evaluation	3
PS 501	Advanced Studies in International Law	3
IS 596	Independent Studies	3

For any course designated HIST 4XX, graduate students must register for HIST 495 to receive graduate credit.

**Population, Mobility, and Development (6 to 12 credits)**

ANTH 401	City Life & Culture	4
ANTH 475	Topics in Anthropology	3
ECON 430	International Economics	3
ECON 435	Economic Development	3
GEOG 470	Geography of Health & Disease	3
GEOG 544	The Geography of World Economic Development	3
IS 596	Independent Studies	3

For any course designated GEOG 4XX, graduate students must register for GEOG 516 to receive graduate credit.

**3. Research and Capstone Requirements (6 credits)**

**Plan A:**

IS 598	Advanced Research in International Studies	3
IS 599	Thesis in International Studies	3

**Plan C:**

IS 595	Special Project in International Studies	3
IS 598	Advanced Research in International Studies	3

**4. Language Requirement and Study Abroad**

The International Studies MS program requires that all students have a level of proficiency in reading, writing, speaking, and understanding of a single world language relevant to the area of geographical specialization, equal to the completion of the 126-level (226-level for French, Italian, or Spanish). Fulfillment of this requirement will be determined by a CCSU instructor of the language, the Chair of the World Languages, Literatures, and Cultures Department, or a CCSU faculty member designated by the Director of International Studies.

In addition to the language requirement, IS students without significant life or study experiences abroad are strongly encouraged to participate in a study abroad program, whether a course abroad or a semester or summer exchange. Information about study abroad programs is available via the Center for International Education.

NOTE: No more than nine credits at the 400 level, as approved by the graduate advisor, may be counted toward the graduate planned program of study. Initially, on acceptance to the program, students are assigned to the International Studies Curriculum Coordinator for advice. As soon as possible, students will be assigned an advisor appropriate to their area or global specialization.

This advisor will normally serve as the faculty member supervising the student's thesis or special project.

**Total Credit Hours: 30**

**MARRIAGE AND FAMILY THERAPY M.S.**

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**Master of Science in Marriage and Family Therapy**

**Note: Students interested in the MFT program are encouraged to apply for the Fall only term with a February 1<sup>st</sup> deadline.**

**Program Rationale:**

The Marriage and Family Therapy (MFT) program leads to a Master's of Science in Marriage and Family Therapy (MSMFT). The program is designed to prepare students for professional careers as marriage and family therapists in a wide variety of settings and roles. First, students are taught theories and techniques of practice in individual and group counseling modalities, as well as developmental theory. The foundation of the specialized training in marriage and family therapy is systems theory, serving as the linchpin for the study of clinical theories and practices that are taught in preparation for clinical training.

The philosophy of the program is that a student must integrate theories and techniques as tools for enhancing one's effectiveness as an agent of intervention and change. The program does so by interweaving theory and practice throughout the duration of the training process via graduated practical experiences while studying theory. Thus, through the process of study and practice, the student has an opportunity to incorporate a wide array of learning gradually and comprehensively. The end product of such training is a therapist who is well-grounded in theory and who has had nurturing through an on-going training and supervisory process to use him/herself effectively, professionally, and ethically as an agent of change at a variety of levels. A unique feature of the program is that we utilize a "common factors" approach based on a theoretical model called "Metaframeworks", which provides a template for looking through different systemic "lenses" to make decisions regarding how to intervene to remove constraints preventing a person, couple, family or organization from making necessary changes for their well-being.

The curriculum is designed to meet academic and clinical requirements for Connecticut licensure for marital and family therapists (LMFT) and AAMFT Clinical Membership.

Clinical placements and intensive faculty supervision emphasize the development of effective therapeutic skills

to meet the challenges of the new climate in health care service delivery. Emphasis is also placed on the development of the "person of the therapist." A key theme of the program is respect for diversity of people and lifestyles in families. The program has been awarded accreditation by AAMFT's Commission on Accreditation for MFT Education (COAMFTE).

#### **Mission Statement:**

The mission of the CCSU MFT Program is to provide quality training in MFT education that will ensure the development of competence of individuals entering the profession. To accomplish this end, the program is committed to advancing and disseminating the Metaframeworks paradigm as a valued systemic basis for teaching and practicing marriage and family therapy, promoting culturally-informed and respectful systemic mental health practice, and promoting leadership in the MFT field among our students, faculty, and graduates.

Our mission can be re-stated in terms of program goals (PG) that guide our curriculum, structures, and assessment of our success in accomplishing our mission:

#### **MFT Program Goals (PG):**

1. **Knowledge and Research:** Students will develop competence in the delivery of MFT services, including proficiency in: (1) applying systems thinking in case formulation, (2) utilizing systemic models and interventions, (3) utilizing findings of MFT research to inform clinical practice and (4) Self-reflection and self-improvement as therapists.
2. **Systemic/Integrative Practice:** Students will develop competency in utilizing the integrative Metaframeworks paradigm in assessment, treatment planning and application of systemic models of marital and family therapy.
3. **Ethics:** Students will develop an understanding of and identify ethical issues that arise in academic and clinical practice based on the AAMFT Code of Ethics and state and federal laws applicable to the practice of marital and family therapy.
4. **Diversity:** Students will develop cultural competence in Marital and Family Therapy practice.

To successfully accomplish these Program Goals, the program places the following expectations on our students and faculty:

#### **Student Learning Outcomes (SLO):**

As a result of successful completion of the MFT program, students will:

1. Become knowledgeable in the major schools of marriage and family therapy;
2. Develop proficiency in practice of systemically oriented therapy approaches to be applied in their clinical work with individuals, families and communities;
3. Become knowledgeable consumers of research and evidence-based clinical practice;
4. Demonstrate self-awareness of their own social location (i.e., internal and relational) and identify biases that inform their clinical practice. Based on this self-awareness, students will demonstrate the ability to self-correct or be open to supervisory and peer feedback;
5. Demonstrate the ability to assess a client system's resources and constraints through the "lenses" of the 6 core Metaframeworks domains (i.e., Organization, Sequences, Development, Multicultural, Gender and Internal Family System), select intervention strategies from systemic family therapy models that are appropriate and aligned with the removal of identified constraints, and implement interventions from such models based on their unique Metaframeworks assessment.
6. Demonstrate the ability to recognize ethical dilemmas in professional practice, apply relevant AAMFT Code of Ethics and models of ethical decision making when ethical issues emerge;
7. Demonstrate an awareness of and respect for cultural differences among clients and their contexts as defined in the program's Metaframeworks Multicultural domain.

#### **Admission Requirements for the Marriage and Family Therapy Program**

Admission to the MFT program is made on a competitive basis one time per year. All applications for must be completed with all the required materials and received by February 1 for fall only admission. Applicants must hold a bachelor's degree from a regionally accredited institution of higher education.

#### **Candidates for initial admission will be selected on the basis of the following criteria:**

- 1) **Grade point average:** Minimum **2.70** grade point average (GPA) for all undergraduate courses and a 3.00 for all graduate courses, based on a 4.00 point scale where A is 4.00
- 2) **Two recommendations** from individuals who know your academic competence, character, or professional

work. **Note:** personal references from family members, friends, neighbors, or personal therapist will not be accepted.

**3) Personal essay** regarding your motivation and readiness to pursue a degree in Marriage and Family Therapy. Please include the following (three to five pages maximum, double-spaced, 12-point Times New Roman font):

- a) Personal and professional experiences and reasons that influenced you to pursue the field of Marriage and Family Therapy.
- b) Personal characteristics you believe will contribute to your educational success in the CCSU Marriage and Family Therapy program as well as your success as Marriage and Family Therapist after graduation.
- c) Comment on your definition of family.
- d) Comment on any personal and/or professional experiences you have had with people from diverse cultural backgrounds

**4) Resume:** Submit a current resume

**5) Interview:** After reviewing application materials, qualified applicants will be invited to interview with the Marriage and Family Therapy Faculty.

The online graduate application, application fee, and official transcripts from each institution attended except Central Connecticut State University are to be submitted directly to Graduate Recruitment and Admissions Office.

Instructions for uploading the personal essay and resume and for submitting the the recommendation letters will be found within the online application.

**If accepted, the advisor will orient the student regarding prerequisites, course scheduling, potential course transfers and substitutions, and the planned program of study.**

**Program Format:**

**Evening Track-** Courses meet once per week in the evenings during each academic semester. Some courses are available for summer registration. Admission is limited to approximately 20 students each Fall semester. Once accepted to the program, students may enroll as full-time or part-time students. Students have the flexibility of enrolling either as full-time or part-time students at any point in the program. Full-time students take a minimum of 9 credits during fall and spring semesters, follow a prescribed program schedule, may attend during the summer, and complete the program in 3 years. Part-time

students may take 3 or 6 credits per semester (including summers) and must complete the program within a 6-year period. Students may take up to six years to complete the program, or a maximum of nine years with permission from the advisor and Dean, School of Graduate Studies. Programs of study are arranged with advisors. Students may shift between full-time and part-time status as individually determined between the student and his or her advisor. Typically, students are enrolled part-time during their internship (3rd year), and are eligible for consideration for part-time equivalency if they are only taking a practicum or internship field placement course.

**For additional information, please see the MFT program website:**

CCSU MFT Program

**CURRICULUM - COURSE AND CAPSTONE PROJECT REQUIREMENTS**

**Capstone Project Requirements :** During the internship year, students will complete a capstone project that consists of two parts: 1) A Comprehensive Practice Exam that is a four-hour timed exam consisting of 180 multiple-choice questions. Students will be required to pass the exam while enrolled in MFT 585 (Internship). This is in preparation for taking the national licensing exam provided by the Association of Marital and Family Therapy Regulatory Boards (AMFTRB), and 2) A comprehensive written examination of a clinical case seen by the student. During the third semester of MFT 585 (Internship), on completion of a minimum of 300 of the 400 clinical hours required for graduation, all students must complete the comprehensive written examination, as well as an oral presentation of the case to MFT faculty and peers. This project is designed to help the student integrate his/her learning experiences in the program. In addition, students also may elect to complete Plan A (Thesis), which adds an additional three (3) credits in the program. Students who pursue the thesis option are also required to complete the clinical capstone during the spring semester of MFT 585.

**Clinical Training in the MFT Program**

During the second year of the MFT program, students complete a practicum experience for two semesters, in which they are placed in approved clinical sites in the community for 12 hours per week and receive an hour of supervision per week by an agency supervisor. This experience provides students with basic skills and techniques in interviewing, clinical assessment, and case management. Students attend a weekly course seminar for one hour per week with a faculty instructor. There are over 30 approved training sites across the state, including

mental health centers, youth service bureaus, family service agencies, hospitals, and schools.

Following the practicum, each student undertakes a 12-month, intensive (20-25 hours per week) internship in an approved clinical facility, where the intern may hone his/her skills as an "apprentice" clinician under the mentorship of an on-site supervisor and oversight of a faculty supervisor. The internship is designed to be a much more extensive experience than the practicum experience, with the intern assuming primary responsibility for 12-15 clinical cases per week. The student can expect much guidance during the internship experience, with over three hours per week spent in supervision to discuss clinical assessment, case dynamics, skill development, and use of self in the role of "therapist." By the end of the program, students must complete 400 clinical contact hours with a minimum of 100 hours of supervision of those clinical contact hours under an AAMFT Approved Supervisor.

**Pathway to Certification as a School Marriage and Family Therapist**

: This sequence also includes a pathway to an Educator Certificate for School Marriage and Family Therapists, granted by the State Department of Education. This pathway requires a specialized practicum during the 2nd year that is geared toward meeting State of Connecticut regulations for the certificate (MFT 593 and MFT 594 is substituted for MFT 583 and MFT 584) and additional coursework (SPED 501 and MFT 592). The requirements for the certification exceed the number of credits for the MFT Masters degree; the extra courses may be taken either during the Master's program as extra courses or may be taken post-graduation through the Official Certificate Program in School-based MFT.

**Prerequisites (9 credits):**

MFT 505/CNSL 505	Counseling and Human Development Across the Lifespan	3
	or	
PSY 512	Seminar in Developmental Psychology	3
CNSL 501	Theories and Techniques in Counseling	6

PSY 512: Students interested in the School MFT Certification Sequence can take PSY 512 (MFT 505 is an acceptable substitute).

**Marriage and Family Therapy Core Curriculum - thesis optional:**

MFT 541	Introduction to Theories of Family Systems	3
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MFT 542	Professional, Ethical, and Legal Issues in Marriage and Family Therapy	3
MFT 543	The Family Life Cycle	3
MFT 544	Families in Context: Gender and Cultural Dimensions	3
MFT 551	Structural/Strategic & Behavioral Family Therapies	3
MFT 552	Experiential, Intergenerational and Psychodynamic Family Therapies	3
MFT 554	Couples Therapy	3
MFT 555	Dysfunctional Family Processes	3
MFT 556	Systemic Perspectives on Mental Disorders	3
MFT 557	Action Methods in Marital and Family Therapy	3
MFT 583	Marriage and Family Therapy Practicum I	3
MFT 584	Marriage and Family Therapy Practicum II	3
MFT 585	Marriage and Family Therapy Internship (Plan E)	3 (may be repeated)
MFT 598	Research Methods in Marriage and Family Therapy Elective required	3

MFT 541: This course is taken along with the two prerequisite courses.

MFT 583 and MFT 584: Students in the MFT School Certification sequence substitute MFT 593 and MFT 594 for these courses

MFT 585: See Capstone Project requirement (below).

Elective: May be any graduate course that fits coherently with the student's academic goals, on approval from his or her advisor. The Thesis course (CNSL 599) is not considered an elective (Plan A) and is an additional three (3) credits.

**MARRIAGE AND FAMILY THERAPY EVENING TRACK PLAN OF STUDY BY SEMESTER**

**Phase 1**

Prerequisites: May be taken during Fall, Spring, or Summer semesters as offered prior to start of specialization program.

MFT 505/CNSL 505	Counseling and Human Development Across the Lifespan	3
	or	
PSY 512	Seminar in Developmental Psychology	3

## Psychology

CNSL 501 Theories and Techniques in Counseling 6

CNSL 501: Weekly throughout semester 20-25 hours/week placement; 2.5 hours/week supervision

**YEAR 1****Fall Semester**

MFT 541 Introduction to Theories of Family Systems 3

MFT 542 Professional, Ethical, and Legal Issues in Marriage and Family Therapy 3

MFT 541 and MFT 542: to be taken in the sequence, as shown. Other courses may be taken as available and in any order, providing that course prerequisites are met.

MFT 541 and MFT 542: Weekly throughout semester 20-25 hours/week placement; 2.5 hours/week supervision

Prerequisite courses may be taken during this semester. Join AAMFT ([www.aamft.org](http://www.aamft.org))

**Spring Semester****Phase 2**

MFT 551 Structural/Strategic & Behavioral Family Therapies 3

MFT 556 Systemic Perspectives on Mental Disorders 3

MFT 557 Action Methods in Marital and Family Therapy 3  
Last Friday in January MFT Placement Fair for Practicum and Internship, held at CCSU

MFT 551 and MFT 556: to be taken in the sequence, as shown. Other courses may be taken as available and in any order, providing that course prerequisites are met.

MFT 556: Weekly throughout semester - 12-hour placement, 1.5 hour seminar per week.

MFT 557: Weekly throughout semester 20-25 hours/week placement; 2.5 hours/week supervision

**Summer Semester**

NOTE: Some MFT courses that are scheduled for the Fall and Spring semesters (except sequenced courses in BOLD) are taught during Summer and Intersession semesters on a rotational basis for students' convenience. Students may take courses in the summer, as offered (denoted by an asterisk [\*]). Courses taught every Summer are designated with [\*\*]).

**YEAR 2****Fall Semester****Phase 3: Practicum Year**

MFT 543 The Family Life Cycle 3

MFT 544 Families in Context: Gender and Cultural Dimensions 3

MFT 552 Experiential, Intergenerational and Psychodynamic Family Therapies 3

MFT 583 Marriage and Family Therapy Practicum I 3

MFT 543 and MFT 544: Weekly throughout semester - 12-hour placement, 1.5 hour seminar per week.

MFT 552 and MFT 583: to be taken in the sequence, as shown. Other courses may be taken as available and in any order, providing that course prerequisites are met.

**Note:** In order to take MFT 583, students need to complete MFT 551, MFT 542, and MFT 556 (prerequisites).

**Spring Semester**

MFT 598 Research Methods in Marriage and Family Therapy 3

MFT 555 Dysfunctional Family Processes 3

MFT 584 Marriage and Family Therapy Practicum II 3

MFT 555: Weekly throughout semester - 12-hour placement, 1.5 hour seminar per week.

MFT 598: Weekly throughout semester 20-25 hours/week placement; 2.5 hours/week supervision

MFT 584: to be taken in the sequence, as shown. Other courses may be taken as available and in any order, providing that course prerequisites are met.

(Note: Practicum includes 12 hours on-site at agency per week plus weekly 2-hour seminar with MFT faculty - MFT 583 and MFT 584. Agency provides supervision minimum one hour/week)

**Summer Semester****Phase 4: Internship**

MFT 585 Marriage and Family Therapy Internship (Plan E) 3 (may be repeated)

3 semesters (12 months) requiring 400 clinical contact hours (200 must be "relational") with minimum 100 hours of supervision by an AAMFT Approved Supervisor (offered via faculty supervision at CCSU) 50 hours of supervision must use "raw" clinical data (audio/video/live supervision formats)

MFT 585: to be taken in the sequence, as shown. Other courses may be taken as available and in any order, providing that course prerequisites are met.

**YEAR 3**

**Fall Semester**

MFT 554	Couples Therapy	3
MFT 585	Marriage and Family Therapy Internship (Plan E)	3 (may be repeated)
	Elective	

MFT 585: to be taken in the sequence, as shown. Other courses may be taken as available and in any order, providing that course prerequisites are met.

MFT 554 and Electives: Weekly throughout semester - 12-hour placement, 1.5 hour seminar per week.

**Spring Semester**

MFT 585	Marriage and Family Therapy Internship (Plan E)	3 (may be repeated)
	Capstone Project: Case Presentation	

Student applies for graduation by 3/1

MFT 585 and Capstone: to be taken in the sequence, as shown. Other courses may be taken as available and in any order, providing that course prerequisites are met. In addition, students will take a Comprehensive Practice Exam during the Internship year.

**Summer Semester**

Plan E: Capstone Project Non-Thesis (Typical)

Plan A: Capstone PLUS Thesis (Optional and extra 3 credits)

Notes:

This is a sample semester-by-semester description of the curriculum, which shows the general structure of the program. Courses in bold are taken in the sequence, as shown. Other courses may be taken as available and in any order, providing that course prerequisites are met.

This curriculum is designed to expose students to key theoretical knowledge and clinical techniques prior to the Internship experience. MFT 541 is a prerequisite for all MFT specialization courses. All MFT students must follow the sequence of MFT 541, MFT 554, MFT 551, MFT 556, MFT 552, MFT 583, MFT 584, and MFT 585 during the specified semesters. MFT 551, MFT 542, and MFT 556 are prerequisites for MFT 583/MFT 593. All other MFT courses may be taken anytime after completion of MFT 541 and

acceptance into the program. The elective course can be any graduate-level course that fits coherently with the student's professional interests.

**Total Credit Hours: 51**

**MATHEMATICS M.A. WITH SPECIALIZATION IN ACTUARIAL SCIENCE**

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**Program Rationale:**

The Master of Arts in Mathematics with Specialization in Actuarial Science provides students with an understanding of the mathematical foundations of actuarial work and the professional development process. Consistent with this, the program provides course work which covers a substantial portion of the material on the first four examinations of the Society of Actuaries and the Casualty Actuarial Society. Students are encouraged to begin taking professional exams during their course of study. In conjunction with this, students are exposed to complementary disciplines, such as applied statistics or data mining.

**Program Learning Outcomes:**

Learning outcomes are consistent with those of the North American actuarial societies and the International Actuarial Association. Students in this program will be expected to:

- construct both deterministic and stochastic valuation models;
- have a working knowledge of insurance and financial instruments, including derivatives; and
- estimate both parametric and nonparametric models for frequency and severity and use the models to estimate the distribution of total losses and the probability of ruin.

**Admission Requirements:**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

The Department of Mathematical Sciences may, at its discretion, admit an applicant with a GPA between 2.40 and 2.70 on an unconditional basis provided that the prospective student has both sufficient undergraduate course work and standardized test scores that meet any of

the following standards:

- GRE (math subject area): 600 (45th percentile)
- GRE (general test quantitative reasoning): 720 (80th percentile)
- GMAT (quantitative): 50 (95th percentile)

The graduate application, application fee, and official transcripts are to be submitted to the Graduate Recruitment and Admissions Office. Official transcripts must be sent directly to the Graduate Recruitment and Admissions Office from each institution attended except Central Connecticut State University.

Contact: 860-832-2835

### COURSE AND CAPSTONE REQUIREMENTS

(Plans A, B and C are offered as options.)

The student and faculty advisor will work out an appropriate plan of study within the framework of the following requirements.

#### Actuarial Core

ACTL 565	Graduate Long Term Actuarial Models	4
ACTL 566	Graduate Short Term Actuarial Models	4
STAT 535	Graduate Loss and Frequency Distributions and Credibility Theory	3
DATA 511	Introduction to Data Science	4

#### Additional courses as approved by the advisor, including:

**15 additional credits in actuarial science, mathematics, data science, or statistics.**

No more than nine credits in the program may be earned in 400-level courses.

#### Capstone:

##### Plan A:

Thesis (MATH 599, 3 credits) with 27 credits of course work

##### Plan B:

Comprehensive Exam with 30 credits of course work

##### Plan C:

Special Project in Mathematics (MATH 590, 3 credits) with 27 credits of course work

**Total Credit Hours: 30**

## MATHEMATICS M.A. WITH SPECIALIZATION IN COMPUTER SCIENCE

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#### Program Rationale:

The Master of Arts in Mathematics with Specialization in Computer Science provides an abstract introduction to mathematics at an advanced level, combined with an introduction to some advanced topics in computer science. This program is suitable for students wishing to improve their mathematics backgrounds before applying to doctoral programs and for professionals in the informational sciences.

#### Program Learning Outcomes:

Students in this program will be expected to:

- deeply understand analytic arguments, using such common notions as epsilon/delta, infinite sums, and limits, and expand this to include such considerations for more general spaces than the real numbers, such as spaces of functions;
- develop a basic understanding of measure theory and use it to study the Lebesgue integral;
- deeply understand basic algebraic and discrete notions, such as facts about vector spaces and counting arguments, and expand this to include ideas about rings and fields; and
- develop an understanding of the fundamentals of computer science and the application of mathematics to computer programming and/or software engineering.

#### Admission Requirements:

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

The Department of Mathematical Sciences may, at its discretion, admit an applicant with a GPA between 2.40 and 2.70 on an unconditional basis provided that the prospective student has both sufficient undergraduate course work and standardized test scores that meet any of the following standards:

- GRE (math subject area): 600 (45th percentile)
- GRE (general test quantitative reasoning): 720 (80th



percentile)

- GMAT (quantitative): 50 (95th percentile)

The graduate application, application fee, and official transcripts are to be submitted to the Graduate Recruitment and Admissions Office. Official transcripts must be sent directly to the Graduate Recruitment and Admissions Office from each institution attended except Central Connecticut State University.

Contact: 860-832-2835

### COURSE AND CAPSTONE REQUIREMENTS (30 -31 CREDITS)

The student will choose a specialization in computer programming techniques and numerical methods or computer systems and software engineering. The student and faculty advisor will work out an appropriate plan of study within the framework of the following requirements.

#### Basic Mathematics Courses (15-16 credits)

Three (3) of the following courses:

MATH 515	Abstract Algebra I	4
MATH 516	Abstract Algebra II	4
MATH 519	Principles of Real Analysis I	4
MATH 520	Principles of Real Analysis II	4

and one (1) of the following:

MATH 523	General Topology	4
MATH 526	Complex Variables	4
STAT 551	Applied Stochastic Processes	3

#### Basic Computer Science Courses (6 credits)

CS 500	Computer Science for Computer Information Technology	3
CS 501	Foundations of Computer Science	3

Electives appropriate to the area of specialization as approved by the faculty advisor (9 credits). These may include 3 credits for the thesis for a student electing this option.

Comprehensive Examination or Thesis.

**Total Credit Hours: 0**

### MATHEMATICS M.A. WITH SPECIALIZATION IN STATISTICS

#### Program Rationale:

The Master of Arts in Mathematics with Specialization in Statistics prepares students for a career or advanced study

in statistics by understanding the discipline as a collection of inferential tools derived mathematically from models and/or assumptions.

#### Program Learning Outcomes:

Students in this program will be expected to:

- comprehend the theory behind methods of statistical inference;
- develop proficiency in the design and analysis of univariate, multivariate, stochastic, and categorical data;
- become familiar with regression, log linear, and time series models;
- understand and apply parametric and nonparametric procedures; and
- develop expertise in using the latest statistical analysis software.

#### Admission Requirements:

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate coursework.

The Department of Mathematical Sciences may, at its discretion, admit an applicant with a GPA between 2.40 and 2.70 on an unconditional basis provided that the prospective student has both sufficient undergraduate course work and standardized test scores that meet any of the following standards:

- GRE (math subject area): 600 (45th percentile)
- GRE (general test quantitative reasoning): 720 (80th percentile)
- GMAT (quantitative): 50 (95th percentile)

The graduate application, application fee, and official transcripts are to be submitted to the Graduate Recruitment and Admissions Office. Official transcripts must be sent directly to the Graduate Recruitment and Admissions Office from each institution attended except Central Connecticut State University.

Contact: 860-832-2835

**COURSE AND CAPSTONE REQUIREMENTS**

(Plans A, B and C are offered as options.)

The student and faculty advisor will work out an appropriate plan of study within the framework of the following requirements.

**Requirements:****Statistics Core**

STAT 534	Applied Categorical Data Analysis	3
STAT 551	Applied Stochastic Processes	3
STAT 567	Linear Models and Time Series	3
STAT 575	Mathematical Statistics III	3

**Three courses chosen from**

ACTL 565	Graduate Long Term Actuarial Models	4
ACTL 566	Graduate Short Term Actuarial Models	4
DATA 511	Introduction to Data Science	4
DATA 512	Predictive Analytics: Estimation and Clustering	4
DATA 513	Predictive Analytics: Classification	4
DATA 514	Multivariate Analytics	4
MATH 519	Principles of Real Analysis I	4
MATH 520	Principles of Real Analysis II	4
STAT 535	Graduate Loss and Frequency Distributions and Credibility Theory	3

Electives appropriate to the area of specialization (up to 9 credits): No more than nine credits in the program may be earned in 400-level courses.

**Capstone:****Plan A:**

Thesis (MATH 599) (3 credits) with 30 credits of coursework

**Plan B:**

Comprehensive Exam with 33 credits of coursework

**Plan C:**

Special Project in Mathematics (MATH 590) (3 credits) with 30 credits of coursework

**Total Credit Hours: 33**

Note: Once a graduate student has elected one of the three plans A, B or C, any change to one of the other plans must be made prior to the completion of 21 graduate credits and requires the approval of the student's advisor and the dean, School of Graduate Studies.

**MATHEMATICS FOR CERTIFIED ELEMENTARY AND MIDDLE SCHOOL TEACHERS M.S.****Program Rationale:**

The Master of Science in Mathematics provides certified elementary and middle school teachers with additional content and pedagogical knowledge that will make them effective elementary or middle school teachers. (Note: There are two tracks in this program, one focusing on elementary grades and the other on middle grades.)

**Program Learning Outcomes:**

Students in this program will be expected to:

- deepen their comprehension of mathematics by re-examining, in detail, the mathematics topics taught in elementary or middle school, using topics introduced in the undergraduate program as a basis to build an increased understanding of the underlying mathematical structure;
- develop as reflective practitioners and self-motivated life-long learners who strive for continual improvement in their teaching and seek to facilitate deep student learning;
- understand emerging research on the psychological and intellectual development of children and adolescents and develop their understanding of current research on the teaching and learning of mathematics, trends and issues in mathematics curriculum, and the effective use of technology, data gathering and hands-on methods in the teaching of mathematics;
- acquire skills necessary to conduct research in mathematics education; and
- acquire skills necessary to make creative contributions to the field, such as writing, collecting data, and developing their own curriculum activities.

**Admission Requirements:**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

The Department of Mathematical Sciences may, at its discretion, admit an applicant with a GPA between 2.40 and 2.70 on an unconditional basis provided that the prospective student has both sufficient undergraduate

course work and standardized test scores that meet any of the following standards:

- GRE (math subject area): 600 (45th percentile)
- GRE (general test quantitative reasoning): 720 (80th percentile)
- GMAT (quantitative): 50 (95th percentile)

The graduate application, application fee, and official transcripts are to be submitted to the Graduate Recruitment and Admissions Office. Official transcripts must be sent directly to the Graduate Recruitment and Admissions Office from each institution attended except Central Connecticut State University.

Contact: 860-832-0047

**COURSE AND CAPSTONE REQUIREMENTS:**

(Plans A and C are offered as options. No more than nine credits at the 400 level may be counted toward the degree.)

**Educational Foundations**

One of the following:

EPS 500	Contemporary Educational Issues	3
EPS 516	School and Society	3
EPS 524	Foundations of Contemporary Theories of Curriculum	3
EPS 525	History of American Education	3
EPS 538	The Politics of Education	3
EPS 583	Sociological Foundations of Education	3

**Elementary/ Middle School Mathematics Education Core**

**Elementary school track:**

MATH 506	Teaching Number Concepts in the Elementary Grades	3
MATH 507	Teaching Geometry & Measurement in the Elementary Grades	3
MATH 508	Teaching Probability & Statistics in the Elementary Grades	3
MATH 509	Teaching Algebraic Thinking in the Elementary Grades	3
	or	

**Middle school track:**

MATH 536	Teaching Number Concepts in the Middle Grades	3
MATH 537	Teaching Geometry & Measurement in the Middle Grades	3
MATH 538	Teaching Probability & Statistics in the Middle Grades	3

MATH 539	Teaching Algebraic Thinking in the Middle Grades	3
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**Required Mathematics Courses**

MATH 547	Reflective Practice in Teaching Mathematics	3
STAT 453	Applied Statistical Inference	3

**Mathematics Electives**

Choose two courses from

MATH 502/STEM 502	Modeling with Mathematics in STEM Education	3
MATH 504	Topics in Mathematics	1-3
MATH 510	Mathematics through Technology	3
MATH 534	Techniques in Diagnosis and Remediation for the Teaching of Mathematics - K-12	3
MATH 580	Directed Study in Mathematics	1-3

**Research**

MATH 598	Research in Mathematics Education	3
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**Capstone:**

**Plan A:**

33 credits consisting of 30 credits from the above listings plus MATH 599 Thesis (3 credits).

**Plan C:**

33 credits consisting of 30 credits from the listings above plus MATH 590 Special Project in Mathematics (3 credits).

Note: Once a Planned Program has been accepted, any change to it requires the approval of the student's advisor and the Dean of the School of Graduate Studies.

**MATHEMATICS FOR CERTIFIED SECONDARY TEACHERS M.S.**

**Program Rationale:**

The Master of Science in Mathematics provides teachers of secondary mathematics with additional content and pedagogical knowledge that will make them more effective in their profession.

**Program Learning Outcomes:**

Students in this program will be expected to:

- deepen their comprehension of mathematics by studying advanced topics not covered in undergraduate curriculum and thus develop the dispositions of life-long learners of mathematics;

- develop as reflective practitioners, striving for continual improvement in their teaching and student learning;
- understand current research on teaching and learning mathematics, trends in mathematics curriculum, and the effective use of technology in the teaching of mathematics;
- acquire skills necessary to conduct research in mathematics education; and
- acquire skills necessary to make creative contributions to the field, such as writing, collecting data, and developing curriculum activities.

**Admission Requirements:**

Applicants must hold a bachelor’s degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

The Department of Mathematical Sciences may, at its discretion, admit an applicant with a GPA between 2.40 and 2.70 on an unconditional basis provided that the prospective student has both sufficient undergraduate course work and standardized test scores that meet any of the following standards:

- GRE (math subject area): 600 (45th percentile)
- GRE (general test quantitative reasoning): 720 (80th percentile)
- GMAT (quantitative): 50 (95th percentile)

The graduate application, application fee, and official transcripts are to be submitted to the Graduate Recruitment and Admissions Office. Official transcripts must be sent directly to the Graduate Recruitment and Admissions Office from each institution attended except Central Connecticut State University.

Contact: 860-832-0047

**COURSE AND CAPSTONE REQUIREMENTS:**

(Plans A and C offered as options. No more than nine credits may be earned in 400-level courses.)

**General Education Electives**

As approved by faculty advisor

**Educational Foundations**

**Chosen from:**

EPS 500 Contemporary Educational Issues 3

EPS 516	School and Society	3
EPS 524	Foundations of Contemporary Theories of Curriculum	3
EPS 525	History of American Education	3
EPS 538	The Politics of Education	3
EPS 583	Sociological Foundations of Education	3

**Secondary Mathematics Education**

MATH 547	Reflective Practice in Teaching Mathematics	3
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**plus 6 credits chosen from:**

MATH 502/STEM 502	Modeling with Mathematics in STEM Education	3
MATH 504	Topics in Mathematics	1-3
MATH 534	Techniques in Diagnosis and Remediation for the Teaching of Mathematics - K-12	3
MATH 540	Curriculum Problems in School Mathematics	3
MATH 543	Secondary School Algebra with Technology from Advanced Viewpoint	3
MATH 544	Secondary School Geometry with Technology from an Advanced Viewpoint	3
MATH 580	Directed Study in Mathematics Mathematics and Statistics Content	1-3

**Courses**

No more than six credits in courses with the STAT designation. One course must be STAT 453 unless this course was taken as an undergraduate.

**Courses to be chosen from**

MATH 421	History of Mathematics	3
MATH 440	Selected Topics in Mathematics	1-3
MATH 468	Symbolic Logic	3
MATH 469	Number Theory	3
MATH 477	Numerical Analysis	3
MATH 491	Advanced Vector Calculus	3
MATH 515	Abstract Algebra I	4
MATH 516	Abstract Algebra II	4
MATH 519	Principles of Real Analysis I	4
MATH 520	Principles of Real Analysis II	4
MATH 523	General Topology	4
MATH 525	Higher Geometry	3
MATH 526	Complex Variables	4
STAT 453	Applied Statistical Inference	3
STAT 455	Experimental Design	3
STAT 567	Linear Models and Time Series	3

**Research in Mathematics Education**

MATH 598 Research in Mathematics Education 3

**Capstone:**

**Plan A:**

33 credits consisting of 30 credits from the above plus MATH 599 (3 credit thesis)

**Plan C:**

33 credits consisting of 30 credits from the above plus MATH 590 (3 credit-Special Project)

Note: Once a graduate student has elected one of the two plans, A or C, any change to the other plan must be made prior to the completion of 21 graduate credits and requires the approval of the student's advisor and the dean, School of Graduate Studies.

**MATHEMATICS M.A.-GENERAL**

**Program Rationale:**

The Master of Arts in Mathematics-General provides an abstract introduction to mathematics at an advanced level. This program is suitable for students wishing to improve their mathematics backgrounds before applying to doctoral programs, for candidates interested in teaching at the community-college level, and for high school teachers looking both to broaden and deepen their understanding so as to advance their teaching.

**Program Learning Outcomes:**

Students in this program will be expected to:

- deeply understand analytic arguments, using such common notions as epsilon/delta, infinite sums, and limits, as well as considerations for more general spaces than the real numbers, such as spaces of functions;
- develop a basic understanding of measure theory and use it to study the Lebesgue integral;
- deeply understand basic algebraic and discrete notions, such as facts about vector spaces and counting arguments, and expand this to include ideas about rings and fields;
- develop a basic understanding of Galois theory;
- follow and create analytic proofs involving abstract metric spaces;
- follow and create algebraic proofs, with an understanding of groups, rings, and fields; and

- independently investigate advanced topics in mathematics and present results to others in a clear way.

**Admission Requirements:**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

The Department of Mathematical Sciences may, at its discretion, admit an applicant with a GPA between 2.40 and 2.70 on an unconditional basis provided that the prospective student has both sufficient undergraduate course work and standardized test scores that meet any of the following standards:

- GRE (math subject area): 600 (45th percentile)
- GRE (general test quantitative reasoning): 720 (80th percentile)
- GMAT (quantitative): 50 (95th percentile)

The graduate application, application fee, and official transcripts are to be submitted to the Graduate Recruitment and Admissions Office. Official transcripts must be sent directly to the Graduate Recruitment and Admissions Office from each institution attended except Central Connecticut State University.

Contact: 860-832-2835

**COURSE AND CAPSTONE REQUIREMENTS (33 CREDITS):**

**Requirements (24 credits):**

MATH 515	Abstract Algebra I	4
MATH 516	Abstract Algebra II	4
MATH 519	Principles of Real Analysis I	4
MATH 520	Principles of Real Analysis II	4
MATH 523	General Topology	4
MATH 526	Complex Variables	4

Electives as approved by faculty advisor (9 credits). Electives courses must be at the 500 level. These may include 3 credits for the thesis for a student electing Plan A.

**Capstone Experience:****Plan A:**

Thesis (MATH 599, 3 credits). Students electing this option must also pass one qualifying examination\* in an area not related to the thesis topic.

\* Students must apply for qualifying examinations after completing appropriate coursework with the approval of their advisors. Applications are available in the School of Graduate Studies or on the web at [www.ccsu.edu/grad](http://www.ccsu.edu/grad) under Graduate Forms (Degree Candidacy/Non Capstone Qualifying Form).

**Plan B:**

Comprehensive Exam. Students selecting this option must pass two of three qualifying examinations\* (in the areas of algebra, analysis, or topology) and also give oral presentations on topics approved by their advisors.

\* Students must apply for qualifying examinations after completing appropriate coursework with the approval of their advisors. Applications are available in the School of Graduate Studies or on the web at [www.ccsu.edu/grad](http://www.ccsu.edu/grad) under Graduate Forms (Degree Candidacy/Non Capstone Qualifying Form).

Note: Applicants to the program are expected to have completed the equivalent of MATH 152, MATH 221, MATH 222, MATH 228, MATH 366, and MATH 377 in addition to any necessary prerequisites for courses required in the planned program of graduate study.

**MECHANICAL ENGINEERING, MS**

The MS Mechanical Engineering Program helps engineers with an undergraduate degree enter a new phase in their careers. They will build technical expertise in a subset of mechanical engineering such as Manufacturing and Design, Thermo-Fluids and Energy, or Controls, Dynamics, and Aerospace Systems. Students will learn to apply their acquired knowledge and insight into professional practice. Along the way students will engage in original research, pushing the boundaries of human knowledge, and they will learn how to share their hard-won insights with the wider engineering community. By doing so they will be well positioned to address the current and future challenges facing society.

**Admission Requirements for the Master of Science in Mechanical Engineering**

Applicants meeting the Graduate School admissions standards will be considered for acceptance to the Master of Science in Mechanical Engineering program provided

they meet the additional acceptance criteria in Section I and II A & B.

1. All applicants must hold a bachelor's degree from a regionally accredited institution of higher education, with a minimum undergraduate GPA of 3.00 on a 4-point scale (where A is 4.00), or its equivalent. Applicants with a cumulative undergraduate GPA of 2.70 - 2.99 may be considered for conditional admission.

2. Undergraduate degree:

A. Applicants must hold a four-year Bachelor of Science degree with a major in Mechanical Engineering from and ABET, Inc, accredited program; or

B. Applicants that hold a four-year Bachelor of Science degree in a different Engineering specialty must complete the necessary pre-requisite foundation courses, or their equivalents as specified by the Engineering department after credentials are assessed. Applicants needing three or fewer foundational courses will be considered for conditional admission. All necessary foundation courses would be specified by the department after credentials are assessed.

Foundation course subjects include Mathematics, Chemistry, Physics, Engineering Materials, and Mechanical Engineering.

Although not required, applicants may choose to submit a resume with the application. Instructions for uploading the resume will be found in the online application.

Applications must be submitted by the fall and spring general university deadlines.

**REQUIREMENTS (30 CR., 21 FROM CORE, 9 FROM A CONCENTRATION):****Program Core Courses (21 Credits)**

ENGR 501	Engineering Analysis	3
ENGR 510	Engineering Optimization	3
ENGR 557	Advanced Mechanics of Materials	3
ENGR 592	Research and Development of Experiments	3
ME 567	Advanced Finite Element Analysis	3
ME 597	Thesis I	3
ME 599	Thesis II	3

**Mechanical Design, Materials, and Manufacturing Concentration (9 Cr.)**

ME 516	Machines and Mechanisms	3
ME 518	Fracture Mechanics	3
ME 520	Tribology	3
ME 522	Elasticity and Plasticity	3

ME 523	Contemporary Engineering Materials	3
ME 525	Materials Engineering of Additive Manufacturing	3
ME 540	Advanced Geometric Dimensioning & Tolerancing and Metrology	3
ME 545	Design and Analysis of Additive Manufacturing	3
ME 563	Engineering of Additive Manufacturing Processes	3
ME 565	Advanced Manufacturing Engineering	3
ME 569	Composite Design and Analysis	3

**Thermo-Fluids and Energy Concentration (9 Cr.)**

ME 551	Advanced Fluid Mechanics	3
ME 553	Computational Fluid Dynamics	3
ME 554	Advanced Heat Transfer	3
ME 555	Combustion	3
ME 557	Turbomachinery	3
ME 559	Heating, Ventilation & Air Conditioning	3

**Controls, Dynamics, and Aerospace Systems Concentration (9 Cr.)**

ME 501	Digital Control	3
ME 502	Optimal Control	3
ME 503	Dynamic System Parameter Identification	3
ME 505	Design of Control Systems with Uncertainties	3
ME 509	Guidance, Navigation, and Control	3
ME 522	Elasticity and Plasticity	3
ME 551	Advanced Fluid Mechanics	3
ME 555	Combustion	3
ME 580	Aerospace Propulsion Systems	3
ME 582	Advanced Propulsion	3
ME 583	Advanced Aerodynamics	3
ME 586	Aerospace Structures	3
ME 588	Flight Dynamics	3

**Total Credit Hours: 30**

**MODERN LANGUAGES M.A.**

**30 credits**

**Program Rationale:**

The Master of Arts in Modern Languages is designed for students wishing to pursue language, culture, and literature work at the graduate level.

**Program Learning Outcomes:**

Students in this program are expected to demonstrate:

- an understanding of different literary approaches and research;
- an ability to analyze major works of literature in the language in which graduate work will be undertaken;
- knowledge of topics related to the cultures of the language in which graduate work is undertaken; and
- competence in the grammar and knowledge of the structure of each language in which graduate work is undertaken.

**Admissions Requirements:**

Applicants must hold a bachelor’s degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

Applicants for this degree program should have a baccalaureate degree with a minimum of 24 credits in preparation in each language in which graduate work will be undertaken. Only Italian or Spanish may be chosen as the language of specialization. With approval of the advisor, candidates with sufficient backgrounds in a second language may be permitted to include up to two appropriate graduate courses in this language in their programs.

Application deadlines are as follows: June 1 for fall semester, November 1 for Spring semester, and March 1 for summer term.

The department’s Graduate Studies Committee reserves the right to assess a candidate’s oral and writing proficiency through an oral interview or written sample.

**COURSE AND CAPSTONE REQUIREMENTS:**

Note: No more than nine credits at the 400 level may be counted toward the graduate planned program of study.

The MA program offers a selection of four specializations:

**HISPANO-NORTH AMERICAN INTER-UNIVERSITY  
MASTER'S DEGREE IN SPANISH LANGUAGE AND  
HISPANIC CULTURES SPECIALIZATION 30 CREDITS  
(PLAN A OR B)**

Students must complete nine credits of their planned programs of study at the University of Salamanca during a six-week summer session.

**Core**

SPAN 560	Structure of Spanish Language	3
WL 598	Research in Modern Languages	3

**Subtotal: 6**

**Directed Electives**

**Subtotal: 15**

**Literature:**

Choose 12 credits from

SPAN 515	Colonial Spanish-American Literature	3
SPAN 520	Modernismo	3
SPAN 525	Contemporary Spanish-American Poetry	3
SPAN 526	The Spanish-American Short Story	3
SPAN 530	Contemporary Spanish Novel	3
SPAN 535	Contemporary Spanish-American Novel	3
SPAN 545	The Spanish-American Essay	3
SPAN 551	Drama of the Golden Age	3
SPAN 553	19th-Century Spanish Literature	3
SPAN 571	Generation of '98	3
SPAN 572	20th-Century Spanish Literature	3
SPAN 576	Cervantes	3
WL 500	Studies in Modern Languages	3

**Culture and Civilization:**

Choose 3 credits from

SPAN 534	Women Writers of the Spanish-Speaking World	3
SPAN 588	Topics in the Contemporary Spanish-Speaking World	3
WL 550	Intensive Studies in Modern Languages	3

**Electives**

Selected in consultation with advisor.

**Subtotal: 6-9**

**Capstone**

**Subtotal: 0-3**

**Plan A:**

SPAN 599	Thesis or	3
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**Plan B:**

Comprehensive Examination

Note: Nine credits will be transferred as substitutes from the University of Salamanca as electives.

**ITALIAN OR SPANISH FOR CERTIFIED TEACHERS  
SPECIALIZATION 30 CREDITS (PLAN C)**

**Rationale:**

This specialization is designed for Italian or Spanish teachers wishing to pursue further coursework in language, culture, and literature as well as in foreign language theory and methodology at the graduate level. Students who are teachers will develop, with their advisors, programs of study that take into consideration their educational background and degree of competency in the language.

**Learning Outcomes:**

In addition to the above mentioned learning outcomes, students in this specialization also are expected to demonstrate knowledge of major educational issues.

**Admissions:**

In addition to our general graduate admission criteria, students interested in this specialization for Certified Teachers must be certified, and have a baccalaureate degree, with at least 24 credits of the language in college or equivalent preparation, before being admitted to this program.

**Professional Education**

WL 490	Teaching World Languages II: Acquisition in Young Children for Teachers of World Languages	3
WL 492	Topics in Language Teaching Additional course as approved by advisor	1-3

**Subtotal: 6-9**

**Core**

ITAL 560	Advanced Written Italian or	3
SPAN 560	Structure of Spanish Language	3
WL 598	Research in Modern Languages	3

**Subtotal: 6**

ML 598: must be completed within the first fifteen credits of planned program

**Directed Electives**

One culture/civilization course and two literature courses

**Subtotal: 9**



**Electives**

As approved by advisor

**Subtotal: 3-6**

**Capstone**

**Subtotal: 3**

**Plan C:**

WL 595 Special Project in Modern Languages 3

**ITALIAN SPECIALIZATION 30 CREDITS (PLAN A OR PLAN B)**

**Core**

WL 598 Research in Modern Languages 3  
 ITAL 560 Advanced Written Italian 3

**Subtotal: 6**

**Directed Electives. Select Option 1 or Option 2:**

**Subtotal: 15**

**Option 1**

Four literature courses as approved by advisor.

**Select from:**

ITAL 470 14th-Century Italian Literature 3  
 ITAL 476 16th-Century Italian Literature 3  
 ITAL 561 Topics in Italian Literature 3  
 ITAL 571 20th-Century Italian Literature 3  
 WL 500 Studies in Modern Languages 3

ITAL 561: Topics in Italian Literature (may be repeated up to 3 times with different topics)

**one culture and civilization course:**

ITAL 588 Topics in Italian Cultural Studies 3

ITAL 588: may be repeated up to 3 times with different topics

**Option 2**

WL 550 Intensive Studies in Modern Languages and 6 or 9 credits selected from Option 1 3

ML 550: may be repeated up to 3 times with different topics

**Electives:**

Courses as approved by advisor, including but not restricted to:

ITAL 588 Topics in Italian Cultural Studies 3  
 ITAL 488 Italian Life and Culture 3  
 ITAL 561 Topics in Italian Literature 3  
 ITAL 588 Topics in Italian Cultural Studies 3

IS 590 Graduate Field Study Abroad 3 OR  
 6  
 IS 596 Independent Studies 3

**Subtotal: 6-9**

**Capstone:**

**Subtotal: 0-3**

**Plan A:**

SPAN 599 Thesis or 3

**Plan B:**

Comprehensive Examination

**SPANISH SPECIALIZATION 30 CREDITS (PLAN A OR PLAN B)**

**Core:**

SPAN 560 Structure of Spanish Language 3  
 WL 598 Research in Modern Languages 3

**Subtotal: 6**

**Directed Electives:**

**Subtotal: 15**

**Literature:**

Choose 12 credits from:

SPAN 515 Colonial Spanish-American Literature 3  
 SPAN 520 Modernismo 3  
 SPAN 525 Contemporary Spanish-American Poetry 3  
 SPAN 526 The Spanish-American Short Story 3  
 SPAN 530 Contemporary Spanish Novel 3  
 SPAN 535 Contemporary Spanish-American Novel 3  
 SPAN 545 The Spanish-American Essay 3  
 SPAN 551 Drama of the Golden Age 3  
 SPAN 553 19th-Century Spanish Literature 3  
 SPAN 571 Generation of '98 3  
 SPAN 572 20th-Century Spanish Literature 3  
 SPAN 576 Cervantes 3  
 WL 500 Studies in Modern Languages 3

**Culture and Civilization:**

one of the following:

SPAN 534 Women Writers of the Spanish-Speaking World 3  
 SPAN 588 Topics in the Contemporary Spanish-Speaking World 3  
 WL 550 Intensive Studies in Modern Languages 3

**Electives:**

Selected in consultation with advisor

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**Subtotal: 6-9**

**Capstone:**


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**Subtotal: 0-3**

**Plan A:**

SPAN 599	Thesis	3
	or	

**Plan B:**

Comprehensive Examination

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**MUSIC EDUCATION M.S.**


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**This program is not accepting applications for Admissions at this time.**

**Program Rationale:**

The Master of Science in Music Education degree program is designed to provide the certified music teacher with professional training beyond the baccalaureate degree in music education, performance, composition, music theory, music history, and education. Graduates are expected to meet the challenges presented by the philosophical, pedagogical, theoretical, and musical aspects of the field through the development of the analytic and critical skills required to solve contemporary problems in various aspects of music and music education.

**Program Learning Outcomes:**

Students in the program are expected to:

- demonstrate knowledge about different philosophies of music education and develop a philosophical foundation for careers;
- demonstrate knowledge about current issues and trends in music education and education;
- demonstrate an ability to organize, interpret, synthesize, and evaluate knowledge in music, music education, and education;
- demonstrate competence in aural, written, and communication skills and an ability to disseminate knowledge in a scholarly, coherent, and organized manner; and
- understand and evaluate research in music education and conduct research.

**Admission Requirements:**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA

of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

In addition to the requirements of the School of Graduate Studies, application to the Department of Music requires the following:

- An application to the Department of Music
- An essay\*
- A portfolio\*
- A theory examination\*\*
- Evidence of proficiency in technology\*\*\*
- A Personal Interview

\*For essay and portfolio requirements, refer to the Music Department's website or call the Coordinator of Graduate Studies, at (860) 832-3317.

\*\*While this examination is primarily a placement examination, a low score could influence the decision about an applicant's acceptance.

- For Spring admission you must complete the theory exam and interview in November
- For Summer admission you must complete the theory exam and interview in November of the previous year, or January, or February of the matriculation year.
- For Fall admission you must complete the theory exam and interview by January, February, or April.

Please refer to the Music department's website to reserve a specific date for the interview/theory exam.

\*\*\*If a candidate does not provide evidence of proficiency in technology (notation and sequencing), he/she will be required to take a notation or sequencing course as one of his/her electives (at least two credits).

The graduate application, application fee, and official transcripts are to be submitted to the Graduate Recruitment and Admissions Office. Official transcripts must be sent directly to the Graduate Recruitment and Admissions Office from each institution attended except Central Connecticut State University.

Contact: 860-832-3317

**COURSE AND CAPSTONE REQUIREMENTS**

The student in the M.S. in Music Education program must complete Plan B-Comprehensive Exam and either Plan A-Thesis or Plan C-Special Project, both of which total 33 credits. Students selecting Plan C may complete either MUS 597A or MUS 597B.

**Professional Education:**

One of the following:

EPS 500	Contemporary Educational Issues	3
EPS 516	School and Society	3
EPS 524	Foundations of Contemporary Theories of Curriculum	3
EPS 525	History of American Education	3
EPS 538	The Politics of Education	3
EPS 583	Sociological Foundations of Education	3

**Music:**

Students must:

**Take the following core courses:**

MUS 470	Musical Structure and Style	3
MUS 509	Comparative Music Studies	3
MUS 504	Principles and Foundations of Music Education	3
MUS 510	Current Issues in Music Education	3
MUS 598	Research in Music Education	3

**One of the following:**

MUS 502	Topics in Music Education	1-3
MUS 503	Topics in Instrumental Music Education	1-3
MUS 505	Topics in Pedagogy and Curriculum	1-3
MUS 506	Topics in Choral Music Education	2
MUS 512	Topics in String Pedagogy	2
MUS 551	Orff-Schulwerk Teacher Training Course Level I	3
MUS 506	Topics in Choral Music Education	2
MUS 557	Topics in General Music Education	2
MUS 559	Topics in High School Music Curriculum	2
MUS 525	Topics in Pedagogy and Curriculum in Music Technology	2

**Take at least 4 credits from the following:**

MUS 501	Topics in Music	1-3
MUS 507	Topics in Conducting	1-3
MUS 508	Topics in Choral Literature	2
MUS 515	Topics in Technology Applications and Techniques in the Music Classroom	2
MUS 540	Chamber Ensemble	1
MUS 578	Advanced Applied Music or	2

	Conducting	
MUS 579	Topics in Improvisation	2
MUS 590	Sinfonietta	1
MUS 591	Chorus	1
MUS 592A	Wind Symphony	1
	Up to 6 credits in music education, music, or advisor-approved electives outside the discipline.	

**Culminating Project:**

**Plan B:**

Comprehensive Exam

Comprehensive Exam: All students must take the Comprehensive Exam, as well as one of the other capstone options.

**and one of the following:**

**Plan A:**

MUS 599	Thesis	3
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**Plan C:**

MUS 597B	Performance or Conducting Recital	3
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**Total Credit Hours: 33**

Note: Students enrolled in the following courses will be assessed an Applied Music Fee - \$200.00 for 1/2 hour lesson and \$400.00 for full hour lesson (MUS 578). Contact the department for additional information.

Note: No more than six credits at the 400 level, as approved by the graduate advisor, may be counted toward the graduate planned program of study.

**NURSING, MSN**

**Master of Science in Nursing in Hospice and Palliative Care**

**Program Description:**

**The MSN program in Hospice and Palliative Care will provide nurses the theory and practice to deliver advanced nursing care for end-of-life and chronic care patients and their support person(s). Nurses completing this program of study will be able to professionally advance in the field of hospice and palliative care.**

**Program Learning Outcomes:**

- Upon completion of the MSN in Hospice Palliative Care Program of Study, the graduate will be prepared to:
- (1) Utilize appropriate theories from nursing and related fields to respond to emerging health care challenges;
  - (2) Apply ethical analysis and clinical reasoning to assess, intervene, and evaluate advanced nursing care delivery;

(3) Understand how to influence health care policy for the purpose of advocating for clients and community;

(4) Use quality processes and improvement science to evaluate care and ensure patient safety for individuals and communities;

(5) Synthesize evidence for practice to determine appropriate application of interventions across all populations affected by end-of-life and chronic care;

(6) Incorporate global nursing knowledge, attitudes, and skills in planning, implementing, and evaluating hospice and palliative care practice;

(7) Integrate interprofessional collaboration and informatics to make changes in the hospice and palliative care environment to improve delivery of care;

(8) Develop leadership skills and integrate scholarship into nursing practice through participation in praxis courses; and

(9) Meet the American Association of Colleges of Nursing (AACN) Essentials for Masters Education in Nursing

#### Admission Requirements:

Applicants must hold a bachelor's degree (BSN in Nursing preferred) from a regionally accredited institution of higher education and have their RN license. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and be in good standing (3.00 GPA) in all post-baccalaureate course work.

#### Conditional Admissions:

An applicant for this Masters Program who does not meet regular admissions standards but has an undergraduate GPA between 2.50 and 2.69 may be considered for conditional admission. The conditional admission program is an arrangement allowing a student to demonstrate successful performance during their first semester in the graduate program.

#### The Application Process:

1. Applicants must submit a completed application for admission to graduate study as well as official transcripts from all institutions where undergraduate and graduate work has been done to the Graduate Recruitment and Admissions Office.
2. Applicants must submit a narrative statement describing their professional goals as well as any educational or professional experiences that may

assist the department's admissions committee in reviewing the application.

3. Applicants must also submit contact information for two references, one from an academic/professional source and one from nursing employer who can specify length of time and direct responsibilities of the applicant in an RN nursing position.
4. Applicants must have a grade of C+ or higher in an undergraduate statistics course.
5. The application deadline for the Fall term is August 1.
6. Instructions for submitting the narrative and references can be found within the online graduate application.

### MAJOR REQUIREMENTS (35 CREDITS)

#### Major Core

NRSE 501	Theory of Hospice & Palliative Care	3
NRSE 502	Global Policy and Ethical Issues in Hospice & Palliative Care	3
NRSE 500	Pathophysiology and Health Assessment Across the Lifespan	4
NRSE 503	Nursing Leadership, Management, and Inter-Professional Collaboration	3
NRSE 504	Emerging Best Practices and Research in Hospice & Palliative Care	3
NRSE 505	Comparative Domestic Delivery Systems and Informatics	3
NRSE 506	Current Pharmacology and Complementary Therapies in Hospice & Palliative Care	4
NRSE 507	Nursing Practicum	6
NRSE 508	Nursing Capstone	6

**Total Credit Hours: 35**

### PHYSICAL EDUCATION WITH SPECIALIZATION IN EXERCISE SCIENCE M.S.

#### Program Rationale:

Graduates of the M.S. in Physical Education with a specialization in Exercise Science are expected to gain/enhance knowledge and applied skills needed for the professions of certified (State of Connecticut licensed) athletic trainers, certified strength and conditioning specialists, and certified health fitness specialists.

#### Program Learning Outcomes:

Students in the program are expected to:

- interpret and determine appropriate application of any one or combination of the following theories to their professions: biomechanical, physiological, psychological, and sociological
- read and interpret research and apply significant findings to their professions

**Admissions Requirements:**

An undergraduate program in exercise science or related field is preferred for admission to the master’s degree program. Applicants must hold a bachelor’s degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70, preferably a 3.00 on a 4.00 point scale (where A is 4.00).

The admissions application, application fee, and official transcripts from each college and university attended (except Central Connecticut State University) must be submitted to the Graduate Recruitment and Admissions Office. Additionally, a letter of application including the names and contact information for two references must be submitted for admission. A letter of application must demonstrate a command of the English language. 1) a discussion of your path in higher education, 2) a reflection on what is leading you to pursue a Master's degree, and 3) elaboration of how you would use this Master's degree as it relates to your career path in the field of Exercise Science. Suggested length of this letter is no more than two pages. At least one of the two references must be from a former instructor who can attest to the applicant's preparedness for graduate study in exercise science. An interview with exercise science graduate faculty will be required for admissions. Instructions for uploading the letter of application will be found within the online application.

**Application deadlines** for the MS in Physical Education with a specialization in Exercise Science include:

Fall Semester - Deadline is May 1

Spring Semester - Deadline is November 1

Summer Term - Deadline is March 1\*

\*The program starts in summer session of even years. Application Deadline is March 1 of even numbered years (March 1, 2016 for the 2016 cohort, etc).

**REQUIREMENTS**

**Core Courses**

NOTE: All students must take a minimum of 15 credits from the Exercise Science category

**Sport**

EXS 507	Sociological Foundations of Sport and Exercise	3
EXS 515	Foundations of Sport and Exercise Psychology	3
EXS 516	Foundations of Leadership for Sport and Exercise	3

EXS 507: Spring odd years

EXS 515: Spring even years

EXS 516: Fall odd years

**Exercise Science**

EXS 519	Sport Biomechanics	3
EXS 523	Essentials of Sports Performance Training	3
EXS 530	Nutrition for Health, Fitness, and Sport Performance	3
EXS 590	Independent Study / Topics in Exercise Science or Sports Medicine	1-3
EXS 592	Advanced Physiology of Sport & Exercise I	3
EXS 593	Advanced Physiology of Sport and Exercise II	3

EXS 519: Fall even years

EXS 523: Summer odd years

EXS 530: Summer even years

EXS 590: Irregular

EXS 592: Fall odd years

EXS 593: Spring even years

Note: Either PE 590 and/or EXS 590 may be taken for a maximum of 6 credits

**Research**

**Fall**

PE 597	Research in Physical Education and Exercise Science I	3
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(Students must take before successful completion of 12 credit hours)

PE 597: Students must take PE 597 and PE 598 in order to proceed with PE 599; Students must take PE 597 in order to proceed with PE 595

**Spring**

PE 598	Research in Physical Education and Exercise Science II	3
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(Students must take before successful completion of 24 credits hours)

PE 598: Students must take PE 597 and PE 598 in order to proceed with PE 599

**Electives**

NOTE: Courses other than Core Courses as approved by faculty advisor

**Capstone Requirement**

**Plan A:**

PE 599	Thesis	3
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Irregular; PLAN A ONLY

**Plan B:**

Comprehensive Examination

Note: No more than 9 credits at the 400 level, as approved by the graduate advisor, may be counted toward the graduate planned program of study.

**Plan C:**

PE 595	Applied Research in Physical Education and Exercise Science	3
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Irregular; PLAN C ONLY

**PHYSICAL EDUCATION WITH SPECIALIZATION IN TEACHING PHYSICAL EDUCATION M.S. (FOR CERTIFIED TEACHERS)**

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**Program Rationale:**

The graduates of the M.S. in Physical Education with a specialization in Teaching Physical Education are expected to increase the competency and knowledge of certified teachers in health and physical education.

**Program Learning Outcomes:**

Graduate Students will:

- Develop content knowledge in pedagogy and exercise science as it relates to health and physical education professionals
- Read and interpret research and apply significant findings as it relates to health and physical education professions.

**Admissions Requirements:**

An undergraduate program in physical education from an accredited institution of higher education and teaching certification is preferred for admission to the master's degree program. Applicants must hold a bachelor's degree from a regionally accredited institution of higher

education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

The admissions application, application fee, and official transcripts from each college and university attended (except Central Connecticut State University) must be submitted to the Graduate Recruitment and Admissions Office.

**Additional Materials Required:**

- three letters of reference (at least two from academic sources)
- a personal statement

Instructions for uploading the statement, and for obtaining and submitting the letters of reference, will be found within the online graduate application.

**Contact: 860-832-2155**

**REQUIREMENTS (30 CREDITS)**

All Students must take a minimum of 12 credits from the Pedagogy Core Courses and a minimum of 3 credits from the Sport category and a minimum of 3 credits from the Exercise Science category

**Pedagogy Core Courses (12 Credits)**

PE 500	Improving Student Learning in Physical Education	3
PE 505	Instructional Tools for Physical Education	3
PE 506	Adapted Physical Education	3
PE 509	Teaching Health-Related Fitness	3
PE 510	Instructional Models for Physical Education	3
PE 520	Current Issues in Physical Education	3
PE 522	Physical Activity and Health Concepts for Physical Educators	3
PE 590	Independent Study/Topics in Physical Education	1-3

Note: Either PE 590 and/or EXS 590 may be taken for a maximum of 6 credits

**Sport (3 Credits)**

EXS 507	Sociological Foundations of Sport and Exercise	3
EXS 515	Foundations of Sport and Exercise Psychology	3
EXS 516	Foundations of Leadership for Sport and Exercise	3

**Exercise Science (3 Credits)**

EXS 519	Sport Biomechanics	3
EXS 523	Essentials of Sports Performance Training	3
EXS 530	Nutrition for Health, Fitness, and Sport Performance	3
EXS 590	Independent Study / Topics in Exercise Science or Sports Medicine	1-3
EXS 592	Advanced Physiology of Sport & Exercise I	3
EXS 593	Advanced Physiology of Sport and Exercise II	3

Note: Either PE 590 and/or EXS 590 may be taken for a maximum of 6 credits

**Research (6 Credits)**

PE 597	Research in Physical Education and Exercise Science I	3
PE 598	Research in Physical Education and Exercise Science II	3

Students must take PE 597 before successful completion of 12 credit hours

Students must take PE 598 before successful completion of 24 credit hours

**Electives (3-6 Credits)**

Courses as approved by faculty advisor

**Capstone Requirement (0-3 Credits)**

**Plan A: Thesis (3 Credits)**

PE 599	Thesis	3
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Students electing the Thesis for their Capstone should discuss which course the Thesis will substitute for with their advisor.

**Plan B: Comprehensive Exam (0 Credits)**

Comprehensive Examination

**Plan C Applied Research 3 credits**

PE 595	Applied Research in Physical Education and Exercise Science	3
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Note: No more than 9 credits at the 400 level, as approved by the graduate advisor, may be counted toward the graduate planned program of study.

**Total Credit Hours: 30**

**PSYCHOLOGY M.A.**

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**Program Rationale:**

The Master of Arts program is designed to prepare students for careers in the field of human services or as preparation for further graduate study.

**Program Learning Outcomes:**

- Upon completion of the MA program in psychology, students should demonstrate the following:
- proficiency with researching, summarizing, and critically evaluating scholarly literature;
- the advanced skills necessary to comprehend, design, and conduct rigorous academic research;
- professional-level skill in scholarly presentations, including the ability to write and publish in peer reviewed academic journals and to present at professional conferences;
- an ability to critically analyze and integrate psychological theory in applied and real-life situations; and
- expertise within an area of psychology (community psychology, health psychology, or other area of focus).

**Admission Requirements:**

Required:

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA ) in all post-baccalaureate course work.

- Three letters of reference
- Personal statement\*

Preferred:

- a BA/BS degree in Psychology
- grade of B or higher in Statistics and Research Methods
- Grade point average of 2.75 or higher, with a 3.00 or higher in psychology courses
- Two of the letters of reference from academic sources.

\*The personal statement should present the applicants professional goals, any specific experiences that helped prepare applicants for the psychology program, such as research or training, and any additional information that

may assist the department's admissions committee in reviewing the application.

Applicants must submit the following documents directly to the Graduate Recruitment and Admissions Office:

- Completed admissions application
- Application fee
- Official transcripts from each college and university attended (except from Central Connecticut State University), which must be sent from institution to institution

#### Additional Materials Required:

- three letters of reference (at least two from academic sources)
- a personal statement

Instructions for uploading the statement, and for obtaining and submitting the letters of reference, will be found within the online graduate application.

The application deadline for Spring admission is November 1st and the Fall admission deadline is April 1st. Further information can be found at [www.psychology.ccsu.edu/](http://www.psychology.ccsu.edu/).

### COURSE AND CAPSTONE REQUIREMENTS:

#### M.A. Program

The program requires 36-39 credits, including a thesis or capstone. A common core of 12 credits is required for all students. In addition, in order to graduate, students must complete the online Graduate Exit Survey. Once students have completed their oral defense, they will be provided a link prompting them to complete the survey.

#### Common Core:

PSY 501	Thesis and Capstone Preparation	1
PSY 596	Psychological Research: Design and Analysis I	4
PSY 597	Psychological Research: Design and Analysis II	4
PSY 599	Thesis or Capstone	3

PSY 599: defense required

#### Option 1: Research-based empirical thesis

PSY 591 Advanced Independent Reading and Research in Psychology

PSY 599 Thesis: preparation of the thesis or capstone under the supervision of the thesis advisor.

#### Option 2: Capstone-Extensive and Integrative Analysis of Literature

PSY 599 Thesis: preparation of the capstone under the supervision of the capstone advisor.

### GENERAL PSYCHOLOGY SPECIALIZATIONS (36 CREDITS):

The general psychology specialization is designed to give students the opportunity to follow their interests. The specialization provides solid preparation in core areas of psychology, including developmental, clinical, and community psychology and research methodology. General psychology MA graduates often go on to doctoral programs, but many also work in a variety of research and human services settings.

#### Required Courses

##### Common Core and Specialization:

PSY 501	Thesis and Capstone Preparation	1
PSY 596	Psychological Research: Design and Analysis I	4
PSY 597	Psychological Research: Design and Analysis II	4
PSY 599	Thesis	3
PSY 512	Seminar in Developmental Psychology	3
PSY 545	Introduction to Clinical Psychology or	3
PSY 530	Psychopathology or	3
PSY 550	Community Psychology Directed electives as approved by advisor	3 18

### COMMUNITY PSYCHOLOGY SPECIALIZATION (36 CREDITS):

The community psychology specialization is designed to train students to be active practitioners in the prevention field or prepare them for further study. It emphasizes developing and delivering interventions that can prevent the onset of psychological problems such as substance abuse, interpersonal violence, and depression. Most of our graduates work in the program planning and development level of local and state government, non-



profit organizations, and schools, although some work in direct service positions.

**Required Courses**

Common Core and Specialization:

PSY 501	Thesis and Capstone Preparation	1
PSY 596	Psychological Research: Design and Analysis I	4
PSY 597	Psychological Research: Design and Analysis II	4
PSY 599	Thesis	3
PSY 520	Global Psychology	3
PSY 550	Community Psychology	3
PSY 551	Prevention and Community-Based Research	3
PSY 553	Evaluation Research	3
PSY 595	Graduate Internship in Psychological Applications Directed electives as approved by advisor (15 credits)	3

**HEALTH PSYCHOLOGY SPECIALIZATION (39 CREDITS):**

The health psychology specialization is designed to prepare students for a career in the field of health psychology or for further graduate study. MA graduates often go on to doctoral programs, and others work in a variety of research and human service settings where they can apply knowledge of health-related behaviors, stress, disease risk factors, and methods to improve health and chronic illness. Some also work in the area of prevention.

**Required Courses**

Common Core and Specialization:

PSY 501	Thesis and Capstone Preparation	1
PSY 596	Psychological Research: Design and Analysis I	4
PSY 597	Psychological Research: Design and Analysis II	4
PSY 599	Thesis	3
PSY 541	Health Psychology	3
PSY 542	Psychology of Stress	3
PSY 543	Stress Management: Theory & Research	3
PSY 547	Clinical Health Psychology and Chronic Illness	3
PSY 595	Graduate Internship in Psychological Applications Directed electives	3
		12

Note: A maximum of six credits at the 400 level may be included, with approval of faculty advisor, in the planned program of study.

**PUBLIC HISTORY M.A.**

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- CORE (18 credits), ELECTIVES (6 credits), CAPSTONE PROJECT: Plan C (3 credits)

**Program Rationale:**

Public historians are front-line interpreters, bringing historical knowledge to a broad public audience beyond the traditional academic classroom. The Masters of Arts in Public History is designed to prepare students for careers in history museums, historical societies, historic preservation, cultural resource management, government agencies, heritage tourism, and other fields in which history is presented to public and client-based audiences. The degree also provides K-12 history educators with tools to energize their classroom teaching. Students receive traditional training in the areas of historical research, writing, and interpretation, along with job specific skills and the hands-on experience necessary to become efficient and ethical stewards of the past. This degree is also appropriate for those seeking to pursue further study in American history or public history at the doctoral level.

For more information, visit the department's website at [www.history.ccsu.edu/ma\\_pubhist.html](http://www.history.ccsu.edu/ma_pubhist.html).

**Program Learning Outcomes:**

Students in the program will be expected to:

- conduct original research;
- interpret primary sources;
- evaluate the historiography of a specific historical topic;
- demonstrate knowledge of public history practices and techniques; and
- communicate effectively with a non-academic or client-based audience.

**Admission Requirements:**

To be considered for admission to the M.A. in Public History, you must meet the following requirements:

1. Applicants must have an undergraduate (or combined undergraduate/graduate) GPA of 3.00 or higher, as well as a degree in history or related field. If you do not meet this admission standard, please see the "NOTES" below.

2. Applicants must submit the following materials to the Graduate Recruitment and Admissions Office:

- The graduate school admissions application and application fee
- Official transcripts from each college and university attended (except Central Connecticut State University)

3. Applicants must also submit the following materials to the History Department

- two letters of recommendation
- two essays. Write a 500-word essay that discusses a scholarly monograph written by a historian that has influenced the way you think about the past, and write a 250-word essay that describes your career aspirations and any opportunities for career preparation that you have had.

Instructions for uploading the essay, and for obtaining and submitting the letters, will be found within the online graduate application

The graduate application, application fee, and official transcripts must be submitted to the Graduate Recruitment and Admissions Office.

All application materials must be received by the application deadline.

#### NOTES:

a) If you have an undergraduate degree in history but are denied admission because you have an undergraduate (or combined undergraduate/graduate) GPA between 2.70 and 2.99, or for any other reason, then you may be considered for conditional admission. In order to be recommended for full admission, conditionally admitted students must complete HIST 501 or HIST 502 with a B+ or better.

b) If you have an undergraduate degree in history but are denied admission because you do not meet the GPA requirements for full admission or conditional admission, or for any other reason, then you must take 9 credits of 500-level history courses, including History 501 or 502, as a non-matriculated student. (If you are later admitted to the program, then those courses will apply to your graduate degree.) In order to be considered for admission, you must earn a grade of B+ in all 9 credits of 500-level history courses and receive two positive letters of recommendation from CCSU History Department faculty. Once you have fulfilled those conditions, you should apply again for admission.

c) If you meet the GPA requirements for full admission to the graduate program but do not have an undergraduate degree in history, you should meet with the History Department chair or a History Department M.A coordinator to determine the requisite courses needed for admission. At minimum, those students will receive a conditional admission and must complete HIST 501 OR HIST 502 with a B+ or better.

#### **COURSE AND CAPSTONE REQUIREMENTS (INCLUDING AN INTERNSHIP AND PROJECT [PLAN C]):**

Admission criteria: Acceptance into the CCSU Graduate Program and approval of the History Department.

#### **Public history courses required (graduate courses specific to public history)**

HIST 501	Thinking Historically	3
HIST 502	Writing History	3
HIST 510	Seminar in Public History	3
HIST 511	Topics in Public History	3
HIST 595	Public History Research Project (Plan C)	3

**Subtotal: 21**

HIST 511: Must be taken twice with different topics

HIST 595: Plan C

#### **General history courses to be taken from the following list**

HIST 560	Seminar in American History	3
HIST 540	Seminar in European History	3
HIST 512	Connecticut Encounters	3

**Subtotal: 6**

#### **Total Credit Hours: 33**

Two elective courses (6 credits), chosen in consultation with an advisor.

At least one of these courses (3 credits) must be taken in a discipline other than history.

No more than six credits can be taken at the 400-level.

Additional non-course requirement: Each student must attend five professional conferences as part of his/her program.

For more information, contact the Public History Program Coordinator, 860-832-2800

#### **READING AND LANGUAGE ARTS M.S.**

##### **Program Rationale**

The Master of Science degree in Reading and Language Arts is designed to prepare literacy professionals who are knowledgeable and competent in providing quality support, who can enhance students' literacy learning, and who meet the standards for reading professionals as defined by the International Literacy Association and by state mandates. The master's program offers four strands:

*Strand I: Reading Specialist/Literacy Coach (36 credits).* It is designed to prepare teachers to become reading specialists language arts consultants/literacy coaches in compliance with the state standards for advanced certification in Remedial Reading and Remedial Language Arts (102 certification), as well as in Reading and Language Arts Consultant (097certification).

*Strand II: Reading Specialist (30 credits).* It is designed to prepare teachers to become reading specialists in compliance with the state standards for advanced certification in Remedial Reading and Remedial Language Arts (102 certification).

*Strand III: Literacy Education (30 credits).* It is designed to prepare teachers for teaching reading and language arts to diverse groups of students in a classroom context.

*Strand IV: Literacy & Mathematics Education (30 credits).* It is designed to prepare teachers to teach both literacy and numeracy to diverse groups of students in a classroom context.

### **Program Learning Outcomes**

The Master of Science degree program in Reading and Language Arts is based on the ILA standards for reading professionals. In order to prepare knowledgeable and competent reading and language arts classroom teachers, reading specialists, or literacy coaches, students in the program are expected to:

- meet the ILA standards for reading professionals;
- provide leadership, through modeling and mentoring colleagues and other support staff, and acquire a wide range of instructional practices, approaches, methods, and curriculum materials to facilitate their reading and writing instruction;
- be knowledgeable in various assessments appropriate for a wide range of diversity in the classroom, including technologically based assessments, and are able to select, administer, and interpret assessments to enhance student learning and to communicate results to educational stakeholders;

-create a literate environment to facilitate successful reading and writing for all children;

-continue to be lifelong learners and scholars, through reading, research, and professional development, and leaders in advocating to advance the professional research base to expand knowledge-based practices.

### **Admission Requirements**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work. A minimum of one year teaching experience is preferred.

To apply to the Reading and Language Arts Master of Science degree a candidate must submit an application for graduate admission, official transcripts, and application fee to the CCSU Graduate Recruitment and Admissions Office.

### **Additional Materials Required:**

A candidate must also submit a copy of his/her teaching certificate with the application for graduate admissions. Instructions for uploading the certificate will be found within the online graduate application.

Candidates seeking ONLY endorsement (not MS) as a Reading and Language Arts Consultant in the State of Connecticut must apply to the School of Graduate Studies for admission to the Advanced Official Certificate Program (AdvOCP). The candidates must have completed a Master's or a 6th Year Certificate in Reading and Language Arts that led to the 102 certification (Remedial Reading and Remedial Lang. Arts) before applying to the AdvOCP.

For more information on admissions requirements check the department website at [www.ccsu.edu/literacy](http://www.ccsu.edu/literacy) or call 860-832-2175.

**COURSE AND CAPSTONE REQUIREMENTS:**

Depending on the chosen strand, the candidate's planned program of graduate study will include 30 or 36 credits of field study and either Plan A: LLA 599 Thesis (3 credits) or Plan B: Comprehensive Exam. A planned program of study will be developed by the candidate and the program advisor. Based on the program advisor's evaluation of candidate's needs, background, and experiences in reading and language arts, a candidate may need to complete additional coursework for his/her planned program of study and therefore may exceed the 30 or 36 credits.

**Strand I in Reading Specialist/Literacy Coach (certification track)**

The Strand in Reading Specialist/Literacy Coach requires 36 credits of courses and a choice between Plan A and Plan B.

LLA 502	Developmental Reading in PreK-12	3
LLA 504	Language Arts for First and Second Language Speakers	2
LLA 506	Decoding and Spelling Instruction	1
LLA 508	Teaching Literacy in the Content Areas	3
LLA 512	The Pedagogy of Literature PK-12 or	3
LLA 603	Teaching Multicultural Literature in the Classroom	3
LLA 514	Diagnosis and Intervention of Reading and Language Arts Difficulties I	3
LLA 516	Diagnosis and Intervention of Reading and Language Arts Difficulties II	3
LLA 518/LLA 618	Clinical Practices in Literacy and Language Arts	6
LLA 520	Seminar in Literacy Research	3
LLA 522	Organization, Administration, and Supervision of Reading & Language Arts Programs	3
LLA 524	Practicum for Reading Specialist/Literacy Coach I	3
LLA 526	Practicum for Reading Specialist/Literacy Coach II	3

**Strand II in Reading Specialist (certification track)**

The strand in Reading Specialist requires 30 credits of courses and a choice between Plan A and Plan B.

LLA 502	Developmental Reading in PreK-12	3
LLA 504	Language Arts for First and Second Language Speakers	2
LLA 506	Decoding and Spelling Instruction	1

LLA 508	Teaching Literacy in the Content Areas	3
LLA 514	Diagnosis and Intervention of Reading and Language Arts Difficulties I	3
LLA 516	Diagnosis and Intervention of Reading and Language Arts Difficulties II	3
LLA 518/LLA 618	Clinical Practices in Literacy and Language Arts	6
LLA 520	Seminar in Literacy Research	3

The remaining 6 credits come from reading and language arts courses and are decided in consultation with program advisor.

**Strand III in Literacy Education**

The strand in Literacy Education requires 30 credits of courses and a choice between Plan A and Plan B.

LLA 502	Developmental Reading in PreK-12	3
LLA 504	Language Arts for First and Second Language Speakers	2
LLA 506	Decoding and Spelling Instruction	1
LLA 508	Teaching Literacy in the Content Areas	3
LLA 514	Diagnosis and Intervention of Reading and Language Arts Difficulties I	3
LLA 520	Seminar in Literacy Research	3

The remaining 15 credits come from reading and language arts courses and are decided in consultation with program advisor.

**Strand IV in Literacy & Mathematics Education**

The strand in Literacy & Mathematics Education requires 30 credits of courses and a choice between Plan A and Plan B.

LLA 502	Developmental Reading in PreK-12	3
LLA 504	Language Arts for First and Second Language Speakers	2
LLA 506	Decoding and Spelling Instruction	1
LLA 508	Teaching Literacy in the Content Areas	3
LLA 514	Diagnosis and Intervention of Reading and Language Arts Difficulties I	3
LLA 520	Seminar in Literacy Research	3

The remaining 15 credits come from mathematics courses recommended by the Department of Mathematical Sciences.

## SOFTWARE ENGINEERING, M.S.

The MS in Software Engineering program prepares students for a broad range of careers and professional growth in the field of software engineering, including software architecture and design, software construction, software testing and quality assurance, software maintenance, database systems, distributed computing, artificial intelligence, data mining, linked data engineering, and data visualization. It focuses on the foundational concepts of the field and emphasizes the practical applications of these concepts. Students interested in research will find an abundance of advanced topics in cutting edge areas, such as data mining, Semantic web, data visualization, and distributed computing, to name a few. The program is designed for maximum flexibility to allow students to concentrate in one or more areas of study.

### Learning outcomes:

- Have the ability to identify, formulate, and solve software engineering problems in a variety of application settings;
- Understand modern software engineering concepts, techniques, practices, and tools and to apply them to the development of complex software systems;
- Possess advanced level software development skills and demonstrate in-depth knowledge in at least one computer science area;
- Recognize the need for, and have the ability to engage in, continuing professional development; and
- Have the ability to communicate effectively with a range of audiences and possess skills needed to work successfully as a part of a team.

### Admission requirements:

1. BS in Computer Science degree from a regionally accredited institution of higher education with an undergraduate GPA of 2.70 or higher and a minimum of 3.00 or higher in any post baccalaureate coursework, or
2. BS in a related information technology field (with GPA as stated above) with a minimum of six courses of relevant computer science courses (Computer Science 1, Computer Science 2, Data Structures, Computer Architecture, and two advanced computer science electives). May require an extra semester or a summer term to satisfy the expected computer science background by taking CS 501 Foundations of Computer

Science and/or CS 502 Computing and Communications Technology as prerequisite courses (not part of the program), or

3. BS in a STEM field (with GPA as stated above) with a minimum of five courses of relevant mathematics and computer science courses (Calculus I, Calculus II, Discrete Math, Computer Science I, Computer Science II). Will require an extra semester to satisfy the expected computer science background by taking CS 501 Foundations of Computer Science, CS 502 Computing and Communications Technology and CS 464 Programming Languages (not part of the program).

### Conditional Admissions

An applicant for the MS in Software Engineering program who does not meet regular admission standards in terms of GPA, but has an undergraduate GPA between 2.40 and 2.69 may be considered for conditional admission.

### Additional Materials Required

Applicants with a BS degree different from Computer Science (see 2 and 3 above) must submit a resume and two letters of recommendation to be used in reviewing their computer science related background. Additional materials should be sent to the Department of Computer Science, Maria Sanford Hall, Room 303, Central Connecticut State University, New Britain, CT 06050.

## COURSE AND CAPSTONE REQUIREMENTS

### Core Courses

CS 505	Design Patterns	3
CS 506	Software Testing and Quality Assurance	3
CS 510/CS 410	Fundamentals of Software Engineering	3
CS 530	Advanced Software Engineering	3

### Electives:

18 credits of electives are required. These elective courses can be any combination of 500-level CS courses numbered from CS 507 to CS 594 and the 400-level CS courses listed below. A maximum of 9 credits at the 400-level can be applied. All 400-level credits require the prior permission of advisor.

CS 407	Advanced Topics in Computer Science	1-3
CS 409/CYS 409	Advanced CS Topics in Cybersecurity	3
CS 423	Computer Graphics	3
CS 460	Database Concepts	3
CS 462	Artificial Intelligence	3

CS 463	Algorithms	3
CS 464	Programming Languages	3
CS 465	Compiler Design	3
CS 481	Operating Systems Design	3
CS 490	Computer Communications Networks & Distributed Processing	3
CS 492/CYS 492	Computer Security	3
<b>Capstone Requirement</b>		
CS 595	Capstone in Software Engineering	3

**Total Credit Hours: 33**

## **SPECIAL EDUCATION M.S.: SPECIALIZATION FOR SPECIAL EDUCATORS**

### **Program Rationale:**

This interdisciplinary program is designed for students who already hold a bachelor's degree and/or certification in special education. In this specialization students take course work designed to broaden and/or deepen their knowledge of the field in one of three tracks: Language Arts Instruction for Exceptional Learners, STEM Instruction for Exceptional Learners, or Advanced Studies in Disability. The candidate's Planned Program of Graduate Study is developed by the candidate and their assigned Academic Advisor to fulfill professional and personal goals. Courses for this program are aligned with the Advanced Preparation Standards of the Council for Exceptional Children (CEC).

### **Program Learning Outcomes:**

1. Possess strong knowledge of content, content pedagogy, and learner development (typical and atypical).
2. Create an inclusive and culturally responsive learning environment.
3. Use data, content knowledge, and evidence-based pedagogical content knowledge to critically examine practice for the purpose of improving student learning.
4. Design and deliver instructional and assessment strategies that facilitate significant learning for all students including struggling learners and those with disabilities.
5. Design, deliver, and assess individualized instructional strategies to deepen literacy and content learning.
6. Act collaboratively, ethically, and responsibly to ensure student growth and advance the profession.

Admission Requirements:

Applicants must hold a bachelor's degree and/or certification in special education from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00) or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

The admissions application, application fee, and official transcripts from each college and university attended (except Central Connecticut State University) must be submitted to the Graduate Recruitment and Admissions Office.

Contact: 860-832-2400

### **Professional Requirements**

SPED 532	Contemporary Issues in Special Education	3
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### **Tracks**

Students take 18 credits of advanced-level course work in special education. Up to 6 credits of related interdisciplinary course work from other departments may be included in consultation with an Academic Advisor.

### **Language Arts Instruction for Learners with Exceptionalities Track**

	Directed electives	12
SPED 506	Foundations of Language for the Exceptional Child	3
	or	
SPED 517/SPED 417	Special Education Methods in Teaching Reading (K-12)	3
	or	
SPED 518	Special Education Methods in Teaching Writing (K-12)	3
SPED 529/LLA 529	Multisensory Structured Language Instruction Practicum	3
	or	
SPED 528/LLA 528	Multisensory Structured Language Instruction	3

Up to 6 credits in Literacy Education may be included in consultation with an Academic Advisor.

### **STEM Instruction for Learners with Exceptionalities Track**

SPED 519/SPED 419	Special Education Methods in Content Area Instruction (K-12)	3
SPED 581	Assistive Technology in Special	3

	Education	
STEM 506	Problem Based Learning in STEM Education	3
STEM 520	STEM Practices in the Physical Sciences	3
	or	
STEM 530	STEM Practices in the Earth/Space Sciences	3
	or	
STEM 540	STEM Practices in the Life Sciences	3

**The remaining 6 credits are decided in consultation with an Academic Advisor.**

**Advanced Studies in Disability Track**

SPED 504	Universal Design, Inclusion and Accessibility in Learning, Teaching, and Beyond	3
SPED 506	Foundations of Language for the Exceptional Child	3
SPED 536	Autism Spectrum Disorder	3
SPED 537	Executive Function, ADHD, and Learning	3

**The remaining 6 credits are decided in consultation with Academic Advisor.**

**Research and Capstone Requirements**

SPED 597	Capstone Intervention Project II	3
SPED 598	Research in Special Education	3

**Total Credit Hours: 30**

**SPECIAL EDUCATION M.S.: SPECIALIZATION IN INCLUSION AND TRANSITION**

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**Program Rationale:**

The Master of Science in Special Education: Specialization in Inclusion and Transition is designed to prepare general education teachers or candidates with an earned bachelors degree in a related area of study (eg., Psychology, Sociology, Social Work, Human Services, Disability, and related disciplines) to gain the knowledge, skills, and professional dispositions to develop effective teaching and learning environments for individuals with disabilities in K-12 educational settings and/or transition planning. Completion of this program does not lead to a cross endorsements in special education. The curriculum for this program is aligned with the standards of the Council for Exceptional Children (CEC).

**Program Learning Outcomes:**

1. Students will demonstrate knowledge of foundational issues in special education and their impact on the field.
2. Students will demonstrate knowledge of the development and characteristics of learners, individual learning differences, and appropriate instructional strategies.
3. Students will demonstrate the ability to analyze multiple forms of standardized and curriculum-based assessments and use that information for a variety of educational decisions.
4. Students will demonstrate the ability to use their knowledge of general and specialized curricula to individualize learning for students with exceptional learning needs.
5. Students will demonstrate the ability to select, adopt, and use instructional strategies to promote learning and to modify learning environments for students with exceptional learning needs.
6. Students will promote professional, ethical, and collaborative practices in the field of special education.

**Admission Requirements:**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00) or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

The admissions application, application fee, and official transcripts from each college and university attended (except Central Connecticut State University) must be submitted to the Graduate Recruitment and Admissions Office.

Contact: 860-832-2400

**REQUIREMENTS**

Admitted students are required to have taken SPED 315 Introduction of Educating Learners with Exceptionalities, SPED 501 Education of Exceptional Learner (3 credits), or an equivalent course before beginning the program.

\*Course Requirements for eligibility for Official Certificate Program in Transition Planning (16-18 credits) include SPED 503, SPED 527, SPED 541, SPED 566, CNSL 522, and CNSL 560.

**Professional Requirements**

SPED 532	Contemporary Issues in Special	3
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	Education	
SPED 566	Legal and Administrative Issues in Special Education	3

**Specialization Required Courses**

SPED 503	Evidence-Based Practices for Diverse Learners	3
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**Specialization Electives (choose at least 12 credits)**

SPED 504	Universal Design, Inclusion and Accessibility in Learning, Teaching, and Beyond	3
SPED 506	Foundations of Language for the Exceptional Child	3
SPED 510	Inclusive Education	3
SPED 514/SPED 414	Behavioral Assessment and Interventions	3
SPED 515	Assessment in Special Education	3
SPED 516	Instructional Programming for Students with Exceptionalities	3
SPED 517/SPED 417	Special Education Methods in Teaching Reading (K-12)	3
SPED 518	Special Education Methods in Teaching Writing (K-12)	3
SPED 519/SPED 419	Special Education Methods in Content Area Instruction (K-12)	3
SPED 527	Internship in Inclusion and/or Transition Services	1-3
SPED 536	Autism Spectrum Disorder	3
SPED 541	Person-Centered Planning and Transition	3
SPED 581	Assistive Technology in Special Education	3
SPED 595	Topics in Special Education	1-3
CNSL 522	Appraisal Procedures in Counseling	3
CNSL 560	Introduction to Rehabilitation Counseling	3

Transition Specialist Official Certificate Program requires : SPED 527, SPED 541, SPED 566, CNSL 522, and CNSL 560.

SPED 514, SPED 515, SPED 516, SPED 517, SPED 518, SPED 519 also can count toward state requirements for teacher certification in Special Education.

**Program Prerequisites**

SPED 315	Introduction to Educating Learners with Exceptionalities	3
	or	
SPED 501	Education of the Exceptional Learner	3

**Research and Capstone Requirements**

SPED 596	Capstone Intervention Project I	3
SPED 597	Capstone Intervention Project II	3
SPED 598	Research in Special Education	3

SPED 596 and SPED 597: Plan E

**Total Credit Hours: 0**

**SPECIAL EDUCATION M.S.: FOR INITIAL CERTIFICATION OR TEACHERS SEEKING CROSS ENDORSEMENT IN SPECIAL EDUCATION**

**Program Rationale:**

The Master of Science in Special Education: Specialization for Initial Certification and Teachers Seeking Cross Endorsement serves two audiences: applicants who, after receiving an undergraduate degree that did not lead to teacher certification, want to pursue coursework leading to teacher certification in special education, as well as teachers who hold a current Connecticut Teaching Certificate in elementary, secondary, or K-12 education. This master's level Specialization provides coursework that leads to initial certification or a cross endorsement in Special Education. Nationally accredited by the Council for Exceptional Children (CEC), this program also meets certification requirements of the Connecticut State Department of Education.

**Program Learning Outcomes:**

1. Possess strong knowledge of content, content pedagogy, and learner development (typical and atypical).
2. Create an inclusive and culturally responsive learning environment.
3. Use data, content knowledge, and evidence-based pedagogical content knowledge to critically examine practice for the purpose of improving student learning.
4. Design and deliver instructional and assessment strategies that facilitate significant learning for all students including struggling learners and those with disabilities.
5. Design, deliver, and assess literacy/language strategies to deepen literacy and content learning.
6. Act collaboratively, ethically, and responsibly to ensure student growth and advance the profession.

**Admission Requirements:**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00) or its equivalent, and good standing (3.00 GPA) in all post-



baccalaureate course work.

The admissions application, application fee, and official transcripts from each college and university attended (except Central Connecticut State University) must be submitted to the Graduate Recruitment and Admissions Office.

Contact: 860-832-2400

## REQUIREMENTS

Prerequisites for students seeking initial certification: SPED 501, ~~SPED 502~~, LLA 509.

### Core

SPED 503	Evidence-Based Practices for Diverse Learners	3
SPED 514/SPED 414	Behavioral Assessment and Interventions	3
SPED 515	Assessment in Special Education	3
SPED 516	Instructional Programming for Students with Exceptionalities	3
SPED 532	Contemporary Issues in Special Education	3
SPED 502	Principles of Learning for Special Education	3

### Methods

SPED 517/SPED 417	Special Education Methods in Teaching Reading (K-12)	3
SPED 518	Special Education Methods in Teaching Writing (K-12)	3
SPED 519/SPED 419	Special Education Methods in Content Area Instruction (K-12)	3

### Student Teaching or Practicum

SPED 521	Student Teaching in Special Education - Elementary	3
SPED 522	Student Teaching in Special Education - Secondary or	3
SPED 520	Student Teaching Seminar	1
SPED 523	Practicum in Special Education - Elementary	2
SPED 524	Practicum in Special Education - Secondary	2
ED 582	Supervision of Secondary School Teaching	3
ED 583	Supervised Student Teaching	3

SPED 520 to be taken concurrently with SPED 521, SPED 522, SPED 523, SPED 524, and ED 583.

### Research and Capstone Requirements

SPED 597	Capstone Intervention Project II	3
SPED 598	Research in Special Education	3

**Total Credit Hours: 0**

## STEM EDUCATION FOR CERTIFIED TEACHERS M.S.

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### Program Rationale:

The MS in STEM Education for Certified Teachers will prepare certified teachers in the trans-disciplinary areas of Science, Technology, Engineering and Mathematics (STEM). Courses are aligned with national and/or CT state content standards in each discipline: Science, Technology, Engineering, and Math, and the Common Core for Mathematics and Language Arts. This program does not lead to CT state teacher certification or cross-endorsement.

In line with the STEM philosophy, courses will integrate the STEM disciplines and provide teachers with the skills necessary to move away from the traditional way of teaching discrete subjects towards a more comprehensive way of addressing the science, technology, engineering, and mathematics disciplines for use in the classroom to prepare students for 21st century college skills and career readiness.

### Program Learning Outcomes:

Graduate students are expected to demonstrate:

- Integrating and applying the practices of scientists and engineers into curriculum, instruction, and assessment for use in the classroom
- Understanding of the role of inquiry in curriculum, instruction, and assessment
- Integrating the crosscutting concepts of STEM into curriculum, instruction, and assessment
- Applying disciplinary core ideas of STEM into curriculum, instruction, and assessment for use in the classroom
- Constructing a research plan and carry out independent research on a STEM topic

### Admission Requirements:

The MS STEM Education Program is for certified teachers who hold a bachelor's degree from a regionally accredited

institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work. Teachers who do not teach one or more of the STEM disciplines (science, technology education, engineering education, or math) may be required to take additional content courses.

The admissions application, application fee, and official transcripts from each college and university attended (except Central Connecticut State University) must be submitted to the Graduate Recruitment and Admissions Office.

### COURSE AND CAPSTONE REQUIREMENTS

#### Core Courses (27 credits)

STEM 501	Applying Mathematical Concepts	3
STEM 502/MATH 502	Modeling with Mathematics in STEM Education	3
STEM 506	Inquiry-Based Learning	3
STEM 517	Robotics Applications in STEM Education	3
STEM 520	Inquiry in the Physical Sciences: Energy and the Environment	3
STEM 521	Engineering Design for STEM Education	3
STEM 530	Inquiry in the Life Sciences: From Micro to Macro	3
STEM 540	STEM Practices in the Life Sciences	3
STEM 590	Research I	3

#### Other Related/Requirements

#### Electives (3 credits)

	Any 500 level Science, Technology Education, Engineering Education Math course with permission of advisor	3
SCI 580	Topics in STEM Education	3

#### Capstone

STEM 595	Research II	3
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**Total Credit Hours: 33**

**Plan E: 33 credits**

### STRATEGIC COMMUNICATION M.S.

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#### Program Rationale:

Graduate study in communication is designed to provide students with academic experiences that enable them to evaluate, develop, shape, and change the communication

environment within organizations (organizational communication), as well as between organizations and their target audiences (public relations), using traditional and contemporary media technologies.

#### Program Learning Outcomes:

Students will be expected to:

- understand communication processes, internal and external, of an organization;
- demonstrate the ability to write appropriately in both academic and professional settings;
- employ research methods in the diagnosis of communication problems within organizations and between organizations and their target audiences, including those resulting from intercultural differences;
- apply problem-solving, decision-making, and negotiation strategies in complex relational situations within organizations;
- examine the use and impact of information, communication, and new media technologies in the design and evaluation of public relations, strategic communication campaigns, and other organizational applications; and
- develop and practice sound and ethical reasoning.

#### Admission Requirements:

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education.

Applicants seeking admission to the M.S. in Strategic Communication program must present an undergraduate average of B (3.00). Students with an undergraduate GPA of 2.70 through 2.99, or who have been out of school for five years and possess significant professional experience, may apply to be considered for conditional acceptance. Students who meet the above requirements should submit an Application for Graduate Admission, official transcripts, and an application fee directly to the Graduate Recruitment and Admissions Office.

#### Additional Materials Required:

Applicants must submit a current resume, and a writing sample comprised of 500 to 1,000 words which expresses their goals for graduate study and future professional aspirations. Instructions for uploading these documents will be found within the graduate online application.

Contact: 860-832-2690

**COURSE AND CAPSTONE REQUIREMENTS**

The program comprises two sections, a 12-credit core of foundational courses and 18-21 credits of advisor-approved directed electives. A capstone experience consisting of Plan A (6-credit Thesis) or Plan B (Comprehensive Examination) or Plan C (Special Project) is required for graduation.

**Core Courses**

COMM 500	Introduction to Graduate Studies in Communication	3
COMM 503	Research Methods in Communication	3
COMM 501	Theories of Human Communication within an Organizational Context or	3
COMM 505	Persuasive Communication	3
COMM 504	Campaign Monitoring and Evaluation or	3
COMM 507	Campaign Planning or	3
COMM 510	Public Opinion Research or	3
COMM 511	Social Media Research & Analytics	3

**Directed Electives (General Track)**

COMM 450	Communication Skills for Training and Development	3
COMM 451	Environmental Communication	3
COMM 454	Communication and Social Change	3
COMM 506	Case Studies in Public Relations	3
COMM 508	Public Relations Writing Strategies	3
COMM 522	Corporate Communication	3
COMM 523	Advanced Crisis Communication	3
COMM 539	Advanced Public Relations and Social Media	3
COMM 543	Intercultural Communication	3
COMM 562	Communication and Relationship Management	3
COMM 585	Special Topics	3
COMM 586	Graduate Field Studies in Communication	3
COMM 590	Independent Study	1-3

Please note: COMM 501, COMM 504, COMM 505, COMM 507, COMM 510 and/or COMM 511 can also count as directed electives.

With advisor approval, students may also select up to two courses offered by other CCSU graduate programs, to count as directed electives.

**Directed Electives (Online Track)**

COMM 454	Communication and Social Change	3
COMM 506	Case Studies in Public Relations	3
COMM 508	Public Relations Writing Strategies	3
COMM 522	Corporate Communication	3
COMM 539	Advanced Public Relations and Social Media	3
COMM 543	Intercultural Communication	3
COMM 562	Communication and Relationship Management	3
COMM 585	Special Topics	3
COMM 590	Independent Study	1-3

Please note: COMM 501, COMM 504, COMM 505 and/or COMM 510 can also count as directed electives in the online track.

With advisor approval, students may also select up to two online courses offered by other CCSU graduate programs, to count as directed electives.

All courses listed above (with the exception of COMM 507) have been or will be offered online by Fall 2018, the planned start date for this online track.

**"We want to add our proposed new course, COMM 523 Advanced Crisis Communication, to the course list above"**

**Capstone**

**Plan A:**

COMM 590	Independent Study and	1-3
COMM 599	Thesis or	3

**Plan B:**

Comprehensive Examination  
or

**Plan C:**

COMM 597	Special Project	3
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**Total Credit Hours: 33**

To complete degree requirements, students have the option of a thesis (Plan A) or a comprehensive examination (Plan B) comprised of a written exam followed by an oral exam or a Special Project (Plan C). Programs will be designed jointly by the departmental advisors and the students to provide the greatest educational and career opportunities.

## SUPPLY CHAIN & LOGISTICS MANAGEMENT (M.S. PROGRAM)

### Program Rationale:

The Master of Science in Supply Chain & Logistics Management (SCLM) Program is designed to fulfill the educational needs of students and working professionals whose career paths are directed toward management in technologically-oriented organizations.

### Program Learning Outcomes:

Graduate students in the program will be expected to:

- Apply knowledge of technology and management principles to the contemporary supply chain and logistics practices such as sourcing, quality, flow of materials, manufacturing / assembly operations, warehousing, transportation, order management and delivery to the customer,
- Identify, analyze, and solve supply chain and logistical problems using continuous improvement methods,
- Exhibit the knowledge required to lead projects and manage relationship with suppliers inside and outside the organization, diverse workforce, facilities, and problem-solving teams,
- Acquire knowledge and skills to meet the evolving challenges of global supply chains and logistics,
- Communicate effectively in written, oral, graphic and visual modes. Coordinate and communicate with key stakeholders inside and outside the organization.

### Admission Requirements:

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00-point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

The graduate application, application fee, and official transcripts are to be submitted to the Graduate Recruitment and Admissions Office. Official transcripts must be sent directly to the Graduate Recruitment and Admissions Office from each institution attended except Central Connecticut State University.

Contact: 860-832-1830

Applicant Deadlines for the M.S. Supply Chain & Logistics Management program are as follows:

- August 1 for Fall Semester
- December 1 for Spring Semester
- May 1 for Summer Term

International students must apply by the following application deadline (summer term is not available to international students):

- May 1 for Fall Semester
- November 1 for Spring Semester

### COURSE AND CAPSTONE REQUIREMENTS:

#### a. All three plans have a core curriculum as follows:

SCLM 562	Supply Chain Strategy	3
SCLM 563	Strategic Logistics Management	3
SCLM 564	Quality Systems Management	3
SCLM 565	Logistics: Traffic and Transportation	3
SCLM 566	Distribution and Warehouse Management	3
SCLM 561	Application of Lean Principles or	3
TM 561	Application of Lean Principles	3
SCLM 510	Industrial Operations Management or	3
TM 510	Industrial Operations Management	3

### Degree Requirements

The Master of Science in Supply Chain & Logistics Management (SCLM) is a 33-credit master's, consisting of three different plans. Plan A is 30 credits plus a three-credit thesis; Plan B is 33 credits with a comprehensive exam, and Plan C is 30 credits plus a three-credit applied research project.

7 Core Courses:

1. SCLM 562 Supply Chain Strategy
2. SCLM 563 Strategic Logistics Management
3. SCLM 564 Quality Systems Management
4. SCLM 565 Logistics: Traffic and Transportation -
5. SCLM 566 Distribution and Warehouse Management
6. SCLM 561 Application of Lean Principles  
(or, TM 561 Application of Lean Principles)
7. SCLM 510 Industrial Operations Management  
(or, TM 510 Industrial Operations Management)

**b. Directed electives.**

SCLM 560	Supply Chain Foundations	3
SCLM 596	Topics in Supply Chain & Logistics Management	3
TM 570	Supply Chain Modeling and Analysis	3
TM 576	Autonomous Logistics	3
TM 500	Product Life Cycle Management	3
TM 502	Human Relations and Behavior in Complex Organizations	3
TM 551	Project Management	3
TM 572	Innovative Leadership	3
TM 512	Principles of Occupational Safety	3
TM 464	Six Sigma Quality	3
TM 490	Advanced Six Sigma Quality	3

These are graduate courses in technology at the 400- and 500-level, as approved by a faculty advisor. Students selecting Plan A or Plan C will take three courses, and four if the Plan B option is chosen.

**c. All three plans have capstone course requirements of 0-3 credits.**

**Plan A:**

TM 599	Thesis	3
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**Plan B:**

Comprehensive Exam - credits

**Plan C:**

TM 595	Applied Research Capstone Project	3
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Note: No more than nine credits at the 400 level, as approved by the graduate advisor, may be counted toward the graduate planned program of study.

**Total Credit Hours: 33**

**TEACHER LEADERSHIP M.S.**

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**Program Rationale:**

The master's degree in Teacher Leadership is a 30-credit program designed to prepare educational leaders who are capable of implementing innovative instructional approaches and enhancing the effectiveness of their organizations. The program is primarily focused on PK-12 settings, but is applicable to a diversity of other private and non-profit sector organizations. Students may select from three strands of specialization.

1. Teacher leadership: Development of skills in promoting teacher collaboration, instructional coaching and curriculum development for diverse learners across the PK-12 spectrum.
2. Secondary education: Developing leadership capacity for instructional strategies and innovative practices for adolescent learners.
3. Educational policy studies: Exploration of the social, political, philosophical, and ethical dimensions of educational policy and practice.

All students take 9 credits of common core courses and a common 6 credit capstone experience. Each strand then has its own unique content of 9 credits as well as 6 credits of electives. Electives of relevance to each student's program are chosen in consultation with an advisor. The common 6-credit capstone course sequence offers degree candidates the opportunity to explore advanced applications of program content through completing a field-based research project.

**Program Learning Outcomes:**

Graduates of the program are expected to be able to:

1. Develop and facilitate learning environments and programs that are responsive to personal, cultural, linguistic, and learning differences.
2. Design, implement, and evaluate instructional programs to promote student learning.
3. Design, implement, and evaluate professional development activities that promote teacher learning.
4. Use evidence-based decision-making to improve student learning.
5. Demonstrate growth in professional self-knowledge by engaging in reflective practice.
6. Apply social, cultural, political, and historical perspectives to critically analyze and assess policy and school practices.
7. Understand, interpret, critique, and apply educational research.

**Admissions Requirements:**

To be considered for admission to the program, applicants must have a minimum undergraduate GPA of 3.00 on a 4.00 point scale (where A is 4.00), or a 2.70 GPA, or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work. Applicants to the Teacher Leadership and Secondary Education strands must hold, or be eligible for, a valid teaching certificate.

Applications are accepted for Fall, Spring and Summer terms. The graduate application, application fee, and official transcripts are to be submitted to the Graduate Recruitment and Admissions Office.

Contact: 860-832-2130

### COURSE AND CAPSTONE REQUIREMENTS

All strands total 30 credit hours. Candidates complete a program of graduate study requiring common core courses, one content-specific strand, electives, and a common capstone experience.

#### Common Courses

The candidate's planned program of graduate study requires the following common courses across all strands:

ED 598	Introduction to Research in Education	3
EDT 540	Educational Technology: Instructional Design, Assessment, and Data and a 500-level EPS course	3

**Subtotal: 9**

#### Strand 1 - Teacher Leadership

The strand in Teacher Leadership also requires:

ED 520	Instructional Programs for Diverse Learners	3
EDL 523	Instructional Leadership and Coaching	3
EDL 531	Collaboration and Professional Development	3

**Subtotal: 9**

#### Strand 2 – Secondary Education

The strand in Secondary Education also requires:

ED 520	Instructional Programs for Diverse Learners	3
EDSC 505	Innovations in Secondary Education	3
EDSC 556	Instructional Theory and Practice	3

**Subtotal: 9**

#### Strand 3 – Educational Policy Studies

The strand in Educational Policy Studies includes three of the following:

EPS 500	Contemporary Educational Issues	3
EPS 516	School and Society	3
EPS 524	Foundations of Contemporary Theories of Curriculum	3
EPS 525	History of American Education	3
EPS 526	Philosophy of Education	3

EPS 528	Comparative and International Education	3
EPS 535	Special Topics in Educational Foundations	3
EPS 538	The Politics of Education	3
EPS 583	Sociological Foundations of Education	3

**Subtotal: 9**

#### Electives

All strands require 6 credit hours of advisor-approved graduate-level electives. Candidates in the Secondary Education strand fulfill these with courses in their content area of certification.

**Subtotal: 6**

#### Capstone

All strands require:

ED 591	Curriculum, Instruction, and Assessment I	3
ED 592	Curriculum, Instruction, and Assessment II	3

**Subtotal: 6**

Candidates complete an independent research-based inquiry of educational practice or policy as part of this two-course capstone experience.

#### Total Credit Hours: 30

#### Non-matriculated students:

While students may take some courses as non-matriculated students, they must be accepted into the program before taking a fourth 500-level course. 500-level courses beyond the third course will not count toward program completion.

### TEACHING (M.A.T): TEACHER EDUCATION WITH SPECIALIZATIONS IN ENGLISH (7-12)

#### Program Rationale:

The Master's of Arts in Teaching (MAT) program is designed to offer high-quality degree-bearing teacher preparation to career changers and traditional-age students who have demonstrated content mastery and wish to expedite their preparation to teach in the shortage areas. For full-time students, the program begins in January each year and uses a cohort model to enhance program completion rates and teacher retention as graduates enter teaching. Specializations in secondary disciplines: English, history/social studies, mathematics,

modern language, sciences, and special education (K-12). An extended timeline of study is also available.

Note: Available science certifications include physics, chemistry, earth science, and biology. Available language certifications include Spanish.

### Program Learning Outcomes:

Graduate students in the program will:

- Possess strong knowledge of content, content pedagogy, and learner development (typical and atypical).
- Create an inclusive and culturally responsive learning environment.
- Use data, content knowledge, and evidence-based pedagogical content knowledge to critically examine practice for the purpose of improving student learning.
- Design and deliver instructional and assessment strategies that facilitate significant learning for all students including struggling learners and those with disabilities.
- Design, deliver, and assess literacy/language strategies to deepen literacy and content learning within the discipline.
- Act collaboratively, ethically, and responsibly to ensure student growth and advance the profession.

### Admission Requirements:

The MAT program selectively admits candidates based on a complete application portfolio. Admitted students complete a structured sequence of courses, field experiences, and classroom-based research.

To be considered for admission, applicants must demonstrate the knowledge, skills, and dispositions expected of teacher candidates. Initial assessments will be made through review of complete applications. Fully qualified candidates will be invited to participate in an admissions interview.

The following qualifications are required for consideration for admission:

- Completion of a bachelor's degree from a regionally accredited institution with a total undergraduate GPA of at least 2.70 and, if applicable, a CCSU undergraduate GPA of at least 2.70. GPA waivers will be considered for applicants who have less than a 2.70 GPA, but meet all other admission requirements and have at least a 3.00 GPA in the last 60 hours of coursework. Applicants with a GPA of at least 3.00 in

an earned master's degree whose undergraduate GPA does not meet minimum standards will be considered for admission if the GPA in the certification content major is at least 3.00.

- Completion of a major in the content area that meets state certification standards. For special education candidates, priority will be given to candidates who complete a major in an academic discipline represented in secondary curriculum. All candidates may be required to complete specific prerequisite courses prior to admission.
- Completion of general education coursework that meets current Connecticut State Department of Education (CSDE) standards for certification (currently 39 credits distributed across 5 of 6 areas and including a 3-credit U.S. history survey course). Applicants will be considered for admission if there are fewer than 12 credits of general education outstanding. These standards must be met prior to graduation.
- Submission of basic skills test scores in reading, mathematics, and writing that meet guidelines for admission to the professional program for teacher certification.
- Scores on required state content knowledge examinations in the certification area:

In mathematics, sciences, English, and history/social studies, Praxis Subject Assessment (formerly Praxis II) scores that meet current CSDE passing standards are required. Special education candidates must pass the Praxis Elementary Education Assessment: Mathematics Subtest or earn a B or better in MATH 113 or equivalent.

In Spanish, ACTFL Oral Proficiency Interview and Writing Proficiency ratings that meet current CSDE passing standards are required. If the ACTFL scores are more than one year old at the time the application is complete, a confirmatory interview with department faculty will be required.

To document their qualifications, applicants will submit School of Graduate Studies and program applications that include the following materials:

- Official undergraduate and graduate transcripts from all institutions attended except CCSU;
- Submission of basic skills test scores in reading, mathematics, and writing that meet guidelines for admission to the professional program for teacher certification;

- Acceptable scores on the required test of content knowledge;
- A resume documenting educational and work experiences;
- Two references that assess the candidate's ability to work with children and other adults on the reference form provided. One reference must be from someone, preferably an education professional, who has observed the student's work with children in the age range the student wishes to teach and can knowledgeably assess potential as a teacher. The second reference should be from someone who has observed and can knowledgeably assess ability to work with other adults. Personal references are not accepted.
- A word-processed essay demonstrating a command of the English language and explaining the experiences and thinking that have led the student to choose (a) a teaching career and (b) this particular certification program. Applicants to the modern language specialization must submit a second word-processed essay in target language, explaining why they believe they would be an effective language teacher.
- Evidence of the ability to work with diverse groups of students in an educational setting and an understanding of teaching as a work environment demonstrated through reflection on and documentation of no less than 60 hours of high-quality experience with students at the level the student wishes to teach, including recent experience in a public school setting. See the form "Statement of Experience with Children and Schools" which delineates expectations for this experience.
- Evidence of ability to write at graduate school level, demonstrated through submitted essays and either a GRE writing score or a CCSU sit-down writing examination which may be conducted in conjunction with an interview. Current Connecticut criminal background clearance.

**COURSE AND CAPSTONE REQUIREMENTS**

All MAT programs include core, specialization, and capstone components.

**Core**

All MAT candidates complete the following courses

MAT 510	Research on Teaching Diverse Learners	5
MAT 511	Introduction to Special Education	1
MAT 520	Design and Delivery of Instruction	4

MAT 530	Meeting the Needs of Special Learners in the Classroom	2
LLA 531	Literacy and Language Issues in the Classroom	3
LING 521	Meeting the Needs of ELLs in the Classroom	1
MAT 534	Creating Productive Learning Environments	3
MAT 541	Internship Seminar	3
MAT 551	Perspectives on Educational Policy and Practice	3

\*With the permission of the program coordinator, MAT 522 can be substituted for MAT 520 for up to four credits.

**Specialization**

**English**

ENG 507/ENG 407	Advanced Study of Literature for Teachers	3
ENG 508/ENG 408	Advanced Study of Teaching Writing in Middle and Secondary Schools	3
ENG 520/ENG 420	Advanced Study of Teaching English in Secondary Schools	3
MAT 533	Field Experience in the Certification Area: English, History/Social Studies, Mathematics, Modern Language, Science, and Special Education	3
MAT 540	Internship in the Certification Area: English, History/Social Studies, Mathematics, Modern Language, Science, and Special Education.	6

**Capstone**

All students will be Plan E. All MAT candidates complete the following capstone courses.

MAT 532	Intervention Capstone I: Reading and Designing Educational Research	3
MAT 550	Intervention Capstone II: Conducting and Reporting Teacher Research	3

**Total Credit Hours: 49**

**TEACHING (M.A.T): TEACHER EDUCATION WITH SPECIALIZATIONS IN HISTORY/SOCIAL STUDIES (7-12)**

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**Program Rationale:**

The Master's of Arts in Teaching (MAT) program is designed to offer high-quality degree-bearing teacher preparation to career changers and traditional-age students who have demonstrated content mastery and wish to expedite their preparation to teach in the shortage areas. For full-time students, the program begins in January each year and uses a cohort model to enhance program completion rates and teacher retention as graduates enter teaching. Specializations in secondary disciplines: English, history/social studies, mathematics, modern language, sciences, and special education (K-12). An extended timeline of study is also available.

Note: Available science certifications include physics, chemistry, earth science, and biology. Available language certifications include Spanish.

**Program Learning Outcomes:**

Graduate students in the program will:

- Possess strong knowledge of content, content pedagogy, and learner development (typical and atypical).
- Create an inclusive and culturally responsive learning environment.
- Use data, content knowledge, and evidence-based pedagogical content knowledge to critically examine practice for the purpose of improving student learning.
- Design and deliver instructional and assessment strategies that facilitate significant learning for all students including struggling learners and those with disabilities.
- Design, deliver, and assess literacy/language strategies to deepen literacy and content learning within the discipline.
- Act collaboratively, ethically, and responsibly to ensure student growth and advance the profession.

**Admission Requirements:**

The MAT program selectively admits candidates based on a complete application portfolio. Admitted students complete a structured sequence of courses, field experiences, and classroom-based research.

To be considered for admission, applicants must demonstrate the knowledge, skills, and dispositions expected of teacher candidates. Initial assessments will be made through review of complete applications. Fully

qualified candidates will be invited to participate in an admissions interview.

The following qualifications are required for consideration for admission:

- Completion of a bachelor's degree from a regionally accredited institution with a total undergraduate GPA of at least 2.70 and, if applicable, a CCSU undergraduate GPA of at least 2.70. GPA waivers will be considered for applicants who have less than a 2.70 GPA, but meet all other admission requirements and have at least a 3.00 GPA in the last 60 hours of coursework. Applicants with a GPA of at least 3.00 in an earned master's degree whose undergraduate GPA does not meet minimum standards will be considered for admission if the GPA in the certification content major is at least 3.00.
- Completion of a major in the content area that meets state certification standards or, for special education candidates priority will be given to candidates who complete a major in an academic discipline represented in secondary curriculum. Candidates may be required to complete specific prerequisite courses prior to admission.
- Completion of general education coursework that meets current Connecticut State Department of Education (CSDE) standards for certification (currently 39 credits distributed across 5 of 6 areas and including a 3-credit U.S. history survey course). Applicants will be considered for admission if there are fewer than 12 credits of general education outstanding. These standards must be met prior to graduation.
- Submission of basic skills test scores in reading, mathematics, and writing that meet guidelines for admissions to the professional program for teacher certification.
- Scores on required state content knowledge examinations in the certification area:

In mathematics, sciences, English, and history/social studies, Praxis Subject Assessment (formerly Praxis II) scores that meet current CSDE passing standards are required. Special education candidates must pass the Praxis Elementary Education Assessment: Mathematics Subtest or earn a B or better in MATH 113 or equivalent.

In Spanish, ACTFL Oral Proficiency Interview and Writing Proficiency ratings that meet current CSDE passing standards are required. If the ACTFL scores are more than one year old at the time the application is complete, a

confirmatory interview with department faculty will be required.

To document their qualifications, applicants will submit School of Graduate Studies and program application that include the following materials:

- Official undergraduate and graduate transcripts from all institutions attended except CCSU;
- Submission of basic skills test scores in reading, mathematics, and writing that meet guidelines for admission to the professional program for teacher certification;
- Acceptable scores on the required test of content knowledge;
- A resume documenting educational and work experiences;
- Two references that assess the candidate's ability to work with children and other adults on the reference form provided. One reference must be from someone, preferably an education professional, who has observed the student's work with children in the age range the student wishes to teach and can knowledgeably assess potential as a teacher. The second reference should be from someone who has observed and can knowledgeably assess ability to work with other adults. Personal references are not accepted.
- A word-processed essay demonstrating a command of the English language and explaining the experiences and thinking that have led the student to choose (a) a teaching career and (b) this particular certification program. Applicants to the modern language specialization must submit a second word-processed essay in target language, explaining why they believe they would be an effective language teacher.
- Evidence of the ability to work with diverse groups of students in an educational setting and an understanding of teaching as a work environment demonstrated through reflection on and documentation of no less than 60 hours of high-quality experience with students at the level the student wishes to teach, including recent experience in a public school setting. See the form "Statement of Experience with Children and Schools" which delineates expectations for this experience.
- Evidence of ability to write at graduate school level, demonstrated through submitted essays and either a GRE writing score or a CCSU sit-down writing

examination which may be conducted in conjunction with an interview.

- Current Connecticut criminal background clearance.

**COURSE AND CAPSTONE REQUIREMENTS**

All MAT programs include core, specialization, and capstone components.

**Core**

All MAT candidate complete the following courses:

MAT 510	Research on Teaching Diverse Learners	5
MAT 511	Introduction to Special Education	1
MAT 520	Design and Delivery of Instruction	4
MAT 530	Meeting the Needs of Special Learners in the Classroom	2
LLA 531	Literacy and Language Issues in the Classroom	3
LING 521	Meeting the Needs of ELLs in the Classroom	1
MAT 534	Creating Productive Learning Environments	3
MAT 541	Internship Seminar	3
MAT 551	Perspectives on Educational Policy and Practice	3

\*With the permission of the program coordinator, MAT 522 can be substituted for MAT 520 for up to four credits.

**Specialization**

**History/Social Studies**

SSCI 501/HIST 401	Advanced US History for Teachers	3
SSCI 510/HIST 410	Advanced World History for Teachers	3
SSCI 515/SSCI 415	Advanced Social Studies Methods at the Secondary Level	3
MAT 533	Field Experience in the Certification Area: English, History/Social Studies, Mathematics, Modern Language, Science, and Special Education	3
MAT 540	Internship in the Certification Area: English, History/Social Studies, Mathematics, Modern Language, Science, and Special Education.	6

**Capstone**

All students will be Plan E. All MAT candidates complete the following capstone courses:

MAT 532	Intervention Capstone I: Reading and Designing Educational Research	3
MAT 550	Intervention Capstone II: Conducting and Reporting Teacher Research	3

**Total Credit Hours: 49**

**TEACHING (M.A.T): TEACHER EDUCATION WITH SPECIALIZATIONS IN MATHEMATICS (7-12)**

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**The Master's of Arts in Teaching program with specialization in Mathematics is no longer accepting new applications.**

**Program Rationale:**

The Master's of Arts in Teaching (MAT) program is designed to offer high-quality degree-bearing teacher preparation to career changers and traditional-age students who have demonstrated content mastery and wish to expedite their preparation to teach in the shortage areas. For full-time students, the program begins in January each year and uses a cohort model to enhance program completion rates and teacher retention as graduates enter teaching. Specializations in secondary disciplines: English, history/social studies, mathematics, modern language, sciences, and special education (K-12). An extended timeline of study is also available.

Note: Available science certifications include physics, chemistry, earth science, and biology. Available language certifications include Spanish.

**Program Learning Outcomes:**

Graduate students in the program will:

- Possess strong knowledge of content, content pedagogy, and learner development (typical and atypical).
- Create an inclusive and culturally responsive learning environment.
- Use data, content knowledge, and evidence-based pedagogical content knowledge to critically examine practice for the purpose of improving student learning.
- Design and deliver instructional and assessment strategies that facilitate significant learning for all

students including struggling learners and those with disabilities.

- Design, deliver, and assess literacy/language strategies to deepen literacy and content learning within the discipline.
- Act collaboratively, ethically, and responsibly to ensure student growth and advance the profession.

**Admission Requirements:**

The MAT program selectively admits candidates based on a complete application portfolio. Admitted students complete a structured sequence of courses, field experiences, and classroom-based research.

To be considered for admission, applicants must demonstrate the knowledge, skills, and dispositions expected of teacher candidates. Initial assessments will be made through review of complete applications. Fully qualified candidates will be invited to participate in an admissions interview.

The following qualifications are required for consideration for admission:

- Completion of a bachelor's degree from a regionally accredited institution with a total undergraduate GPA of at least 2.70 and, if applicable, a CCSU undergraduate GPA of at least 2.70. GPA waivers will be considered for applicants who have less than a 2.70 GPA, but meet all other admission requirements and have at least a 3.00 GPA in the last 60 hours of coursework. Applicants with a GPA of at least 3.00 in an earned master's degree whose undergraduate GPA does not meet minimum standards will be considered for admission if the GPA in the certification content major is at least 3.00.
- Completion of a major in the content area that meets state certification standards or, for special education candidates priority will be given to candidates who complete a major in an academic discipline represented in secondary curriculum. Candidates may be required to complete specific prerequisite courses prior to admission.
- Completion of general education coursework that meets current Connecticut State Department of Education (CSDE) standards for certification (currently 39 credits distributed across 5 of 6 areas and including a 3-credit U.S. history survey course). Applicants will be considered for admission if there are fewer than 12 credits of general education outstanding. These standards must be met prior to graduation.

- Submission of basic skills test scores in reading, mathematics, and writing that meet guidelines for admission to the professional program for teacher certification.
- Scores on required state content knowledge examinations in the certification area:

In mathematics, sciences, English, and history/social studies, Praxis Subject Assessment (formerly Praxis II) scores that meet current CSDE passing standards are required. Special education candidates must pass the Praxis Elementary Education Assessment: Mathematics Subtest or earn a B or better in MATH 113 or equivalent.

In Spanish, ACTFL Oral Proficiency Interview and Writing Proficiency ratings that meet current CSDE passing standards are required. If the ACTFL scores are more than one year old at the time the application is complete, a confirmatory interview with department faculty will be required.

To document their qualifications, applicants will submit School of Graduate Studies and program application that include the following materials:

- Official undergraduate and graduate transcripts from all institutions attended except CCSU
- Submission of basic skills test scores in reading, mathematics, and writing that meet guidelines for admission to the professional program for teacher certification;
- Acceptable scores on the required test of content knowledge;
- A resume documenting educational and work experiences;
- Two references that assess the candidate's ability to work with children and other adults on the reference form provided. One reference must be from someone, preferably an education professional, who has observed the student's work with children in the age range the student wishes to teach and can knowledgeably assess potential as a teacher. The second reference should be from someone who has observed and can knowledgeably assess ability to work with other adults. Personal references are not accepted.
- A word-processed essay demonstrating a command of the English language and explaining the experiences and thinking that have led the student to choose (a) a teaching career and (b) this particular certification program. Applicants to the modern language

specialization must submit a second word-processed essay in target language, explaining why they believe they would be an effective language teacher.

- Evidence of the ability to work with diverse groups of students in an educational setting and an understanding of teaching as a work environment demonstrated through reflection on and documentation of no less than 60 hours of high-quality experience with students at the level the student wishes to teach, including recent experience in a public school setting. See the form "Statement of Experience with Children and Schools" which delineates expectations for this experience.
- Evidence of ability to write at graduate school level, demonstrated through submitted essays and either a GRE writing score or a CCSU sit-down writing examination which may be conducted in conjunction with an interview.
- Current Connecticut criminal background clearance.

### COURSE AND CAPSTONE REQUIREMENTS

All MAT programs include core, specialization, and capstone components.

#### Core

All MAT candidates complete the following courses

MAT 510	Research on Teaching Diverse Learners	5
MAT 511	Introduction to Special Education	1
MAT 520	Design and Delivery of Instruction	4
MAT 530	Meeting the Needs of Special Learners in the Classroom	2
LLA 531	Literacy and Language Issues in the Classroom	3
LING 521	Meeting the Needs of ELLs in the Classroom	1
MAT 534	Creating Productive Learning Environments	3
MAT 541	Internship Seminar	3
MAT 551	Perspectives on Educational Policy and Practice	3

\*With the permission of the program coordinator, MAT 522 can be substituted for MAT 520 for up to four credits.

#### Specialization

##### Mathematics

TE 519/TE 299	Technology & Engineering Education Practicum Advanced	3
TE 529	Content Pedagogy in Certification Area I	3

TE 539	Content Pedagogy in the Certification Area II	3
MAT 533	Field Experience in the Certification Area: English, History/Social Studies, Mathematics, Modern Language, Science, and Special Education	3
MAT 540	Internship in the Certification Area: English, History/Social Studies, Mathematics, Modern Language, Science, and Special Education.	6

**Capstone**

All students will be Plan E. All MAT candidates complete the following capstone courses.

MAT 532	Intervention Capstone I: Reading and Designing Educational Research	3
MAT 550	Intervention Capstone II: Conducting and Reporting Teacher Research	3

**Total Credit Hours: 49**

**TEACHING (M.A.T): TEACHER EDUCATION WITH SPECIALIZATIONS IN MODERN LANGUAGE (7-12)**

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**Program Rationale:**

The Master's of Arts in Teaching (MAT) program is designed to offer high-quality degree-bearing teacher preparation to career changers and traditional-age students who have demonstrated content mastery and wish to expedite their preparation to teach in the shortage areas. For full-time students, the program begins in January each year and uses a cohort model to enhance program completion rates and teacher retention as graduates enter teaching. Specializations in secondary disciplines: English, history/social studies, mathematics, modern language, sciences, and special education (K-12). An extended timeline of study is also available.

Note: Available science certifications include physics, chemistry, earth science, and biology. Available language certifications include Spanish.

**Program Learning Outcomes:**

Graduate students in the program will:

- Possess strong knowledge of content, content pedagogy, and learner development (typical and atypical).

- Create an inclusive and culturally responsive learning environment.
- Use data, content knowledge, and evidence-based pedagogical content knowledge to critically examine practice for the purpose of improving student learning.
- Design and deliver instructional and assessment strategies that facilitate significant learning for all students including struggling learners and those with disabilities.
- Design, deliver, and assess literacy/language strategies to deepen literacy and content learning within the discipline.
- Act collaboratively, ethically, and responsibly to ensure student growth and advance the profession.

**Admission Requirements:**

The MAT program selectively admits candidates based on a complete application portfolio. Admitted students complete a structured sequence of courses, field experiences, and classroom-based research.

To be considered for admission, applicants must demonstrate the knowledge, skills, and dispositions expected of teacher candidates. Initial assessments will be made through review of complete applications. Fully qualified candidates will be invited to participate in an admissions interview.

The following qualifications are required for consideration for admission:

- Completion of a bachelor's degree from a regionally accredited institution with a total undergraduate GPA of at least 2.70 and, if applicable, a CCSU undergraduate GPA of at least 2.70. GPA waivers will be considered for applicants who have less than a 2.70 GPA, but meet all other admission requirements and have at least a 3.00 GPA in the last 60 hours of coursework. Applicants with a GPA of at least 3.00 in an earned master's degree whose undergraduate GPA does not meet minimum standards will be considered for admission if the GPA in the certification content major is at least 3.00.
- Completion of a major in the content area that meets state certification standards or, for special education candidates priority will be given to candidates who complete a major in an academic discipline represented in secondary curriculum. Candidates may

be required to complete specific prerequisite courses prior to admission.

- Completion of general education coursework that meets current Connecticut State Department of Education (CSDE) standards for certification (currently 39 credits distributed across 5 of 6 areas and including a 3-credit U.S. history survey course). Applicants will be considered for admission if there are fewer than 12 credits of general education outstanding. These standards must be met prior to graduation.
- Submission of basic skills test scores in reading, mathematics, and writing that meet guidelines for admission to the professional program for teacher certification.
- Scores on required state content knowledge examinations in the certification area:

In mathematics, sciences, English, and history/social studies, Praxis Subject Assessment (formerly Praxis II) scores that meet current CSDE passing standards are required. Special education candidates must pass the Praxis Elementary Education Assessment: Mathematics Subtest or earn a B or better in MATH 113 or equivalent.

In Spanish, ACTFL Oral Proficiency Interview and Writing Proficiency ratings that meet current CSDE passing standards are required. If the ACTFL scores are more than one year old at the time the application is complete, a confirmatory interview with department faculty will be required.

To document their qualifications, applicants will submit School of Graduate Studies and program application that include the following materials:

- Official undergraduate and graduate transcripts from all institutions attended except CCSU;
- Submission of basic skills test scores in reading, mathematics, and writing that meet guidelines for admission to the professional program for teacher certification;
- Acceptable scores on the required test of content knowledge;
- A resume documenting educational and work experiences;
- Two references that assess the candidate's ability to work with children and other adults on the reference form provided. One reference must be from someone, preferably an education professional, who has observed the student's work with children in the age

range the student wishes to teach and can knowledgeably assess potential as a teacher. The second reference should be from someone who has observed and can knowledgeably assess ability to work with other adults. Personal references are not accepted.

- A word-processed essay demonstrating a command of the English language and explaining the experiences and thinking that have led the student to choose (a) a teaching career and (b) this particular certification program. Applicants to the modern language specialization must submit a second word-processed essay in target language, explaining why they believe they would be an effective language teacher.
- Evidence of the ability to work with diverse groups of students in an educational setting and an understanding of teaching as a work environment demonstrated through reflection on and documentation of no less than 60 hours of high-quality experience with students at the level the student wishes to teach, including recent experience in a public school setting. See the form "Statement of Experience with Children and Schools" which delineates expectations for this experience.
- Evidence of ability to write at graduate school level, demonstrated through submitted essays and either a GRE writing score or a CCSU sit-down writing examination which may be conducted in conjunction with an interview.
- Current Connecticut criminal background clearance.

**COURSE AND CAPSTONE REQUIREMENTS:**

All MAT programs include core, specialization, and capstone components.

**Core**

All MAT candidates complete the following courses

MAT 510	Research on Teaching Diverse Learners	5
MAT 511	Introduction to Special Education	1
MAT 520	Design and Delivery of Instruction	4
MAT 530	Meeting the Needs of Special Learners in the Classroom	2
LLA 531	Literacy and Language Issues in the Classroom	3
LING 521	Meeting the Needs of ELLs in the Classroom	1
MAT 534	Creating Productive Learning Environments	3

MAT 541	Internship Seminar	3
MAT 551	Perspectives on Educational Policy and Practice	3

\*With the permission of the program coordinator, MAT 522 can be substituted for MAT 520 for up to four credits.

**Specialization**

**Modern Language**

WL 519/WL 490	Advanced Teaching of World Languages: Acquisition in Young Children for Teachers of World Languages	3
WL 529/WL 428	Methods of Teaching World Languages in Elementary Schools	3
WL 539	Advanced Methods of Teaching World Languages in Secondary Schools	3
MAT 533	Field Experience in the Certification Area: English, History/Social Studies, Mathematics, Modern Language, Science, and Special Education	3
MAT 540	Internship in the Certification Area: English, History/Social Studies, Mathematics, Modern Language, Science, and Special Education.	6

**Capstone**

All students will be Plan E. All MAT candidates complete the following capstone courses.

MAT 532	Intervention Capstone I: Reading and Designing Educational Research	3
MAT 550	Intervention Capstone II: Conducting and Reporting Teacher Research	3

**Total Credit Hours: 49**

**TEACHING (M.A.T): TEACHER EDUCATION WITH SPECIALIZATIONS IN SCIENCES (7-12)**

**Program Rationale:**

The Master's of Arts in Teaching (MAT) program is designed to offer high-quality degree-bearing teacher preparation to career changers and traditional-age students who have demonstrated content mastery and wish to expedite their preparation to teach in the shortage areas. For full-time students, the program begins in January each year and uses a cohort model to enhance program completion rates and teacher retention as

graduates enter teaching. Specializations in secondary disciplines: English, history/social studies, mathematics, modern language, sciences, and special education (K-12). An extended timeline of study is also available.

Note: Available science certifications include physics, chemistry, earth science, and biology. Available language certifications include Spanish.

**Program Learning Outcomes:**

Graduate students in the program will:

- Possess strong knowledge of content, content pedagogy, and learner development (typical and atypical).
- Create an inclusive and culturally responsive learning environment.
- Use data, content knowledge, and evidence-based pedagogical content knowledge to critically examine practice for the purpose of improving student learning.
- Design and deliver instructional and assessment strategies that facilitate significant learning for all students including struggling learners and those with disabilities.
- Design, deliver, and assess literacy/language strategies to deepen literacy and content learning within the discipline.
- Act collaboratively, ethically, and responsibly to ensure student growth and advance the profession.

**Admission Requirements:**

The MAT program selectively admits candidates based on a complete application portfolio. Admitted students complete a structured sequence of courses, field experiences, and classroom-based research.

To be considered for admission, applicants must demonstrate the knowledge, skills, and dispositions expected of teacher candidates. Initial assessments will be made through review of complete applications. Fully qualified candidates will be invited to participate in an admissions interview.

The following qualifications are required for consideration for admission:

- Completion of a bachelor's degree from a regionally accredited institution with a total undergraduate GPA of at least 2.70 and, if applicable, a CCSU undergraduate GPA of at least 2.70. GPA waivers will

be considered for applicants who have less than a 2.70 GPA, but meet all other admission requirements and have at least a 3.00 GPA in the last 60 hours of coursework. Applicants with a GPA of at least 3.00 in an earned master's degree whose undergraduate GPA does not meet minimum standards will be considered for admission if the GPA in the certification content major is at least 3.00.

- Completion of a major in the content area that meets state certification standards or, for special education candidates priority will be given to candidates who complete a major in an academic discipline represented in secondary curriculum. Candidates may be required to complete specific prerequisite courses prior to admission.
- Completion of general education coursework that meets current Connecticut State Department of Education (CSDE) standards for certification (currently 39 credits distributed across 5 of 6 areas and including a 3-credit U.S. history survey course). Applicants will be considered for admission if there are fewer than 12 credits of general education outstanding. These standards must be met prior to graduation.
- Submission of basic skills test scores in reading, mathematics, and writing that meet guidelines for admission to the professional program for teacher certification.
- Scores on required state content knowledge examinations in the certification area:

In mathematics, sciences, English, and history/social studies, Praxis Subject Assessment (formerly Praxis II) scores that meet current CSDE passing standards are required. Special education candidates must pass the Praxis Elementary Education Assessment: Mathematics Subtest or earn a B or better in MATH 113 or equivalent.

In Spanish, ACTFL Oral Proficiency Interview and Writing Proficiency ratings that meet current CSDE passing standards are required. If the ACTFL scores are more than one year old at the time the application is complete, a confirmatory interview with department faculty will be required.

To document their qualifications, applicants will submit School of Graduate Studies and program application that include the following materials:

- Official undergraduate and graduate transcripts from all institutions attended except CCSU;

- Submissions of basic skills test scores in reading, mathematics, and writing that meet guidelines for admission to the professional program for teacher certification;
- Acceptable scores on the required test of content knowledge;
- A resume documenting educational and work experiences;
- Two references that assess the candidate's ability to work with children and other adults on the reference form provided. One reference must be from someone, preferably an education professional, who has observed the student's work with children in the age range the student wishes to teach and can knowledgeably assess potential as a teacher. The second reference should be from someone who has observed and can knowledgeably assess ability to work with other adults. Personal references are not accepted.
- A word-processed essay demonstrating a command of the English language and explaining the experiences and thinking that have led the student to choose (a) a teaching career and (b) this particular certification program. Applicants to the modern language specialization must submit a second word-processed essay in target language, explaining why they believe they would be an effective language teacher.
- Evidence of the ability to work with diverse groups of students in an educational setting and an understanding of teaching as a work environment demonstrated through reflection on and documentation of no less than 60 hours of high-quality experience with students at the level the student wishes to teach, including recent experience in a public school setting. See the form "Statement of Experience with Children and Schools" which delineates expectations for this experience.
- Evidence of ability to write at graduate school level, demonstrated through submitted essays and either a GRE writing score or a CCSU sit-down writing examination which may be conducted in conjunction with an interview.
- Current Connecticut criminal background clearance.

## **COURSE AND CAPSTONE REQUIREMENTS**

All MAT programs include core, specialization, and capstone components.



**Core**

All MAT candidates complete the following courses

MAT 510	Research on Teaching Diverse Learners	5
MAT 511	Introduction to Special Education	1
MAT 520	Design and Delivery of Instruction	4
MAT 530	Meeting the Needs of Special Learners in the Classroom	2
LLA 531	Literacy and Language Issues in the Classroom	3
LING 521	Meeting the Needs of ELLs in the Classroom	1
MAT 534	Creating Productive Learning Environments	3
MAT 541	Internship Seminar	3
MAT 551	Perspectives on Educational Policy and Practice	3

\*With the permission of the program coordinator, MAT 522 can be substituted for MAT 520 for up to four credits.

**Specialization**

**Sciences**

SCI 500/SCI 400	Advanced Topics of Nature of Science and Technology	3
SCI 514/SCI 414	Advanced Interdisciplinary Science, Practices and Pedagogy	3
SCI 517/SCI 417	Advanced Science Methods in the Secondary School	3
MAT 533	Field Experience in the Certification Area: English, History/Social Studies, Mathematics, Modern Language, Science, and Special Education	3
MAT 540	Internship in the Certification Area: English, History/Social Studies, Mathematics, Modern Language, Science, and Special Education.	6

**Capstone**

All students will be Plan E. All MAT candidates complete the following capstone courses.

MAT 532	Intervention Capstone I: Reading and Designing Educational Research	3
MAT 550	Intervention Capstone II: Conducting and Reporting Teacher Research	3

**Total Credit Hours: 49**

**TEACHING (M.A.T): TEACHER EDUCATION WITH SPECIALIZATIONS IN SPECIAL EDUCATION (K-12)**

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**Program Rationale:**

The Master's of Arts in Teaching (MAT) program is designed to offer high-quality degree-bearing teacher preparation to career changers and traditional-age students who have demonstrated content mastery and wish to expedite their preparation to teach in the shortage areas. For full-time students, the program begins in January each year and uses a cohort model to enhance program completion rates and teacher retention as graduates enter teaching. Specializations in secondary disciplines: English, history/social studies, mathematics, modern language, sciences, and special education (K-12). An extended timeline of study is also available.

Note: Available science certifications include physics, chemistry, earth science, and biology. Available language certifications include Spanish.

**Program Learning Outcomes:**

Graduate students in the program will:

- Possess strong knowledge of content, content pedagogy, and learner development (typical and atypical).
- Create an inclusive and culturally responsive learning environment.
- Use data, content knowledge, and evidence-based pedagogical content knowledge to critically examine practice for the purpose of improving student learning.
- Design and deliver instructional and assessment strategies that facilitate significant learning for all students including struggling learners and those with disabilities.
- Design, deliver, and assess literacy/language strategies to deepen literacy and content learning within the discipline.
- Act collaboratively, ethically, and responsibly to ensure student growth and advance the profession.

**Admission Requirements:**

The MAT program selectively admits candidates based on a complete application portfolio. Admitted

students complete a structured sequence of courses, field experiences, and classroom-based research.

To be considered for admission, applicants must demonstrate the knowledge, skills, and dispositions expected of teacher candidates. Initial assessments will be made through review of complete applications. Fully qualified candidates will be invited to participate in an admissions interview.

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- Completion of general education coursework that meets current Connecticut State Department of Education (CSDE) standards for certification (currently 39 credits distributed across 5 of 6 areas and including a 3-credit U.S. history survey course). Applicants will be considered for admission if there are fewer than 12 credits of general education outstanding. These standards must be met prior to graduation.
- Submission of basic skills test scores in reading, mathematics, and writing that meet guidelines for admission to the professional program for teacher certification
- Scores on required state content knowledge examinations in the certification area:

In mathematics, sciences, English, and history/social studies, Praxis Subject Assessment (formerly Praxis II) scores that meet current CSDE passing standards are required. Special education candidates must pass the

Praxis Elementary Education Assessment: Mathematics Subtest or earn a B or better in MATH 113 or equivalent.

In Spanish, ACTFL Oral Proficiency Interview and Writing Proficiency ratings that meet current CSDE passing standards are required. If the ACTFL scores are more than one year old at the time the application is complete, a confirmatory interview with department faculty will be required.

To document their qualifications, applicants will submit School of Graduate Studies and program application that include the following materials:

- Official undergraduate and graduate transcripts from all institutions attended except CCSU;
- Submission of basic skills test scores in reading, mathematics, and writing that meet guidelines for admission to the professional program for teacher certification;
- Acceptable scores on the required test of content knowledge;
- A resume documenting educational and work experiences;
- Two references that assess the candidate's ability to work with children and other adults on the reference form provided. One reference must be from someone, preferably an education professional, who has observed the student's work with children in the age range the student wishes to teach and can knowledgeably assess potential as a teacher. The second reference should be from someone who has observed and can knowledgeably assess ability to work with other adults. Personal references are not accepted.
- A word-processed essay demonstrating a command of the English language and explaining the experiences and thinking that have led the student to choose (a) a teaching career and (b) this particular certification program. Applicants to the modern language specialization must submit a second word-processed essay in target language, explaining why they believe they would be an effective language teacher.
- Evidence of the ability to work with diverse groups of students in an educational setting and an understanding of teaching as a work environment demonstrated through reflection on and documentation of no less than 60 hours of high-quality experience with students at the level the student wishes to teach, including recent experience in a

public school setting. See the form "Statement of Experience with Children and Schools" which delineates expectations for this experience.

- Evidence of ability to write at graduate school level, demonstrated through submitted essays and either a GRE writing score or a CCSU sit-down writing examination which may be conducted in conjunction with an interview.
- Current Connecticut criminal background clearance.

**COURSE AND CAPSTONE REQUIREMENTS**

All MAT programs include core, specialization, and capstone components.

**Core**

All MAT candidates complete the following courses:

MAT 510	Research on Teaching Diverse Learners	5
MAT 511	Introduction to Special Education	1
MAT 520	Design and Delivery of Instruction	4
MAT 530	Meeting the Needs of Special Learners in the Classroom	2
LING 521	Meeting the Needs of ELLs in the Classroom	1
MAT 534	Creating Productive Learning Environments	3
MAT 541	Internship Seminar	3
<b>Specialization- Special Education</b>		
LLA 509	Comprehensive Reading Instruction	3
MAT 516	Special Education Literacy Methods and Evidence-Based Practices	3
MAT 517	Special Education Content Methods and Evidence-Based Practices	3
MAT 515	Advanced Assessment in Special Education	3
MAT 533	Field Experience in the Certification Area: English, History/Social Studies, Mathematics, Modern Language, Science, and Special Education	3
MAT 540	Internship in the Certification Area: English, History/Social Studies, Mathematics, Modern Language, Science, and Special Education.	6
MAT 566	Special Education Case Management	3

\*With the permission of the program coordinator, MAT 522 can be substituted for MAT 520 for up to four credits.

**Capstone**

All students will be Plan E. All MAT candidates complete the following capstone courses:

MAT 532	Intervention Capstone I: Reading and Designing Educational Research	3
MAT 550	Intervention Capstone II: Conducting and Reporting Teacher Research	3

**Total Credit Hours: 49**

**TEACHING (M.A.T): TEACHER EDUCATION WITH SPECIALIZATION IN TECHNOLOGY EDUCATION (7-12)**

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**Program Rationale:**

The Master of Arts in Teaching (MAT) program is designed to offer high-quality degree-bearing teacher preparation to career changers and traditional-age students who have demonstrated content mastery and wish to expedite their preparation to teach in the shortage areas. For full-time students, the program begins in January each year and uses a cohort model to enhance program completion rates and teacher retention as graduates enter teaching. Specializations in secondary disciplines: English, history/social studies, mathematics, modern language, sciences, special education (K-12), and technology education (K-12).

*(Note: Available science certifications include physics, chemistry, earth science, and biology. Available language certifications include Spanish.)*

**Program Learning Outcomes:**

Graduate students in the program will:

- Possess strong knowledge of content, content pedagogy, and learner development (typical and atypical).
- Create an inclusive and culturally responsive learning environment.
- Use data, content knowledge, and evidence-based pedagogical content knowledge to critically examine practice for the purpose of improving student learning.
- Design and deliver instructional and assessment strategies that facilitate significant learning for all

students including struggling learners and those with disabilities.

- Design, deliver, and assess literacy/language strategies to deepen literacy and content learning within the discipline.
- Act collaboratively, ethically, and responsibly to ensure student growth and advance the profession.

#### Admission Requirements:

The MAT program selectively admits candidates based on a complete application portfolio. Admitted students complete a structured sequence of courses, field experiences, and classroom-based research.

To be considered for admission, applicants must demonstrate the knowledge, skills, and dispositions expected of teacher candidates. Initial assessments will be made through review of complete applications. Fully qualified candidates will be invited to participate in an admissions interview.

The following qualifications are required for consideration for admission:

- Completion of a bachelor's degree from a regionally accredited institution with a total undergraduate GPA of at least 2.70 and, if applicable, a CCSU undergraduate GPA of at least 2.70. GPA waivers will be considered for applicants who have less than a 2.70 GPA, but meet all other admission requirements and have at least a 3.00 GPA in the last 60 hours of coursework. Applicants with a GPA of at least 3.00 in an earned master's degree whose undergraduate GPA does not meet minimum standards will be considered for admission if the GPA in the certification content major is at least 3.00.
- Completion of a major in the content area that meets state certification standards. For special education candidates, priority will be given to candidates who complete a major in an academic discipline represented in secondary curriculum. All candidates may be required to complete specific prerequisite courses prior to admission.
- Completion of general education coursework that meets current Connecticut State Department of Education (CSDE) standards for certification (currently 39 credits distributed across 5 of 6 areas and including

a 3-credit U.S. history survey course). Applicants will be considered for admission if there are fewer than 12 credits of general education outstanding. These standards must be met prior to graduation.

- Submission of basic skills test scores in reading, mathematics, and writing that meet guidelines for admission to the professional program for teacher certification.
- Scores on required state content knowledge examinations in the certification area:
  - **English, history/social studies, mathematics, sciences, and technology education candidates** must pass the Praxis Subject Assessment (formerly Praxis II) scores that meet current CSDE passing standards are required.
  - **Spanish candidates** must earn advanced scores on ACTFL Oral Proficiency Interview and Writing Proficiency. If the ACTFL scores are more than one year old at the time the application is complete, a confirmatory interview with department faculty will be required.

#### To document their qualifications, applicants will submit School of Graduate Studies and program applications that include the following materials:

- **Official Transcripts:** Official undergraduate and graduate transcripts from all institutions attended except CCSU;
- **Basic Skills Test:** Submission of basic skills test scores in reading, mathematics, and writing that meet guidelines for admission to the professional program for teacher certification;
- **Content Area Assessment:** Passing scores on the required test of content knowledge;
- **Statement of Experience:** Evidence of the ability to work with diverse groups of students for a minimum of 60 hours, with at least 20 of those hours in a school setting. You must submit a completed Statement of Experience Form\* for each setting in which you worked with children. \*Visit <http://web.ccsu.edu/mat/forms.asp> for the required form.
- **Letters of Recommendation:** Two references that assess your ability to work with children and other adults using the required MAT Recommendation Form\*. Personal references are not accepted. \*Visit

<http://web.ccsu.edu/mat/forms.asp> for the required form.

- **Essay:** Candidate statement explaining the experiences and reasoning that led to selection of a teaching career and the CCSU MAT program.

**Applicants will also be required to:**

- **Interview:** Participate in and successfully complete an interview.
- **On-Demand Writing:** Candidate will provide evidence of ability to write at graduate school level (typically completed in conjunction with the program admission interview).
- **Background Check:** Must be able to pass a Connecticut criminal background clearance.

**COURSE AND CAPSTONE REQUIREMENTS**

All MAT programs include core, specialization, and capstone components.

**Core**

MAT 510	Research on Teaching Diverse Learners	5
MAT 511	Introduction to Special Education	1
MAT 520	Design and Delivery of Instruction	4
MAT 530	Meeting the Needs of Special Learners in the Classroom	2
LLA 531	Literacy and Language Issues in the Classroom	3
LING 521	Meeting the Needs of ELLs in the Classroom	1
MAT 534	Creating Productive Learning Environments	3
MAT 541	Internship Seminar	3
MAT 551	Perspectives on Educational Policy and Practice	3

\*With the permission of the program coordinator, MAT 522 can be substituted for MAT 520 for up to four credits.

**Specialization**

**Technology Education**

TE 519/TE 299	Technology & Engineering Education Practicum Advanced	3
TE 529	Content Pedagogy in Certification Area I	3
TE 539	Content Pedagogy in the	3

MAT 533	Certification Area II Field Experience in the Certification Area: English, History/Social Studies, Mathematics, Modern Language, Science, and Special Education	3
MAT 540	Internship in the Certification Area: English, History/Social Studies, Mathematics, Modern Language, Science, and Special Education.	6

**Capstone**

MAT 532	Intervention Capstone I: Reading and Designing Educational Research	3
MAT 550	Intervention Capstone II: Conducting and Reporting Teacher Research	3

**Total Credit Hours: 49**

**TECHNOLOGY MANAGEMENT M.S.**

The Master of Science in Technology Management Program is designed to fulfill the educational needs of students and working professionals whose career paths are directed toward management in technologically-oriented organizations.

**COURSE AND CAPSTONE REQUIREMENTS:**

The Master of Science in Technology Management is a 33-credit master's, consisting of three different plans. Plan A is 30 credits plus a three-credit thesis; Plan B is 33 credits with comprehensive exam; and Plan C is 30 credits plus a three-credit applied research project.

**a. All three plans have a core curriculum as follows:**

TM 500	Product Life Cycle Management	3
TM 551	Project Management	3
TM 562	Supply Chain Strategy	3
TM 572	Innovative Leadership	3
TM 510	Industrial Operations Management	3
	or	
SCLM 510	Industrial Operations Management	3
TM 561	Application of Lean Principles	3
	or	
SCLM 561	Application of Lean Principles	3

**b. Directed electives.**

These are graduate courses in technology at the 400- and 500-level, as approved by a faculty advisor. This allows the student flexibility to develop a specialization. Students

selecting a strand will take four courses in that strand, five if the Plan B option is chosen.

Strands:

Some examples could include, but are not limited to:

Lean Manufacturing and Six Sigma

Supply Chain and Logistics Management

Environmental and Occupational Safety

Computer Networking

**c. All three plans have capstone course requirements of 0-3 credits.**

**Plan A:**

TM 599	Thesis	3
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**Plan B:**

Comprehensive Exam

**Plan C:**

TM 595	Applied Research Capstone Project	3
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**Total Credit Hours: 33**

Note: No more than nine credits at the 400 level, as approved by the graduate advisor, may be counted toward the graduate planned program of study.

## DOCTORAL PROGRAMS

### DOCTOR OF NURSE ANESTHESIA PRACTICE

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#### Program Rationale

The Doctorate of Nurse Anesthesia Practice (DNAP) program is a practice doctoral degree, which has two specializations. The first specialization is the Entry-level DNAP, designed for bachelor's prepared licensed registered nurses to become certified registered nurse anesthetists (CRNAs) and provide discipline specific preparation in biology and anesthesia; the second specialization is the Advanced DNAP for master's level practicing certified registered nurse anesthetists to become DNAP-prepared practitioners, and which allows these individuals to expand their background in areas of biology and anesthesia specific to their discipline.

This professional doctoral program provides a strong science background for those students wishing to emphasize the sciences. The program focuses on the use of critical thinking skills and analyses to evaluate clinical practice, health care, and patient safety; it builds on scientific and clinical skills from licensed registered nurse training and on experience as a critical care nurse. The DNAP prepares CRNAs for positions of leadership and management, patient care, and nurse anesthesia education.

Per CCSU DNAP and Hospital Program Handbooks, all students must achieve a final grade of an 84 or better in all ANES and BIO 700-level courses to remain in the program.

#### Program Learning Outcomes

1. Analyzes best-practice models for nurse anesthesia patient care management through integration of knowledge acquired from arts and sciences within the context of the scope and standards of nurse anesthesia practice.
2. Undertakes complex leadership role and integrate critical and reflective thinking to facilitate intraprofessional and interprofessional collaboration.
3. Uses evidence-based practice in clinical decision making, develop and assess strategies to improve patient outcomes and quality of care.
4. Evaluates the impact of public processes on financing and delivery of healthcare.
5. Assesses and evaluates health outcomes in a variety of populations, clinical settings, and systems.
6. Completes and disseminates scholarly work, demonstrating knowledge with an area of academic focus.
7. Uses information systems/technology and evaluate clinical and research databases to support and improve patient care and healthcare systems.
8. Demonstrates ability to advocate for health policy change to improve patient care and advance the specialty of nurse anesthesia.
9. Analyzes healthcare delivery systems, organizations, and risk management plans to improve outcomes for the patient, organization, and community.
10. Demonstrates ethical decision-making; and communicates and represents themselves in accordance with the Code of Ethics for CRNAs.

#### Admission requirements to DNAP: Entry-level Specialization Program

All Applicants must demonstrate:

1. Bachelor's degree from a regionally accredited institution of higher education and satisfy both the University's and the affiliated hospital school of nurse anesthesia's criteria for acceptance. The BSN from an NLN or AACN accredited baccalaureate program in nursing or another appropriate baccalaureate degree (biology, chemistry, etc.) from a regionally accredited institution of higher education must be completed at the time of application.
2. Cumulative GPA 3.00 or higher on a 4.00 scale (A is 4.00) and grades of B or higher in all required prerequisite courses. The Graduate Recruitment and Admissions office will maintain the right to request other official transcripts to confirm minimum grade requirements for prerequisite courses.
3. Required Prerequisite courses include 2 courses in chemistry (this must include inorganic and organic chemistry or biochemistry), a year in anatomy and physiology, one course in Statistics or Biostatistics, and one course in Pharmacology. Please note one course in chemistry and one course in anatomy and physiology must be less than 8 years old.

4. Current unencumbered licensure as a registered nurse in one of the 50 states and a current certification in basic life support (BLS).
5. A minimum of 18 months of critical care experience should be accumulated by the application deadline (September 1st) in which the applicant has had the opportunity to develop independent decision making, demonstrate psychomotor skills and the ability to use and interpret advanced monitoring, based on a knowledge of physiologic and pharmacologic principles as evidence by a letter from a supervisor.
6. A satisfactory interview with the admissions committee from an affiliated hospital school of nurse anesthesia, if selected as finalist.

All Applicants must send the following to a director of affiliated hospital school of nurse anesthesia:

1. Official transcripts of all undergraduate and graduate coursework;
2. Copy of licensure as a registered nurse in one of the 50 states and a current certification in basic life support (BLS);
3. Three letters of recommendation from employers or educators familiar with your academic or professional experience; one must be from the Office of the Dean or Director of your school of nursing and one from a current supervisor; one of these letters must demonstrate your years of critical care experience;
4. Resume or Curriculum Vitae outlining work experience;
5. Narrative statement covering career goals, reason for pursuing doctorate, life/work experience relevant as part of your educational experience, ability to pursue study during summer, fall and spring semesters;
6. Application form for affiliated hospital school of nurse anesthesia.
7. For summer matriculation to the DNAP: Entry-Level Program send Application materials to:

Director, Nurse Anesthesia Program of Hartford, 100 Retreat Ave., Suite 403, Hartford, CT 06106-2528

Director, Yale-New Haven Hospital School of Nurse Anesthesia, 1450 Chapel Street, MOB 216, New Haven, CT 06511

Application materials are due September 1

Application materials are due September 1

**If selected, application must be made to Central Connecticut State University no later than March 1**

Due to the sequential nature of the program, transfer credits are not accepted. Students not meeting admission requirements will not be allowed to take course(s) in the program on a conditional or provisional basis. Conditional or provisional acceptance into the program is not an option.

#### **Admission requirements to DNAP: Advanced Specialization Program**

All Applicants must demonstrate:

1. Graduation from a nurse anesthesia educational program accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs (COA).
2. Master's degree from a regionally accredited institution of higher education;
3. Cumulative GPA 3.00 or higher on a 4.00 scale (A is 4.00).
4. Current unencumbered licensure as a registered nurse in one of the 50 states, a current certification in basic life support (BLS), and advanced practice nurse (if required by home state).
5. Either certification by the Council on Certification of Nurse Anesthetists (certified registered nurse anesthetist, CRNA); or current recertification by the Council on Recertification of Nurse Anesthetists (if past initial certification period).
6. A satisfactory interview with the admissions committee from an affiliated hospital school of nurse anesthesia, if selected as finalist.

All Applicants must send the following to a director of affiliated hospital school of nurse anesthesia:

1. Applicants who hold a Master's degree from a regionally accredited university with a 3.0 or higher GPA on a four-point scale (where A = 4.00) are required to request that official transcripts be sent from the institution where the undergraduate degree was obtained and from where the Master's degree was obtained. Official transcripts must also be sent from each institution where any other graduate level courses were taken. The Graduate Recruitment and Admissions office will maintain the right to request other official transcripts to review courses that are essential to the applicant's program of study.
2. Copy of licensure as a registered nurse in one of the 50 states, a current certification in basic life support (BLS), and advanced practice nurse (if required by home state);



3. Copy of either certification by the Council on Certification of Nurse Anesthetists (certified registered nurse anesthetist, CRNA); or current recertification by the Council on Recertification of Nurse Anesthetists (if past initial certification period)
4. Three letters of recommendation from employers or educators familiar with your academic or professional experience; one must be from the Office of the Dean or Director of your school of nurse anesthesia and one from a current supervisor;
5. Resume or Curriculum Vitae outlining work experience;
6. Narrative statement covering career goals, reason for pursuing doctorate, life/work experience relevant as part of your educational experience, ability to pursue study during summer, fall and spring semesters;
7. Application form for affiliated hospital school of nurse anesthesia.
8. Application materials are due June 1 for fall matriculation to the DNAP: Advanced Specialization Program. Send Application materials to:

Director, Nurse Anesthesia Program of Hartford, 100 Retreat Ave., Suite 403, Hartford, CT 06106-2528	Director, Yale-New Haven Hospital School of Nurse Anesthesia, 1450 Chapel Street, MOB 216, New Haven, CT 06511
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Application materials are due <u>June 1</u>	Application materials are due <u>June 1</u>
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**If selected, application must be made to Central Connecticut State University no later than August 1.**

Preference will be given to those with demonstrated previous course in statistics as evidenced by a transcript.

Due to the sequential nature of the program, transfer credits are not accepted. Students not meeting admissions requirements will not be allowed to take course(s) in the program on a conditional or provisional basis. Conditional or provisional acceptance into the program is not an option.

**DOCTORATE OF NURSE ANESTHESIA PRACTICE: ENTRY-LEVEL SPECIALIZATION**

3 years, including doctoral capstone

**I- Biological Systems Core**

CHEM 550	Basic Organic and Biological Chemistry	3
BIO 517	Advanced Human Anatomy, Physiology, and Pathophysiology	6

DNAP 518	Advanced Pathophysiology, Anatomy, and Physiology for Nurse Anesthesia I	3
DNAP 519	Advanced Pathophysiology, Anatomy, and Physiology for Nurse Anesthesia II	3
DNAP 527	Advanced Anesthesia Pharmacology I	4
DNAP 528	Advanced Anesthesia Pharmacology II	3
BIO 598	Research in Biology	3

**II- Professional Core**

DNAP 525	Advanced Physical Health Assessment for Nurse Anesthetists	3
DNAP 725	Bioethics in Nurse Anesthesia	3
DNAP 730	Human Factors and Patient Safety for Nurse Anesthetists	3
DNAP 736	Evidence-based Practice and Biostatistics	3
DNAP 739	Advanced Topics in Pharmacology	3
DNAP 740	Leadership and Nurse Anesthesia Education	3
DNAP 742	Policy and Politics for the Nurse Anesthetist	3

**III- Anesthesia Clinical Core**

DNAP 501	Principles of Nurse Anesthesia Practice I	4
DNAP 502	Principles of Nurse Anesthesia Practice II	2
DNAP 503	Principles of Anesthesia Practice III	2
DNAP 504	Principles of Nurse Anesthesia Practice IV	4
DNAP 515	Professional Aspects of Nurse Anesthesia Practice	2
NAR 730	Nurse Anesthesia Residency I	1
NAR 731	Nurse Anesthesia Residency II	1
NAR 732	Nurse Anesthesia Residency III	1
NAR 733	Nurse Anesthesia Residency IV	3
NAR 734	Nurse Anesthesia Residency V	3
NAR 735	Nurse Anesthesia Residency VI	3

**IV- Capstone**

DNAP 744	Entry to Practice Doctoral Scholarly Project I	2
DNAP 745	Entry to Practice Doctoral Scholarly Project II	3
DNAP 746	Doctoral Scholarly Project II	3
DNAP 747	Entry to Practice Doctoral Scholarly Project IV	1-6

DNAP 747- only if needed to complete capstone

**DOCTORATE OF NURSE ANESTHESIA PRACTICE:  
ADVANCED SPECIALIZATION**

Part-time: 2 years, including doctoral capstone

**I- Biological Systems and Professional Core**

BIO 525	Advanced Physical Health Assessment for Nurse Anesthetists	3
DNAP 725	Bioethics in Nurse Anesthesia	3
DNAP 730	Human Factors and Patient Safety for Nurse Anesthetists	3
DNAP 736	Evidence-based Practice and Biostatistics	3
DNAP 739	Advanced Topics in Pharmacology	3
DNAP 740	Leadership and Nurse Anesthesia Education	3
DNAP 742	Policy and Politics for the Nurse Anesthetist	3

BIO 525- if needed

**II- Anesthesia Clinical Core**

ACP 743	Advanced Specialization Clinical Practicum in Anesthesia I	3
ACP 744	Advanced Specialization Clinical Practicum in Anesthesia II	3

**III- Capstone**

DNAP 754	Advanced Specialization Doctoral Scholarly Project I	2
DNAP 755	Advanced Specialization Doctoral Scholarly Project II	2
DNAP 756	Advanced Specialization Doctoral Scholarly Project III	2
DNAP 757	Advanced Specialization Doctoral Scholarly Project IV	1

DNAP 757- only if needed to complete capstone

**EDUCATIONAL LEADERSHIP ED.D.****Program Rationale:**

The doctorate of practice in Educational Leadership (Ed.D.) is designed for delivery to a cohort of full-time educational and administrative professionals in diverse formats, including: weekday evenings, summer and winter sessions, some weekends, and online. The Ed.D. is based on the premise that learning takes place through an integration of course work and experiences that stem from a clear conception of leadership, the knowledge base of the field, and a structure that allows doctoral students and faculty to collaborate on shared work improving educational organizations at all levels. The Ed.D. includes two strands that support the learning needs of two different groups of professionals. Students in the two

strands take some courses together (e.g. research methods) and separate to take other courses related to their strand specialization. Both strands require 48-63 credit hours for completion.

The P12 strand serves teachers and administrators in early childhood through high school educational settings who want to prepare for a variety of leadership positions: principals, teacher leaders, department heads, curriculum and assessment specialists, assistant superintendents, and superintendents. Some graduates also eventually move into careers as college or university faculty; however, the program is not formally designed as a preparatory experience to enter faculty roles in higher education.

The Higher Education strand serves professionals employed in higher education institutions who aspire to a wide range of administrative and leadership positions in academic or student affairs at a broad range of institutional types. This strand is not designed as preparatory experience for faculty roles in other content areas or disciplines.

**Program Learning Outcomes:**

Prior to defending their dissertation proposals all doctoral students must document mastery of program learning outcomes and show their ability to:

1. demonstrate an ethical and moral commitment to collaborative work that promotes positive learning for all members of the organization;
2. demonstrate the ability to foster best practices with the understanding that teaching and learning are at the heart of the organization's mission;
3. connect the immediate work of organizational improvement to the larger philosophical, political and historical context, and to the organization's mission;
4. establish a commitment to social justice through their work and act in ways that promote social justice in their organizations;
5. utilize evolving technologies to improve organizations, enhance learning, and build institutional identity;
6. foster continuous organizational improvement grounded in the collection, analysis, interpretation, and application of data;
7. locate, interpret, and assess relevant educational research and apply it to both practice and the design and conduct of research.

**Admissions Requirements:**

To be considered for admission to the Ed.D. in Educational Leadership, applicants must have earned a master's degree in an appropriate discipline or professional field and have career aspirations that are consistent to the goals and standards of the program.

Applications to the P12 strand are accepted each fall, with cohort courses beginning the following summer.

Applications to the Higher Education strand are accepted in the fall of odd numbered years (e.g. 2021, 2023), with cohort courses beginning the following summer. The deadline for submission of applications is November 1.

The following minimum criteria have been established for admission into either strand of the Ed.D. program:

1. Master's degree from a regionally accredited institution of higher education in a discipline or professional field that is relevant to the Ed.D. Program.
2. Minimum GPA 3.00 on all graduate coursework.
3. Two letters of reference from leaders in education familiar with the applicant's work.
4. Submission of a resume that illustrates work-related experiences.
5. A personal statement covering three important topics:
  - a. Career goals
  - b. Reasons for pursuing the Ed. D. in Educational Leadership at CCSU
  - c. Ability and commitment to devote the required time for courses and dissertation research to complete the program in a timely manner
6. If selected as a finalist, a satisfactory interview with an admission panel.
7. PreK-12 strand only: An additional requirement is completion of EDL 590 Leaders as Learners or an equivalent graduate-level introductory course. Applicants holding the 092 or 093 administrative certificate, or that have completed a Sixth Year certificate program in educational leadership, are considered to have met this requirement.
8. Instructions for uploading the references, resume, and personal statement will be found within the online graduate application.

Application information and links for each Ed.D. strand are available through the Ed.D. program website. Admission decisions are made by a faculty admissions committee. University administrators may also participate on the admissions committee for the Higher Education Strand.

Admission is competitive and there may be occasions when minimally qualified candidates are not able to be admitted due to cohort size limitations. Applications are due by November 1.

#### **Program of Study:**

The total credits required for the program range from 48-63. Up to 15 credits of eligible post-master's graduate coursework may be applied to the required credits for the specialization.

#### **Candidate Assessment:**

The curriculum of the Ed.D. program is aligned with applicable professional and accreditation standards and with the program learning outcomes. Throughout the first two years of the program, each Ed.D. candidate completes a comprehensive leadership portfolio which uses a variety of evidence (artifacts, evaluations, projects, and reflections) to document mastery of program learning outcomes. This portfolio must be successfully defended before a faculty committee before commencing dissertation work. Candidates then also complete and defend a dissertation prior to being awarded the Ed.D. degree.

#### **P12 STRAND COURSE AND CAPSTONE REQUIREMENTS:**

##### **Foundational Core (18 credits)**

EPS 700	The Purposes of Education in America	3
EDL 705	Leadership to Promote Effective Teaching & Learning	3
EDL 705	Leadership to Promote Effective Teaching & Learning	3
EDL 701	Leading Organizational Change I: Theory	3
EDL 702	Leading Organizational Change II: Program Development & Evaluation	3
EDL 735	Special Topics in Leadership	1 to 3

EDL 705 is taken for 6 credits in the P12 strand. Students take 3 credits in the first summer, 1.5 in the first fall, and 1.5 in the first spring. EDL 735 is taken for 1.5 credits in the second fall and 1.5 credits in the second spring.

##### **Inquiry Seminars and Dissertation (30 credits required; up to eighteen additional credits optional):**

EDL 710	Inquiry Seminar I: The Study of Human & Organizational Learning	2
EDL 711	Inquiry Seminar II: Quantitative Research	3

EDL 712	Inquiry Seminar III: Qualitative Research	3			Process	
EDL 713	Inquiry Seminar IV: Study of Organizational Change	2		LLA 601	Current Trends and Issues in Reading and Language Arts	3
EDL 714	Inquiry Seminar V: Advanced Research Design	3		LLA 621	Literacy Instruction for Diverse Populations II	3
EDL 715	Inquiry Seminar VI: Leadership Portfolio and Capstone Prospectus	3		LLA 622	Organization, Administration, and Supervision of Reading and Language Arts Programs	3
EDL 716	Inquiry Seminar VII: Capstone Proposal Development	3		LLA 700	Seminar in Literacy	3
EDL 717	Inquiry Seminar VIII: Capstone Research I	3				
EDL 718	Inquiry Seminar IX: Capstone Research II	3				
EDL 719	Inquiry Seminar X: Capstone Research III	1-2				
EDL 720	Inquiry Seminar XI: Disseminating Research Findings	2				

EDL 719: taken if the capstone is not completed at the end of EDL 718 and may be repeated for up to 18 credits over three calendar years.

#### **Administrative Leadership (Specialization option 1)**

This specialization is for students who aspire for administrative positions in public schools. It could lead to certification for intermediate administrator (a State of Connecticut certificate). Fifteen credits from among:

EDL 590	Leaders as Learners: Educational Leadership and Self-Assessment	3				
EDL 610	School Leadership I	3				
EDL 611	School Leadership II	3				
EDL 688	Administration Programs for Diverse Learners I	1				
EDL 689	Administration Programs for Diverse Learners II	1				
EDL 690	Internship in Educational Leadership I	2				
EDL 691	Internship in Educational Leadership II	2				

#### **Curriculum and Literacy (Specialization option 2)**

This specialization is for students who plan leadership careers in P12 settings such as reading and curriculum specialists. It includes courses in literacy, curriculum, and instructional leadership. Students may take up to 15 credits selected from among the following 3 credit courses:

LLA 603	Multicultural Literature in the Classroom	3				
LLA 605	Reading and Writing as Integrated	3				

#### **HIGHER EDUCATION STRAND COURSE AND CAPSTONE REQUIREMENTS:**

##### **Foundational Core (18 credits)**

EPS 700	The Purposes of Education in America	3				
EDL 701	Leading Organizational Change I: Theory	3				
EDL 702	Leading Organizational Change II: Program Development & Evaluation	3				
EDL 705	Leadership to Promote Effective Teaching & Learning	3				
EDL 730	Budgeting and Resource Management in Higher Education	3				
EDL 731	Administration and Ethics in Higher Education	3				

EDL 705 is taken for 3 credits in the Higher Education strand.

##### **Inquiry Seminars and Dissertation (30 credits required; up to eighteen additional credits optional)**

EDL 710	Inquiry Seminar I: The Study of Human & Organizational Learning	2				
EDL 711	Inquiry Seminar II: Quantitative Research	3				
EDL 712	Inquiry Seminar III: Qualitative Research	3				
EDL 713	Inquiry Seminar IV: Study of Organizational Change	2				
EDL 714	Inquiry Seminar V: Advanced Research Design	3				
EDL 715	Inquiry Seminar VI: Leadership Portfolio and Capstone Prospectus	3				
EDL 716	Inquiry Seminar VII: Capstone Proposal Development	3				
EDL 717	Inquiry Seminar VIII: Capstone Research I	3				
EDL 718	Inquiry Seminar IX: Capstone Research II	3				
EDL 719	Inquiry Seminar X: Capstone Research III	1-2				
EDL 720	Inquiry Seminar XI: Disseminating	2				

### Research Findings

EDL 719: taken if the capstone is not completed at the end of EDL 718 and may be repeated for up to 18 credits over three calendar years.

#### **Organizational Learning and Innovation (Specialization option 1)**

This specialization is appropriate for students most interested in a career in administration, academic affairs, and support of program development. Courses develop skills in using a systems lens for designing innovative solutions to problems of practice. Candidates create project and design-based products to meet organizational needs. Students 15 credits of graduate level coursework in advisor-approved directed electives within the Department of Educational Leadership, Policy and Instructional Technology.

#### **Student Affairs (Specialization option 2)**

This is an appropriate specialization for students without a background in the area, but who are planning a career in student affairs. Students take 15 credits of graduate level coursework in advisor-approved electives in content related to supporting student development in institutions of higher education.

**Total Credit Hours: 63**

## OFFICIAL CERTIFICATE PROGRAMS

### OFFICIAL CERTIFICATE PROGRAM IN ACCOUNTING

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**This program is not accepting applications for Admissions at this time.**

#### Program Description

A graduate-level certificate conducted online, combining the material from six (6) undergraduate accounting courses into a four-course graduate sequence. Two ACP courses will be offered in the fall semester and two in the spring semester, allowing students to complete the certificate in two to four semesters. Applicants who have an undergraduate degree who were not accounting majors will be considered for admission. Upon successful completion (with GPA  $\geq 3.00$ ) of the Certificate in Accounting program, students are accepted into the Master of Science in Accounting program.

#### Academic Rationale

This program prepares students who have a bachelor's degree in a discipline other than accounting to enter the CCSU MS in Accounting program.

#### Demand Rationale

This program, in conjunction with the MS in accounting program will prepare students to meet the state 150-credit education requirement (including 36 accounting credits) required to become Certified Public Accountants.

#### Admissions Requirements

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education (or the international equivalent) with an overall undergraduate GPA of at least 2.70. No GMAT is required. The GPA requirement may be waived for those with substantial work experience or with an advanced degree in another discipline.

Introductory Financial Accounting and Introductory Managerial Accounting courses will need to be completed prior to beginning the Certificate in Accounting Program, or students may enroll in our AC 500 -- Introduction to Financial and Managerial Accounting, offered as an online summer course.

Application to the Certificate in Accounting Program includes online submission of the application, official transcripts, and an application fee; see <http://www.ccsu.edu/grad/admission/>. In addition, submit a current resume. Instructions for uploading the resume will be found within the online graduate application.

International students should review specific admission requirements at <http://www.ccsu.edu/grad/admission/international.html>

#### CERTIFICATE REQUIREMENTS (12 CREDITS)

##### Required Courses (12 Credits)

AC 501	Financial Reporting I	3
AC 502	Introduction to Individual and Corporate Taxation	3
AC 503	Financial Reporting II	3
AC 504	Auditing and Internal Controls	3

##### Addition Requirement (3 Credits)

AC 500 - Introduction to Financial and Managerial Accounting or AC 211 (Introduction to Financial Accounting) and AC 212 (Introduction to Managerial Accounting) or equivalent.

**Total Credit Hours: 12**

### OFFICIAL CERTIFICATE PROGRAM IN ACCOUNTING ANALYTICS

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Central Connecticut State University is offering a timely program designed for today's business professionals. This graduate-level certificate is intended for individuals currently in the workforce or students looking to develop their accounting skills needed to work with "big data." Businesses desire these skills to identify valuable financial insights, increase efficiency, and better manage risk. The program focuses on developing working professionals' skills required to succeed and advance in the competitive accounting industry.

#### Admission Requirements

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education (or international equivalent) with an overall undergraduate GPA of 2.70 or higher. No GMAT or GRE is required.

Applicants with a GPA lower than 2.70 will be considered for conditional admission.

Application to the Official Certificate Program in Accounting Analytics includes online submission of the application, official transcripts, and an application fee; visit <http://www.ccsu.edu/grad/admission/>. In addition, applicants must submit a current resume. Instructions for uploading the resume are found within the online graduate application.

### International Students

In addition to the above requirements, international applicants must meet University standards for international admission, including submission of:

- TOEFL or IELTS scores - unless waived by the University;
- Course-by-course evaluation of foreign credentials from a NACES member evaluation service; and
- Original translations of foreign academic records.

### CERTIFICATE REQUIREMENTS (12 CREDITS)

#### Core Required Courses (6 Credits)

BUS 538	Business Quantitative Analytics	3
AC 543	Advanced Accounting Analytics	3
AC 582	Capstone Seminar	0

#### 6 Credits of Advisor Approved Electives

AC 520	Managerial Analysis & Cost Control	3
AC 545	Advanced Assurance Services	3
AC 548	Contemporary Accounting Topics	3

**Total Credit Hours: 12**

### OFFICIAL CERTIFICATE PROGRAM IN ADDITIVE MANUFACTURING ENGINEERING

The Official Certificate Program in Additive Manufacturing Engineering at CCSU has the following objectives:

1. To provide students in-depth understanding and expertise in the analysis of products manufactured via additive processes.
2. To graduate students who are successful contributors to addressing the current and future challenges facing the society, while adhering to the highest moral and ethical standards.

The Official Certificate Program in Additive Manufacturing Engineering at CCSU has the following learning outcomes:

1. Ability to use computational methods, skills, computers and modern technical tools to problems in additive manufacturing.
2. Ability to identify, formulate and solve technical problems in additive manufacturing using engineering analysis.
3. Ability to design an optimized component to meet desired needs, and to evaluate and modify the optimal design based on thorough knowledge of additive manufacturing capabilities.
4. Knowledge of contemporary issues and understanding the impact of engineering/ technical solutions within a global perspective.
5. Ability to communicate effectively in oral, written, visual and graphical modes.

#### Admission Requirements: Official Certificate Program in Additive Manufacturing Engineering

Applicants meeting the Graduate School admissions standards will be considered for acceptance to the Official Certificate Program in Additive Manufacturing Engineering provided they meet the additional acceptance criteria in Section I and II A & B.

**I)** All applicants must have a minimum undergraduate GPA of 3.00 on a 4-point scale (where A is 4.00), or equivalent. Applicants with a cumulative undergraduate GPA of 2.70 - 2.99 may be considered for conditional admission.

**II)** Undergraduate degree:

**A)** Applicants must hold a four-year Bachelor of Science degree with a major in Mechanical Engineering from an ABET accredited program; or

**B)** Applicants that hold a four-year Bachelor of science degree in a different Engineering specialty must complete the necessary pre-requisite foundation courses, or their equivalents as specified by the Engineering department after credential are assessed. Applicants needing three or fewer foundational courses will be considered for conditional admission. All necessary foundation courses would be specified by the department after credentials are assessed.

Foundation course subjects include: Mathematics, Chemistry, Physics, Engineering Materials, and Mechanical Engineering core courses.

Applications to the Certificate in Additive Manufacturing Engineering includes online submission of the application, official transcripts, and an application fee; see <http://www.ccsu.edu/grad/admission/>. Although not

required, applicants may choose to submit a resume with the application. Instructions for uploading the resume will be found in the online applications.

Applications must be submitted by the fall and spring general deadlines.

### REQUIRED COURSES (12 CREDITS)

#### Core Courses

ENGR 510	Engineering Optimization	3
ME 525	Materials Engineering of Additive Manufacturing	3
ME 545	Design and Analysis of Additive Manufacturing	3
ME 563	Engineering of Additive Manufacturing Processes	3

All of these courses may be applied to the MS in Mechanical Engineering.

**Total Credit Hours: 12**

### OFFICIAL CERTIFICATE PROGRAM IN ADVANCED DETECTIVE

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Designed for professionals involved in crime scene investigation and command situations at critical events. Program covers theory and practice of investigation using modern technology and best practices. Graduates will learn fundamental principles and methods to improve work processes. Courses from the Certificate Program can be applied toward the M.S. in Criminal Justice.

Applicants to the Advanced Detective Certificate Program must have a BA/BS from an accredited university and the Basic Detective Certification completed. In lieu of Basic Detective Certification, applicants or current graduate students who can demonstrate relevance of the curriculum to their career/profession may be considered for acceptance. Interested applicants should contact the Program Coordinator. Priority will be given to applicants who have completed the Basic Detective Certification. Upon Successful completion of the Advanced Detective Certificate Program, students can apply for admission into the Master's Degree in Criminal Justice.

Applicants to the Advanced Detective Certificate Program must hold a bachelor's degree from a regionally accredited institution of higher learning. In addition to the standard University graduate admission requirements, the department requires:

1. A minimum grade point average (GPA) of 3.00 on a 4.00 scale. Applicants may also be considered conditionally with a 2.50 to 2.99 GPA.

2. Completion of the Basic Detective Certification. In lieu of Basic Detective Certification, applicants or current graduate students who can demonstrate relevance of the curriculum to their career/profession may be considered for acceptance. Interested applicants should contact the Program Coordinator. Priority will be given to applicants who have completed the Basic Detective Certification.

Upon successful completion of the Advanced Detective Certificate Program, students can apply for admission into the Master's Degree in Criminal Justice Program. Applicants who want to matriculate in both the MS in Criminal Justice and this OCP should apply to the MS, then add the OCP for dual enrollment.

### CERTIFICATE REQUIREMENTS (12 CREDITS)

#### Program Electives (choose 4)

CRM 480	Death Investigations	3
CJ 581	Sexual Assault Investigation	3
CJ 582	Police Involved Shootings & Crime Scene Investigations	3
CJ 583	Interview & Interrogation	3
CJ 584	Expectation of Privacy	3
CJ 585	Financial Crime Investigation	3
CJ 589/CRM 489	Special Topics in Investigations	1-3

Completion of 4 courses (12 credits) within the Advanced Detective Certificate Program with a 3.0 or better. Any four courses can be taken in any sequence in order to complete the program requirement.

**Total Credit Hours: 12**

### OFFICIAL CERTIFICATE PROGRAM IN ADVANCED MANUFACTURING ENGINEERING

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The **Official** Certificate Program in Advanced Manufacturing Engineering at CCSU has the following objectives:

1. To provide students in-depth understanding and expertise in the analysis advanced manufacturing systems and processes.
2. To graduate students who are successful contributors to addressing the current and future challenges facing the society, while adhering to the highest moral and ethical standards.

The Official Certificate Program in Advanced Manufacturing Engineering at CCSU has the following learning outcomes:



1. Ability to use computational methods, skills, computers and modern technical tools to problems in advanced manufacturing.
2. Ability to identify, formulate and solve technical problems in advanced manufacturing using engineering analysis.
3. Ability to design optimized manufacturing systems and plans using advanced statistical methods.
4. Knowledge of contemporary issues and understanding the impact of engineering/ technical solutions within a global perspective.
5. Ability to communicate effectively in oral, written, visual and graphical modes.

#### Admission Requirements

Applicants meeting the Graduate School admissions standards will be considered for acceptance to the Official Certificate Program in Additive Manufacturing Engineering provided they meet the additional acceptance criteria in Section I and II A & B.

**I)** All applicants must have a minimum undergraduate GPS of 3.00 on a 4-point scale (where A is 4.00), or its equivalent. Applicants with a cumulative undergraduate GPA of 2.70-2.99 may be considered for conditional admission.

**II)** Undergraduate degree:

**A)** Applicants must hold a four-year Bachelor of Science degree with a major in Mechanical Engineering from an ABET accredited program; or

**B)** Applicants that hold a four-year Bachelor of Science degree in a different Engineering specialty must complete the necessary pre-requisite foundation courses, or their equivalents as specified by the Engineering department after credentials are assessed. Applicants needing three or fewer foundational courses will be considered for conditional admission. All necessary foundation courses would be specified by the department after credentials are assessed.

Foundation course subjects include Mathematics, Chemistry, Physics, Engineering Materials, and Mechanical Engineering core courses.

Application to the Certificate in Advanced Manufacturing Engineering includes online submission of the application, official transcripts, and an application fee; see <http://www.ccsu.edu/grad/admission/>. Although not required, applicants may choose to submit a resume with

the application. Instructions for uploading the resume will be found in the online application.

#### REQUIRED COURSES (12 CREDITS)

##### Core Courses (9 Credits)

- ME 540 – Advanced Geometric Dimensioning and Tolerancing (GD&T) and Metrology
- ME 563 – Engineering of Additive Manufacturing Processes
- ME 565 – Advanced Manufacturing Engineering

##### Elective Course (3 Credits)

ENGR 510 – Optimization in Engineering or ME 567 – Advanced Finite Element Analysis

**Total Credit Hours: 12**

#### OFFICIAL CERTIFICATE PROGRAM IN BUSINESS ANALYTICS

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Central Connecticut State University is offering a timely program designed for today's business professionals. This graduate-level certificate is intended for individuals currently in the workforce or students looking to develop their understanding of how business analytics improves the decision-making process. This certificate program is designed to help individual skills on data analyzing, identify insights, and improve the ability of making data driven predictions for future which would be an essential skill set for any level managers.

#### Admission Requirements

Applicants must hold a bachelors degree from a regionally accredited institution of higher education (or the international equivalent) with an overall undergraduate GPA of at least 2.70 or higher. No GMAT is required. Applicants with a GPA < 2.70 will be considered for conditional admission.

Application to the Official Certificate Program in Business Analytics includes online submission of the application, official transcripts, and an application fee; see <http://www.ccsu.edu/grad/admission/>. In addition, applicants must submit a current resume. Instructions for uploading the resume will be found within the online graduate application.

**International Students**

In addition to the above, international applicants must meet University standards for international admission including submission of:

- Unless waived by the University, TOEFL or IELTS scores;
- Course-by-course evaluation of foreign credentials from a NACES member evaluation service; and,
- Original translations of foreign academic record.

**OFFICIAL CERTIFICATE PROGRAM IN BUSINESS ANALYTICS****Core Required Courses**

BUS 538	Business Quantitative Analytics	3
BUS 540	Business Intelligence and Analytics	3

**Electives**

BUS 542	Web Analytics	3
BUS 544	Business Process Modeling	3
BUS 546	Applications of Business Analytics	3
BUS 548	Business Decision Models	3

Pick two courses (6 credits) from the electives.

**Total Credit Hours: 12**

**OFFICIAL CERTIFICATE PROGRAM IN BUSINESS LEADERSHIP****Admission Requirements****Program Description**

Central Connecticut State University is offering a timely program designed for today's business professionals. This graduate-level certificate is intended for emerging leaders, supervisors, and managers of all levels. Both experienced and inexperienced managers and supervisors will gain a comprehensive perspective from this program. The program focuses on developing the skills required to progress into competent business leaders.

**Academic Rationale**

This program will provide a rigorous certificate that can be paired with a bachelors or as an add-on to an existing business specialization in the **MBA**.

**Demand Rationale**

This program has been requested by local organizations (e.g., COCC) so they can develop business leaders from their current employees.

**Admission Requirements**

Applicants must hold a bachelors degree from a regionally accredited institution of higher education (or the international equivalent) with an overall undergraduate GPA of at least 2.70 or higher. No GMAT is required. Applicants with a GPA between 2.40 and 2.69 may be considered for conditional admission.

**Application to the Certificate Program in Business Leadership includes online submission of the application, official transcripts, and an application fee; see**

**<http://www.ccsu.edu/grad/admission/>. In addition, submit a current resume. Instructions for uploading the resume will be found within the online graduate application.**

*International Students*

In addition to the above, international applicants must meet University standards for international admission including submission of:

- Unless waived by the University , TOEFL or IELTS scores;
- Course-by-course evaluation of foreign credentials from a NACES member evaluation service;and
- Original translations of foreign academic record.

**OCP REQUIREMENTS (12 CREDITS)****Core Required Courses (6 Credits)**

AC 531	Accounting Information for Decision Making	3
MGT 531	Managing and Leading in the Contemporary Organization	3

**6 Credits of Advisor Approved Electives**

BUS 598	Special Topics in Business	3
LAW 550	Advanced Business Law & Ethical Leadership	3
MGT 556	Strategic Leadership	3

MIS 531 Strategic IT Alignment 3

**Total Credit Hours: 12**

## **OFFICIAL CERTIFICATE PROGRAM IN COMMERCIAL LENDING**

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Central Connecticut State University is offering a timely program designed for today's credit analysts and lenders. This graduate-level certificate is intended for business and commercial lending professionals of all levels. Both experienced and inexperienced lenders will gain a comprehensive perspective through this program. The design of the certificate program is well-suited to financial institutions' need for developing employees who are skilled in the technical aspects of business and commercial lending and have a well-rounded knowledge of how financial institutions work. In the commercial lending specialization courses, students will learn the analytical skills and decision-making techniques to recognize opportunities for successful commercial lending.

### **Admission requirements are pending approval of Faculty Senate:**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education (or the international equivalent) with an overall undergraduate GPA of at least 2.70 or higher. No GMAT is required. Applicants with a GPA between 2.40 and 2.69 may be considered for conditional admission.

### **OCP REQUIREMENTS (12 CREDITS)**

#### **Core Required Courses (9 Credits)**

FIN 531	Corporate Finance	3
FIN 540/AC 544	Financial Statement Analysis and Valuation	3
FIN 560	Commercial Lending	3

#### **3 Credits of Advisor Approved Electives**

FIN 550	Money, Capital Markets and Banking	3
FIN 590	Finance Seminar	3

**Total Credit Hours: 12**

## **OFFICIAL CERTIFICATE PROGRAM IN CONSTRUCTION MANAGEMENT**

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Participants must successfully complete the following courses (12 credits): CM 435, CM 500 or CM 505, CM 515, CM 575. Up to 12 credits may be applied to the MS in Construction Management (provided the six-year time limit for the master's is met).

### **Admissions Requirements:**

The application for admission to graduate study requires:

- Completion of a bachelor's degree from a regionally accredited institution of higher education.
- A minimum cumulative undergraduate GPA of 2.70 on a 4.00 scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work is required.

As part of the application and admission process, the applicant must request that official undergraduate and graduate transcripts be submitted from every institution attended except Central Connecticut State University. The admission application and official transcripts must be submitted to the Graduate Recruitment and Admissions Office.

## **OFFICIAL CERTIFICATE PROGRAM IN CRIMINAL JUSTICE LEADERSHIP**

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This certificate is designed for criminal justice professionals currently working in the field. The program covers relevant theory and practice relating to criminal justice leadership, including the interpretation and evaluation of research, management of criminal justice employees, development of criminal justice organizations, and implementation of program policy. Graduates will learn the fundamental principles and methods needed to effectively lead in criminal justice and related organizations. Courses from the Certificate Program can be applied towards the M.A. in Criminal Justice Administration.

### **Admissions Requirements**

Applicants to the Official Certificate Program in Criminal Justice Leadership must have a BA/BS from an accredited institution of higher education, at least 3 years of work experience in Criminal Justice or a related field, and an overall GPA of 2.7 or better. Applicants who do not meet the minimum GPA requirements may be considered, at the discretion of the Department, for admission with additional documentation speaking to their experience in the field and potential for success in the program.

ANTH 450 Archaeological Field School 3 TO  
6  
or

**CERTIFICATE REQUIREMENTS (12 CREDITS)**

**Required Course (3 credits)**

CJ 571 Applied Research and Data Interpretation 3

**Program Electives (9 credits)**

CJ 573 Managing Criminal Justice Employees 3  
CJ 574 Effective Criminal Justice Leadership 3  
CJ 575 Developing Criminal Justice Organizations 3  
CJ 580 Criminal Justice Policy Implementation and Effectiveness 3

Students may choose from these courses.

**Total Credit Hours: 12**

**OFFICIAL CERTIFICATE PROGRAM IN CULTURAL RESOURCE MANAGEMENT**

This non-degree Graduate Certificate program in Cultural Resource Management, is offered jointly through the Departments of History and Anthropology/Geography/Tourism. It is designed to provide professional skills and knowledge to students interested in cultural heritage and gaining direct and swift access to a career by filling critical workforce needs in the Northeast. Students can pair the certificate with the MA in Public History, in consultation with a program advisor, with a specialization in either Archeology, Architectural History/Historic Preservation, or Planning. Students who already possess an Master’s degree in Archaeology or History, or hope to pursue a Master’s can earn this certificate independently. Courses completed as part of this certificate program may later be applied to the department's Public History MA program.

Required Courses for Graduate Certificate (12 credits)\*  
The Graduate Certificate can be earned in tandem with the Public History MA or independently, if a student already possesses an MA in a related field.

**CERTIFICATE REQUIREMENTS (12 CREDITS)**

**Core (9 credits)**

HIST 511 Topics in Public History 3  
GEOG 501 Geographic Information Systems: Basics and Beyond 3  
or  
DES 504 Graphic/Information Design Practice II 3

The topic of HIST 511 rotates. All students seeking this certificate are required to take this course with the topic of "Historic Preservation Planning and Cultural Resource Management"

All students must take either GEOG 578 or DES 504.

Students seeking the specialization in either History/Architectural History or in Planning are required to take HIST 521

Students seeking the specialization in Archaeology are required to take ANTH 450.

Students not seeking a specialization must select either ANTH 450 or HIST 521

**Electives (3 Credits)**

In consultation with your advisor, select 3 credits of electives from the courses below depending on the specialization desired. Students not pursuing a specialization may choose 3 credits of elective courses from the General Electives list.

**History/Architectural History Specialization**

ART 509 Advanced Studies in Art History 3  
HIST 495 Advanced Topics in History 3  
HIST 504 American Material Culture 3  
HIST 505 Local History and Community Development 3

The topic of HIST 495 rotates. Consult with your advisor to determine if the topic of will qualify for credit towards this specialization.

**Planning Specialization**

ART 509 Advanced Studies in Art History 3  
GEOG 445 Environmental Planning 3  
GEOG 458 Cultural Heritage Tourism 3  
GEOG 464 GIS Applications in Resource Assessment 3  
GEOG 466 Advanced Remote Sensing 3  
GEOG 468 GIS Applications in Urban Planning 3  
GEOG 514 Studies in Systematic Geography 3  
GEOG 518 Studies in Geographical Techniques 3

The topic of GEOG 514 rotates. To earn credit for this specialization, the topic should be "Issues in Environmental Protection "

The topic of GEOG 518 rotates. To earn credit for this specialization, the topic should be "Cultural Heritage Tourism"

**Archaeology Specialization**

GEOG 516	Studies in Regional Geography	3
HIST 504	American Material Culture	3
HIST 560	Seminar in American History	3

The topic of GEOG 516 rotates. To earn credit for this specialization, the topic should be either "New England Archaeology" or "African Diaspora Archaeology"

The topic of HIST 560 rotates. To earn credit for this specialization, the topic should be "Native American History"

**General Electives**

ANTH 450	Archaeological Field School	3 TO 6
ART 509	Advanced Studies in Art History	3
DES 504	Graphic/Information Design Practice II	3
DES 565	Advanced Topics In Graphic Information Design	3
GEOG 445	Environmental Planning	3
GEOG 464	GIS Applications in Resource Assessment	3
GEOG 466	Advanced Remote Sensing	3
GEOG 468	GIS Applications in Urban Planning	3
GEOG 514	Studies in Systematic Geography	3
GEOG 518	Studies in Geographical Techniques	3
GEOG 578	Advanced GIS and Mapping	3
HIST 504	American Material Culture	3
HIST 505	Local History and Community Development	3
HIST 560	Seminar in American History	3
WRT 403	Technical Writing	3

The topic of GEOG 514 rotates and must be "Issues in Environmental Protection" to earn credit for this certificate.

**Total Credit Hours: 12**

**OFFICIAL CERTIFICATE PROGRAM IN DATA SCIENCE**

**Program Rationale:**

This program is designed for the person who loves data and wants to learn how to uncover actionable results from large data sets, using a data scientific framework. Starting with the first course, students will learn data science by applying it on real-world, large data sets, gaining expertise in state-of-the-art data modeling

methodologies, so as to prepare them for information-age careers in data science, analytics, data mining, statistics, and actuarial science.

**Program Learning Outcomes:**

Students in the program will be expected to:

Apply data science using a systematic process, by implementing an adaptive, iterative, and phased framework to the process, including the research understanding phase, the data understanding phase, the exploratory data analysis phase, the modeling phase, the evaluation phase, and the deployment phase;

Evaluate the true consequences of making false positive or false negative decisions.

Demonstrate proficiency with leading open-source analytics coding software such as R and Python, as well as commercial platforms;

Understand and apply a wide range of clustering, estimation, prediction, and classification algorithms including k-means clustering, Kohonen clustering, classification and regression trees, logistic regression, k-nearest neighbor, multiple regression, and neural networks; and

Learn more specialized techniques in bioinformatics, text analytics, algorithms, and other current issues.

**Admission Requirements:**

Students must (1) hold a Bachelor's degree from a regionally accredited institution of higher education, and (2) have a grade of B or better in two applied statistics courses (such as CCSU's STAT 200/STAT 201, or STAT 104/STAT 453, or STAT 215/STAT 216).

A minimum undergraduate GPA of 3.00 on a 4.00 scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work is required. Conditional admission may be granted to candidates with undergraduate GPAs as low as 2.40.

In addition to the materials required by the School of Graduate Studies, the following are required:

- A formal application essay of 500-1000 words that focuses on (1) academic and work history, and (2) reasons for pursuing the Official Certificate in Data Science, and (3) specify whether and how the stat course prerequisite was met. The essay will also be used to demonstrate a command of the English language.

- One letter of recommendation, either from the academic or work environment.

The application and all transcripts should be sent to the Graduate Admissions Office.

Instructions for uploading the essay and submitting the recommendation letters will be found within the graduate online application.

Total Credit Hours: 20

## COURSE REQUIREMENTS

### Required Courses

DATA 511	Introduction to Data Science	4
DATA 512	Predictive Analytics: Estimation and Clustering	4
DATA 513	Predictive Analytics: Classification	4
<b>Choose two electives from:</b>		
DATA 514	Multivariate Analytics	4
DATA 521	Introduction to Bioinformatics	4
DATA 522	Mining Gene and Protein Expression Data	4
DATA 525	Biomarker Discovery	4
DATA 531	Text Analytics with Information Retrieval	4
DATA 532	Text Analytics with Natural Language Processing	4
DATA 541	Advanced Estimation Methods	4
DATA 542	Advanced Clustering Methods	4
DATA 543	Advanced Classification Methods	4
DATA 551	Predictive Modeling for Insurance Data	4
DATA 565	Web Data Science	4
CS 508	Distributed Computing	3
CS 570	Topics in Artificial Intelligence	3
CS 580	Topics in Database Systems and Applications	3

Other graduate-level data science or statistics course(s) may be selected, with approval of program coordinator.

**Total Credit Hours: 20-22**

More information can be found at:  
<http://web.ccsu.edu/datamining/>

## OFFICIAL CERTIFICATE PROGRAM IN ENVIRONMENTAL HEALTH AND OCCUPATIONAL SAFETY

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Participants must successfully complete the following courses (12 credits): TM 414, TM 456, TM 511, TM 512; nine credits of which may be applied as electives to the

M.S. in Technology Management (provided six-year time limit for the master's is met).

### Admission Requirements:

### The application for admission to graduate study requires:

- Completion of a bachelor's degree from a regionally accredited institution of higher education.
- A minimum cumulative undergraduate GPA of 2.70 on a 4.00 scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work is required.

As part of the application and admission process, the applicant must request that official undergraduate and graduate transcripts be submitted from every institution attended except Central Connecticut State University. The admission application and official transcripts must be submitted to the Graduate Recruitment and Admissions Office.

## OFFICIAL CERTIFICATE PROGRAM IN FORENSIC COUNSELING

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This certificate is designed for criminal justice professionals currently working in the field. The program covers relevant theory and practice relating to forensic counseling, including instruction on offender counseling, risk assessment, offender profiling, and delinquency intervention. Courses from the Certificate Program can be applied towards the M.A. in Criminal Justice Administration.

### Admissions Requirements

Applicants to the Official Certificate Program in Forensic Counseling must have a BA/BS from an accredited institution of higher education, at least 3 years of work experience in Criminal Justice or a related field, and an overall GPA of 2.7 or better. Applicants who do not meet the minimum GPA requirements may be considered, at the discretion of the Department, for admission with additional documentation speaking to their experience in the field and potential for success in the program.

**CERTIFICATE REQUIREMENTS (12 CREDITS)****Program Electives**

CJ 530	Offender Profiles	3
CJ 535	Forensic Counseling	3
CJ 539	Delinquency: Causation and Intervention	3
CJ 560	Sexual Offending	3
CJ 561	Risk Assessment	3
CJ 578	Special Topics in Criminal Justice	3

Students must choose from the courses listed.

**Total Credit Hours: 12**

**OFFICIAL CERTIFICATE PROGRAM IN LEAN MANUFACTURING AND SIX SIGMA**

Participants must successfully complete the following courses (12 credits): TM 464, TM 490, TM 510, TM 561. Up to 12 credits may be applied to the M.S. in Technology Management (provided the six-year time limit for the master's is met).

**Admission Requirements:****The application for admission to graduate study requires:**

- Completion of a bachelor's degree from a regionally accredited institution of higher education.
- A minimum cumulative undergraduate GPA of 2.70 on a 4.00 scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work is required.

As part of the application and admission process, the applicant must request that official undergraduate and graduate transcripts be submitted from every institution attended except Central Connecticut State University. The admission application and official transcripts must be submitted to the Graduate Recruitment and Admissions Office.

**OFFICIAL CERTIFICATE PROGRAM IN LITERACY STUDIES IN CULTURALLY SUSTAINING AND COMPASSIONATE PEDAGOGIES**

The certificate scaffolds teachers towards an understanding of why culturally sustaining and compassionate educational practices are essential in today's classrooms and how to integrate them with current classroom practices. This graduate certificate offers teachers the tools necessary to create a compassionate and culturally relevant practice. The enrolled students will (1) analyze the connection between language, power, social position, and privilege; (2) employ compassionate conversations to develop culturally sustaining pedagogies; (3) integrate critical literacy practices with classroom instruction; and (4) foster civic action committed to equity and justice.

**REQUIRED COURSES****Choose four courses from this list**

LLA 515	Literacy Instruction for the English Learners	3
LLA 521	Literacy Instruction for Diverse Populations	3
LLA 523	Social Emotional Learning Through Literacy Instruction	3
LLA 525	Creative Language Arts	3
LLA 603	Teaching Multicultural Literature in the Classroom	3
LLA 517	Introduction to Critical Literacy	3
	or	
LLA 617	Critical Literacy in Practice	3

**Total Credit Hours: 12**

**OFFICIAL CERTIFICATE PROGRAM IN NURSING HOSPICE & PALLIATIVE CARE, ADVANCED**

The Certificate of Hospice and Palliative Care is a component of the MSN program in Hospice and Palliative Care. This certificate will provide 12 credits of nursing courses to enhance the knowledge base of graduate level advanced practice prepared nurses (APRNs) who deliver direct care, participate on interdisciplinary care teams, and/or have oversight of the care delivered by direct care nurses/teams for end-of-life and palliative care patients and their support person(s).

**Admission Requirements:**

Applicants must hold a bachelor's degree (BSN in Nursing preferred) from a regionally accredited institution of higher education and have their RN license. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and

good standing (3.00 GPA) in all post-baccalaureate course work.

Applicants who do not meet regular admissions standards but have an undergraduate GPA between 2.50 and 2.69 may be considered for conditional admission.

### **The Application Process:**

Applicants must submit the following to the Graduate Recruitment & Admissions Office:

1. Online graduate application
2. Application fee
3. Official transcripts from all institutions where undergraduate and graduate work has been done
4. A narrative statement describing the applicant's professional goals, as well as any educational or professional experiences that may assist the department's admission committee in reviewing the application
5. Contact information for two references, one from an academic/professional source and one from a nursing employer who can specify length of time and direct responsibilities of the applicant in an RN nursing position.
6. Applicant must have a grade of C+ or higher in and undergraduate statistics course.

Instructions for submitting the narrative and references can be found within the online graduate application.

Application deadline for the fall term is August 1.

### **CERTIFICATE REQUIREMENTS (12 CREDITS)**

#### **Required Course (3 credits)**

NRSE 501	Theory of Hospice & Palliative Care	3
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#### **Directed Electives (9 credits from the courses listed below)**

NRSE 502	Global Policy and Ethical Issues in Hospice & Palliative Care	3
NRSE 503	Nursing Leadership, Management, and Inter-Professional Collaboration	3
NRSE 504	Emerging Best Practices and Research in Hospice & Palliative Care	3
NRSE 505	Comparative Domestic Delivery	3

Systems and Informatics

**Total Credit Hours: 12**

### **OFFICIAL CERTIFICATE PROGRAM IN PRE-HEALTH STUDIES**

A Pre-Health Professional Advisory Committee is available to assist students interested in preparing for careers in medicine, dentistry, veterinary medicine, optometry and related fields in the health sciences for which undergraduate training is required prior to admission to other institutions. The Pre-Health Professional Advisory Committee consists of faculty members from the departments of Biology, Biomolecular Sciences, Chemistry and Biochemistry, Physics, and Psychology.

Students interested in pre-health Professional Programs should consult Dr. Peter Osei, program coordinator for the health professions, Department of Biology, NC 339 (860-832-2657), and Dr. Cheryl Watson, chair of the Pre-Health Professional Advisory Committee, Department of Biomolecular Sciences, NC 344 (860-832-2649).

### **Program Overview**

This non-degree certificate program is designed for college graduates whose undergraduate background does not meet the requirements for admission to professional schools of medicine, dentistry, veterinary medicine, etc. This rigorous program provides post-baccalaureate students a formal option to matriculate into a program with the foundation courses and the advisement they need to prepare for applying to professional training schools.

### **Admission Requirements**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work. Applicants should follow the procedures of the Graduate Recruitment and Admissions Office described at <http://www.ccsu.edu/grad/>. Applicants who do not meet the GPA standards may be considered for Conditional Admission; see <http://www.ccsu.edu/grad/admission/conditional.html> for more information.

### **Additional Materials Required:**



Applicants must also submit a narrative statement (about 500 words) describing their academic and career goals, and their reasons for entering this post-baccalaureate program.

Instructions for uploading the statement will be found within the graduate online catalog.

For Fall matriculation, applications should be received by the priority deadline of April 1, but must be received by the University deadline. For Spring matriculation, applications should be received by the priority deadline of October 1, but must be received by the University deadline. Note that applications completed by the priority deadlines can lead to admission before the early course registration period; this can give newly admitted students significant advantages in enrolling in high-demand undergraduate courses.

Post baccalaureate certificate students are classified as graduate students; they may be either part-time or full-time and may qualify for financial aid. Only students matriculated as full-time may take nine or more credits a semester. Part-time and nonmatriculated students are limited to less than nine credits/semester.

**PROGRAM REQUIREMENTS**

While each student’s academic program will be tailored to meet the individual’s specific academic needs and professional goals, a model program that would be appropriate for a student with a minimal science background is shown below. This model program also illustrates the 45-credit upper limit for this certificate program. Smaller academic programs may be possible for students with some science background, with a lower limit of 26 credits. All individual programs must be designed and approved in consultation with the Pre-PAC advisory committee at the admission interview. A maximum of 9 credits in the planned program may be transferred to CCSU.

**Model Program**

Life Science (21 credits), including:

BIO 122	General Biology II	4
BMS 201	Principles of Cell and Molecular Biology	4
BMS 306	Genetics	3
	or	
BMS 307	Genomics	4
BMS 316	Microbiology	4
BIO	Anatomy and Physiology I	4
318/BMS		

318		
BIO 591	Independent Research Project in Advanced Biology	1 TO 4
	or	
BMS 591	Independent Research Project in Biomolecular Sciences	1-4
CHEM 161	General Chemistry	3
CHEM 162	General Chemistry Laboratory	1
CHEM 200	Foundations of Analytical Chemistry	3
	and	
CHEM 201	Foundations of Analytical Chemistry Laboratory	1
CHEM 260	Foundations of Inorganic Chemistry	3
	and	
CHEM 201	Foundations of Analytical Chemistry Laboratory	1
CHEM 210	Organic Chemistry I - Foundations	3
	and	
CHEM 211	Organic Chemistry I Laboratory - Foundations	1
CHEM 212	Organic Synthesis	3
CHEM 213	Organic Chemistry II Laboratory - Synthesis	1
CHEM 354	Foundations of Biochemistry	3
	<b>Subtotal: 26-45</b>	

**Physics including:**

PHYS 121	General Physics I	4
	or	
PHYS 125	University Physics I	4
PHYS 122	General Physics II	4
	or	
PHYS 126	University Physics II	4
	<b>Subtotal: 8</b>	

Students must maintain a 3.00 (B) cumulative grade point average in order to be in good academic standing and to receive the post-baccalaureate certificate. Upon completion of the planned certificate program, a certificate will be issued from the School of Graduate Studies. (While completion of this program does not lead to a graduate degree, courses at the 400 level or above that are taken as part of this program may be counted toward a master’s degree upon the approval of a program advisor, provided that the graduate-syllabus option is

elected at the time of course registration in 400-level courses.)

## **OFFICIAL CERTIFICATE PROGRAM IN PUBLIC RELATIONS/PROMOTIONS**

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This non-degree certificate program, offered by the Department of Communication, is designed for college graduates wishing to expand or update their knowledge of public relations/promotions, but who are not ready to commit to graduate programs leading to a master's degree. The program provides students with a formal option for post-baccalaureate studies. Courses completed as part of this certificate program may later be applied to the department's master program if admission requirements for that program are successfully met and if courses meet the School of Graduate Studies policy for a six-year time limit.

### **Program Requirements**

The Post-Baccalaureate Certificate Program in Public Relations/Promotions will require the student to complete a four-course, 12-credit sequence from any of the following courses: COMM 504 Campaign Monitoring & Evaluation, COMM 505 Persuasive Communication, COMM 506 Case Studies in Public Relations, COMM 507 Campaign Planning, COMM 508 Public Relations Writing Strategies, and/or COMM 539 Advanced Public Relations and Social Media. One other course from the department's master's degree program in communication (e.g., COMM 500) can be substituted for one of the four required courses listed above with permission of the student's academic advisor. More information about these courses can be found at [www.communication.ccsu.edu/grad.htm](http://www.communication.ccsu.edu/grad.htm). The student must achieve a 3.00 (B) GPA in order to receive the post-baccalaureate certificate. Up to 12 credits may be applied to the M.S. in Communication degree.

### **Admission Requirements:**

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education.

Applicants seeking admission must present an undergraduate average of B (3.00). Students with an undergraduate GPA of 2.70 through 2.99, or who have been out of school for five years and possess significant professional experience, may apply to be considered for conditional acceptance. Students who meet the above requirements should submit an Application for Graduate Admission, official transcripts, and an application fee

directly to the Graduate Recruitment and Admissions Office.

### **Additional Materials Required:**

*Applicants must submit a current resume, and a writing sample comprised of 500 to 1,000 words which expresses their goals for graduate study and future professional aspirations. Instructions for uploading these documents will be found within the graduate online application.*

**Total Credit Hours: 12**

## **OFFICIAL CERTIFICATE PROGRAM IN SOFTWARE ENGINEERING**

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### **Program Overview**

This non-degree certificate program is designed for college graduates wishing to expand or update their knowledge of software engineering. This official certificate program provides a core background in software engineering and can also be obtained on the path to the Software Engineering master's degree.

### **Academic rationale**

The Official Certificate Program in Software Engineering prepares students for professional growth in the field of software engineering, including software architecture and design, software construction, software testing and quality assurance, and software maintenance. It focuses on the foundational concepts of the field and emphasizes the practical applications of these concepts.

### **Learning outcomes:**

- Have the ability to solve software engineering problems in a variety of application settings;
- Understand and apply modern software engineering concepts, techniques, practices, and tools;
- Recognize the need for, and have the ability to engage in, continuing professional development; and
- Have the ability to communicate effectively and possess appropriate teamwork skills.

### **Admission requirements:**

- BS in Computer Science degree from a regionally accredited institution of higher education with an undergraduate GPA of 2.70 or higher and a minimum of 3.00 or higher in any post baccalaureate coursework, or

- BS in a related information technology field (with GPA as stated above) with a minimum of six courses of relevant computer science courses (Computer Science 1, Computer Science 2, Data Structures, Computer Architecture, and two advanced computer science electives). May require an extra semester or a summer term to satisfy the expected computer science background by taking CS 501 Foundations of Computer Science and/or CS 502 Computing and Communications Technology as prerequisite courses (not part of the program), or

BS in a STEM field (with GPA as stated above) with a minimum of five courses of relevant mathematics and computer science courses (Calculus I, Calculus II, Discrete Math, Computer Science I, Computer Science II). Will require an extra semester to satisfy the expected computer science background by taking CS 501 Foundations of Computer Science, CS 502 Computing and Communications Technology and CS 464 Programming Languages (not part of the program).

#### Conditional Admissions

An applicant for the Official Certificate Program in Software Engineering program who does not meet regular admission standards in terms of GPA, but has an undergraduate GPA between 2.40 and 2.69 may be considered for conditional admission.

#### Additional Materials Required

Applicants with a BS degree different from Computer Science (see 2 and 3 above) must submit a resume and two letters of recommendation to be used in reviewing their computer science related background. Instructions for submitting the resume and references can be found within the online graduate application.

#### COURSE REQUIREMENTS (12 CREDITS)

##### Core Courses

CS 505	Design Patterns	3
CS 506	Software Testing and Quality Assurance	3
CS 510/CS 410	Fundamentals of Software Engineering	3
CS 530	Advanced Software Engineering	3

**Total Credit Hours: 12**

#### OFFICIAL CERTIFICATE PROGRAM IN SUPPLY CHAIN AND LOGISTICS

Participants must successfully complete the following courses (12 credits): TM 562, TM 563, TM 565, TM 566.

Up to 12 credits may be applied to the M.S. in Technology Management (provided the six-year time limit for the master's is met).

#### Admissions Requirements

The application for admission to graduate study requires:

- Completion of a bachelor's degree from a regionally accredited institution of higher education.
- A minimum cumulative undergraduate GPA of 2.70 on a 4.00 scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work is required.

As part of the application and admission process, the applicant must request that official undergraduate and graduate transcripts be submitted from every institution attended except Central Connecticut State University. The admission application and official transcripts must be submitted to the Graduate Recruitment and Admissions Office.

#### OFFICIAL CERTIFICATE PROGRAM IN TESOL

This non-degree program at the graduate level will provide teaching professionals with an opportunity for professional development and to collect courses toward cross-endorsement in TESOL on an existing State teacher certificate. It also affords candidates who are interested in establishing a foundation in TESOL without going through a rigorous Master's program an opportunity to do so. This program does not grant State of Connecticut ESOL Teacher Certification (contact the Certification Office at the State Department of Education for information about this).

#### Admission Requirements:

The application for admission to graduate study requires:

- Completion of a bachelor's degree from a regionally accredited institution of higher education.
- A minimum cumulative undergraduate GPA of 2.70 on a 4.00 scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work is required.

As part of the application and admission process, the applicant must request that official undergraduate and graduate transcripts be submitted from every institution attended except Central Connecticut State University. The admission application and official transcripts must be submitted to the Graduate Recruitment and Admissions Office.

**CERTIFICATE REQUIREMENTS**

18 credits

**Required courses (12 credits):**

LING 500/LING 400	Advanced Linguistic Analysis	3
LING 506/LING 496	Methods in TESOL I	3
LING 507/LING 497	Second Language Acquisition Theory	3
LING 596	Methods in TESOL II	3
<b>Students must choose TWO electives from the following:</b>		
LING 512/LING 412	Syntactic Theory	3
LING 513/LING 413	Phonological Theory	3
LING 514/LING 414	Variation and Discourse Theory	3
LING 515/LING 415	Language Policy and Planning Theory	3
LING 530/LING 430	Advanced Topics in Applied Linguistics	3
LING 533	Second Language Composition	3
LING 535/LING 435	Second Language Assessment	3
LING 537/LING 437	Advanced Issues in Multilingualism	3
LING 538/LING 438	Methods in Second Language Content Instruction	3
LING 550/LING 450	Internship	3
RDG 581	Language Arts Instruction for the English Learner	3

**Total Credit Hours: 18****OFFICIAL CERTIFICATE PROGRAM IN  
TRANSITION SPECIALIST**

- The Transition Specialist Official Certificate Program (OCP) is designed to prepare post bachelors professionals and those who already hold a license or certification in Special Education, School Counseling, School Psychology, Social Work, Rehabilitation or general counseling to promote successful post-school employment and/or education outcomes of youth and young adults with disabilities. A certificate in advanced graduate work is issued upon completion of a combination of 16 to 18 credits of selected 500-level courses, with a grade of B or better, designed for the certificate program.

**Admission requirements:**

- Bachelor's degree in Education, Counseling, Social Work, Psychology or related field; or hold a professional license or certification as a Special Education Teacher, School Counselor, School Psychologist, Social Worker, Rehabilitation Counselor or Counselor;
- Two years of experience working in their respective field of special education, school guidance, school psychology, social work, rehabilitation, school psychology, or general counseling;
- A minimum undergraduate GPA of 2.70 (some programs require a 3.00) on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work in required
- Completion of Graduate Online Application process: *Students must formally apply to Graduate Admissions by completing the application form, paying the non-refundable application fee of \$50, and having official transcripts for each course taken sent by each previously attended university (excluding CCSU) directly to Graduate Admissions.* Applications are accepted year round; for application deadlines, see <https://www.ccsu.edu/gradadmissions/program-specific-admission-requirements>

**Additional Materials Required;**

- Two current professional recommendations;

- Written essay describing the applicant's motivation for advanced graduate study, past experience and future professional goals; and
- Interview with program faculty

Instructions for uploading the recommendations and essay will be found within the online graduate application.

Admitted students are required to have taken SPED 315 Introduction of Educating Learners with Exceptionalities, SPED 501 Education of Exceptional Learner (3 credits), or an equivalent course before beginning the program.

**COURSE REQUIREMENTS**

**Requirements List**

SPED 503	Evidence-Based Practices for Diverse Learners	3
SPED 566	Legal and Administrative Issues in Special Education	3
SPED 541	Person-Centered Planning and Transition	3
CNSL 522	Appraisal Procedures in Counseling	3
SPED 527	Internship in Inclusion and/or Transition Services	1-3
CNSL 560	Introduction to Rehabilitation Counseling	3

**Total Credit Hours: 0**

**OFFICIAL CERTIFICATE PROGRAM IN VICTIM'S ADVOCACY**

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This certificate is designed for criminal justice professionals currently working in the field, specifically those who work with victims and in victims' advocacy organizations. The program covers relevant theory and practice relating to victims and their experiences in the Criminal Justice System. Relevant topics covered in the certificate programming include domestic violence, mental health, victimization, women's issues, and hate crimes. Courses from the Certificate Program can be applied towards the M.A. in Criminal Justice Administration. The Victim's Advocacy Certificate requires students to complete 12 credit hours.

**Admissions Requirements**

Applicants to the Official Certificate Program in Victim's Advocacy must have a BA/BS from an accredited institution of higher education, at least 3 years of work experience in Criminal Justice or a related field, and an

overall GPA of 2.7 or better. Applicants who do not meet the minimum GPA requirements may be considered, at the discretion of the Department, for admission with additional documentation speaking to their experience in the field and potential for success in the program.

**CERTIFICATE REQUIREMENTS (12 CREDITS)**

**Program Electives**

Students must choose from the courses listed here:

CJ 531	Women and Criminal Behavior	3
CJ 532	Domestic Violence	3
CJ 537	Mental Health and the Criminal Justice System	3
CJ 538	Victimization & The Criminal Justice System	3
CJ 541	Hate Crimes: Prevention & Advocacy	3
CJ 578	Special Topics in Criminal Justice	3

**Total Credit Hours: 12**

## ADVANCED OFFICIAL CERTIFICATE PROGRAMS

### ADVANCED OFFICIAL CERTIFICATE PROGRAM IN PROFESSIONAL COUNSELING

The Advanced Official Certificate Program (OCP) in Professional Counseling is designed for practicing counselors who already hold a master's degree in counseling or related field and are preparing for state licensure as a Professional Counselor through the State of Connecticut Department of Public Health or national Certification as a Rehabilitation Counselor (CRC). A certificate in advanced graduate work in Professional Counseling is issued upon completion of a combination of up to 30 credits of selected 500-level courses, with a grade of B or better, designed for the certificate program. In addition, the OCP offers an 18-credit Gerontology Counseling specialization track for practicing counselors.

Admission criteria for the Advanced Official Certificate Program in Professional Counseling:

- Bachelor's degree from a regionally accredited institution of higher education and a Master's degree in counseling or related field from a regionally accredited institution of higher education with an minimum graduate cumulative GPA of 3.00 or higher
- Completion of the application process: Students must formally apply to Graduate Admissions by completing the application form, paying the non refundable application fee of \$50 and having official transcripts for each course taken sent by each previously attended University (excluding CCSU) directly to Graduate Admissions
- Three current professional recommendations
- Written essay - description of student's motivation for advanced graduate study, past experience and future professional goals
- Interview with program faculty

Instructions for uploading the recommendations and essay will be found within the online graduate application.

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attended this program.

<https://www.ccsu.edu/oira/consumerInformation.html?id=1492>

**Total Credit Hours: 0**

### ADVANCED OFFICIAL CERTIFICATE PROGRAM IN READING AND LANGUAGE ARTS

This is a non-degree program providing coursework to lead to endorsement as a Reading and Language Arts Consultant in the State of Connecticut. Applicants are expected to have a Master's degree or a Sixth Year Certificate in Reading and Language Arts with a minimum GPA of 3.00 on a 4.00 point scale. Applicants must also have 3 years of teaching experience.

To apply to the Advance Official Certificate Program in Reading and Language Arts, a candidate must submit an application for graduate admission, official transcripts, and application fee to CCSU Graduate Recruitment and Admissions Office.

#### Additional Materials Required:

A candidate must also submit a copy of his/her teaching certificate with the application for graduate admission. Instructions for uploading the certificate will be found within the online graduate application.

#### CERTIFICATE REQUIREMENTS

**The required courses are as follows, for a total of 15 to 27 credits of course work:**

LLA 512	The Pedagogy of Literature PK-12	3
LLA 522	Organization, Administration, and Supervision of Reading & Language Arts Programs	3
LLA 524	Practicum for Reading Specialist/Literacy Coach I	3
LLA 526	Practicum for Reading Specialist/Literacy Coach II	3

#### Required prerequisites:

LLA 514	Diagnosis and Intervention of Reading and Language Arts Difficulties I	3
LLA 516	Diagnosis and Intervention of Reading and Language Arts Difficulties II	3
LLA 518/LLA 618	Clinical Practices in Literacy and Language Arts	6

## ADVANCED OFFICIAL CERTIFICATE PROGRAM IN SCHOOL-BASED MARRIAGE AND FAMILY THERAPY

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**The OCP in School-based Marriage and Family Therapy has been closed; no further students will be admitted to the program.**

The OCP in School-based Marriage and Family Therapy provides a course of study for post-graduate students who wish to complete requirements for a Provisional Educator Certificate in Marriage and Family Therapy through the State of CT Department of Education.

### Admission Requirements:

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education and a master's degree in Marriage and Family Therapy from a regionally accredited institution of higher education with a minimum graduate cumulative GPA of 3.00 on a 4.00 scale.

### DEGREE REQUIREMENTS

#### Required Courses

ED 515	Professional Ethics and Law for Educators and Scholars	3
MFT 592	School-Based Family Counseling	3
MFT 593	School-Based Marriage and Family Therapy Practicum and Seminar I	3
MFT 594	School-Based Marriage and Family Therapy Practicum and Seminar II	3

#### Total Credit Hours: 12

Once courses are completed, students will need to apply for certification with the State Department of Education (SDE). They must provide proof of completing the Praxis I exam or evidence of waiver. They may also be required by the SDE to complete other related courses (e.g. Special Education for the Exceptional Learner and Human Development); these other related courses may be taken at other institutions or as part of their Master's program

## ADVANCED OFFICIAL CERTIFICATE PROGRAM IN SUPERINTENDENT OF SCHOOLS

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15 credits

The program is designed for educational professionals seeking certification as a School District Superintendent (093). The core program consists of three courses on

theory, research, and practice (EDL 681, EDL 682, and EDL 683) and two courses on district level practices (EDL 695 and EDL 696). Candidates complete 15 semester hours as mandated by State Department of Education. Courses to be approved by advisor are dependent on students prior coursework.

### Admission Requirements:

- Bachelor's degree from a regionally accredited institution of higher education and a master's degree from a regionally accredited institution of higher education with a minimum graduate cumulative GPA of 3.00 or higher on a 4.00 scale.
- An established record of successful service in a leadership position that requires the Connecticut Intermediate Administrator Certification (092) for a least three school years
- Program Interview

### Additional Materials Required:

- Copy of 092 certificate
- A brief letter of recommendation from the candidate's current superintendent
- Contact information for two additional professional references
- A personal statement (not to exceed two pages)

Instructions for uploading the 092 certificate, letter of recommendation, contact information for professional references, and personal statement will be found within the online graduate application.

The admissions application, application fee, and official transcripts (except CCSU) are to be submitted to the Graduate Recruitment and Admissions office.

All application materials for admissions must be received by April 15th.





## SIXTH YEAR CERTIFICATE PROGRAMS

### SIXTH-YEAR CERTIFICATE IN EDUCATIONAL LEADERSHIP

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#### Program Rationale:

This program is designed to prepare graduates to serve in administrative roles within public and private school organizations. Successful graduates will be eligible for certification as an intermediate administrator/supervisor. A Concentration in Special Education for graduates interested in pursuing administrative roles in special education administration is also available.

#### Program Learning Outcomes:

Students in the program are expected to:

- understand how learning occurs and how people process information, acquire skills, and develop thoughtful inquiring minds;
- apply change theory to create continuous organizational renewal processes;
- use a variety of approaches to assess student learning, teacher development, parent satisfaction, and organizational effectiveness;
- be able to collaborate with colleagues, parents, and local business and social organizations to create optimum learning environments; and
- understand the legal, ethical, and policy environments of their work as school administrators.

#### Admissions Requirements

Admission to this program is limited and highly competitive. All applications and supporting materials for admission to the program must be received by **March 15th** for the summer, July 1st for the fall, and **November 1st** for spring term.

- Possess a master's degree from a regionally accredited institution of higher education
- Attained a 3.00 minimum post-baccalaureate cumulative grade-point average (GPA) on a four-point scale or its equivalent
- Have a minimum of three years of teaching experience (special education or related pupil services required for applicants pursuing the Concentration in Special Education) and possess, or be eligible for, a

Connecticut teaching certificate (Students who do not hold an educator's certificate issued by the Connecticut State Department of Education must also pass Praxis I)

- Two letters of reference from school administrators
- A formal essay which has two focus points (1) the reasons that led the candidate to the area of school leadership, and (2) future career goals

Group interviews will be held in March/April, July, and November/December. Decisions will be communicated to applicants by the end of the current semester.

Instructions for submitting the letters of reference and uploading the essay and copy of the teaching certificate (if obtained) will be found within the online application.

#### COURSE REQUIREMENTS

The Sixth-Year Certificate in Educational Leadership, including recommendation for certification for the Intermediate Administrator/Supervisor, requires 30 credits.

#### Professional Core

SPED 592	Effective Leadership for Equitable and Inclusive Schools	3
EDL 590	Leaders as Learners: Educational Leadership and Self-Assessment	3
EDL 605	Leadership in Teaching and Learning I	3
EDL 606	Leadership in Teaching and Learning II	3
EDL 610	School Leadership I	3
EDL 611	School Leadership II	3
EDL 620	Educational Policy, Communities, and Pluralistic Governance	3
EDL 630	Education Law, Ethics, and Equity	3
EDL 688	Administration of Programs for Diverse Learners I	1
EDL 689	Administration Programs for Diverse Learners II	1
EDL 690	Internship in Educational Leadership I	2
EDL 691	Internship in Educational Leadership II	2

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**Subtotal: 30**

#### Professional Core: Concentration in Special Education

SPED 592	Effective Leadership for Equitable and Inclusive Schools	3
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EDL 590	Leaders as Learners: Educational Leadership and Self-Assessment	3
SPED 605	Special Education Leadership in Teaching and Learning I	3
EDL 606	Leadership in Teaching and Learning II	3
EDL 610	School Leadership I	3
EDL 611	School Leadership II	3
SPED 620	Collaborative Leadership for Special Education Leaders	3
SPED 630	Special Education Law, Ethics, and Equity	3
EDL 688	Administration of Programs for Diverse Learners I	1
EDL 689	Administration Programs for Diverse Learners II	1
EDL 690	Internship in Educational Leadership I	2
EDL 691	Internship in Educational Leadership II	2

**Subtotal: 30**

**Total Credit Hours: 30**

Note: To receive certification, students must also pass a performance-based examination administered by the State of Connecticut. The State of Connecticut also requires 50 months of teaching experience prior to licensure and completion of a designated course in special education, which may be used as part of the elective requirements.

## **SIXTH-YEAR CERTIFICATE IN READING AND LANGUAGE ARTS**

**Program Rationale:**

The Sixth-Year Certificate in Reading and Language Arts is an advanced degree program with several options for educators. One option includes coursework required for endorsement in Remedial Reading & Remedial Language Arts (#102) and/or endorsement as a Reading and Language Arts Consultant (#097) in the State of Connecticut. Another option is for educators who are not interested in these endorsements.

The candidate's planned program of graduate study is developed by the candidate and the program advisor. Course requirements will be based on the candidate's needs in terms of fulfilling professional and personal goals. A minimum of 15 credits of 600-level courses is required for the Sixth-Year certificate.

**Program Learning Outcomes:**

The Sixth-Year Certificate in Reading and Language Arts program is aligned with the standards for the Preparation of Literacy Professionals 2017 of the International Literacy Association (ILA). In order to prepare knowledgeable and competent literacy professionals candidates in the program are expected to:

- meet the ILA 2017 standards and/or the Connecticut state standards for advanced certifications in reading and language arts;
- provide leadership through modeling and mentoring to ensure that classroom teachers and other support staff acquire a wide range of instructional practices, approaches, methods, and curriculum materials to facilitate their reading and writing instruction;
- be knowledgeable of various assessments appropriate for a wide range of diversity in the classroom, and able to mentor and support classroom teachers and other professionals in the selection, administration, and interpretation of assessments to enhance student learning and to communicate results to education stakeholders;
- support and mentor classroom teachers and other professionals in creating a literate environment to facilitate successful reading and writing for all children; and
- continue to be lifelong learners and scholars, through reading, research, and professional development, and leaders in planning and implementing professional development programs for teachers and other professionals, as well as in advocating to advance the professional research base to expand knowledge-based practices.

**Admission Requirements:**

Applicants must hold a Bachelor's Degree from a regionally accredited institution of higher education, and a Master's Degree in Reading or Education or a related field from a regionally accredited institution of higher education with a minimum GPA of 3.00 on a 4.00 point scale. A minimum of one year teaching experience is preferred.

To apply to the Sixth-year Certificate in Reading and Language Arts a candidate must submit an application for graduate admissions, official transcripts, and application fee to the CCSU Recruitment and Admissions Office.

**Additional Materials Required:**

A candidate must also submit a copy of his/her teaching certificate with the application for graduate admission.

Instructions for uploading the certificate will be found within the online graduate application.

**COURSE AND CAPSTONE REQUIREMENTS:**

**Remedial Reading/Language Arts (102) and /or Reading/Language Arts Consultant (097) Certification Track**

The candidate's planned program of study is a minimum of 30 credits and must include the following:

LLA 603	Multicultural Literature in the Classroom	3
LLA 614/LLA 514	Diagnosis and Intervention of Reading and Language Arts Difficulties I	3
LLA 616/LLA 516	Diagnosis and Intervention of Reading and Language Arts Difficulties II	3
LLA 618/LLA 518	Clinical Practices in Literacy and Language Arts	6
LLA 620	Research Seminar	3
LLA 622	Organization, Administration, and Supervision of Reading and Language Arts Programs	3
LLA 624	Practicum for Reading Specialist/Literacy Coach I	3
LLA 626	Practicum for Reading Specialist/Literacy Coach II	3

**Required prerequisites:**

LLA 502	Developmental Reading in PreK-12	3
LLA 504	Language Arts for First and Second Language Speakers	2
LLA 506	Decoding and Spelling Instruction	1
LLA 508	Teaching Literacy in the Content Areas	3

A candidate may need to complete additional coursework for his/her planned program of study and therefore may exceed the minimum of 30 credits.

**Sixth-Year Certificate in Reading and Language Arts Non-Certification Track**

The candidate's planned program of study is a minimum of 30 credits.

LLA 502	Developmental Reading in PreK-12	3
LLA 504	Language Arts for First and Second Language Speakers	2
LLA 506	Decoding and Spelling Instruction	1
LLA 508	Teaching Literacy in the Content Areas	3
LLA 620	Research Seminar	3

**Remaining Credits:**

Remaining credits will be chosen in consultation with advisor. A minimum of 12 credits must be at the 600 level.

Area of Specialization (15-18 credits)

Electives

3-6

## TEACHER LICENSURE CERTIFICATES

Students who already hold a bachelor's degree may pursue teacher certification through our teacher licensure certificate programs. These programs prepare students for teacher certification and do not result in a master's degree.

General Graduate School Admission requirements -

Applicants must hold a bachelor's degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

Applicants who are denied due to a low undergraduate GPA may submit a written appeal to be considered for a GPA waiver in accordance with the School of Education and Professional Studies GPA waiver appeal process. Instructions on this process will be included with the official denial letter.

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### POST-BACCALAUREATE TEACHER PREPARATION IN ART EDUCATION

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#### Program Rationale:

Students who already hold a bachelor's degree may pursue teacher certification through our post-baccalaureate program. This program prepares students for teacher certification in Art Education (PK-12) and does not result in a master's degree.

#### Program Outcomes:

In the post-baccalaureate program, art teacher candidates will:

- develop or increase appropriate techniques and processes in a variety of visual media;
- acquire knowledge of art forms, artists, and art works from diverse historical and contemporary contexts;
- experience a variety of teaching strategies by designing comprehensive, sequential curriculum that is developmentally appropriate; use a variety of teaching strategies to promote a high level of student understanding and artistic achievement during select field and student teaching experiences; and

- engage in self-evaluation and analysis of their field and teaching experiences to identify areas for personal growth.

#### Planned Program of Study:

Persons holding a bachelor's degree from an accredited institution with an art-related major or concentration must follow a planned program of graduate study leading to certification in art education PK-12.

The Planned Program of Study is determined and filed with the advisor or chair of the department and must be approved by the office of the School of Graduate Studies to ensure that all certification requirements are satisfied. The Planned Program becomes a contract between the student and his or her advisor.

Post-baccalaureate students must meet the following general education requirements: at least 39 credits of liberal arts course work, including a U.S. history survey course, and coursework in each of the following areas English, mathematics, natural sciences and social sciences, and one course in foreign language or fine arts. Coursework in developmental or life span psychology is a prerequisite for the Professional Program. These candidates are required to have the equivalent of 45 credits in art-related courses and fulfill departmental admissions requirements which include a portfolio review.

### POST-BACCALAUREATE TEACHER PREPARATION IN BIOLOGY FOR SECONDARY EDUCATION

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The Department of Biology also evaluates undergraduate and graduate preparation of applicants to the biology certification program in secondary education. This evaluation is done through interviews and/or review of transcripts of prospective candidates who have been admitted to the graduate program. Transcripts are forwarded to the department chair by the School of Education and Professional Studies. The chair of biology or a departmental designee will make recommendations for courses to be completed in the biological area of the student's program. Admission to the Professional Program is contingent on recommendation by the Department of Biology in addition to completion of other requirements.

## **POST-BACCALAUREATE TEACHER PREPARATION IN ELEMENTARY EDUCATION**

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**The Program is no longer accepting new applications for Admissions, please visit the new Elementary Education MS (p. 631) program for additional information.**

Students who already hold a bachelor's degree may pursue teacher certification in Elementary Education through our post-baccalaureate program. This program prepares students for teacher certification and does not result in a master's degree.

Admission to a post-baccalaureate teacher certification Professional Program depends upon and follows admission to the School of Graduate Studies. Post-baccalaureate students must meet all course and fieldwork requirements specified in particular teacher preparation programs and governed by State of Connecticut regulations. This includes satisfying certain general education and subject matter major requirements.

### **Post-Baccalaureate "Program of Study"**

For students seeking certification in elementary education, a "Program of Study" is determined and filed with the School of Education post-baccalaureate advisor and then submitted to the School of Graduate Studies.

Post-baccalaureate students must meet the following general education requirements: at least 39 credits of liberal arts course work including a U.S. history survey course, and courses in each of the following areas: English, mathematics, natural sciences and social sciences, and one course in foreign language or fine arts. Coursework in developmental or life span psychology is a prerequisite for the Professional Program. The advisor reviews prior transcripts to determine which courses must still be met.

Admission to the Professional Program is contingent on recommendation by the Department of Literacy, Elementary, and Early Childhood Education in addition to completion of other requirements.

## **POST-BACCALAUREATE TEACHER PREPARATION IN ENGLISH**

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Certification in English is a non-degree program offered to persons with a bachelor's degree (normally in English) whose undergraduate course work does not meet State of Connecticut certification requirements for secondary English teachers. Courses taken to complete certification requirements may not be used to complete the English Department's MS or MA degree programs. A minimum of six credits in English at CCSU is required before student teaching.

## **POST-BACCALAUREATE TEACHER PREPARATION IN FRENCH, ITALIAN, AND SPANISH FOR SECONDARY EDUCATION**

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**Students seeking certification to teach a foreign language must:**

- apply to the Graduate Admission Office as a non-degree graduate student seeking certification. Once accepted to the School of Graduate Studies, determination is made for a plan of study;
- have an interview with the departmental committee to assess oral competency and gain acceptance into Professional Program; recommendations are made by committee to the School of Education and Professional Studies;
- complete the equivalent of an undergraduate major (36 credits), professional core requirements and student teaching block. Students with insufficient undergraduate preparation must make up deficiencies by taking additional courses as required by the Department. To fulfill the language requirements, students may take the ACTFL OPI and WPT to receive up to 24 credits in the target language, depending on ratings obtained in each of these tests. Credits are awarded for the following courses:
  - Advanced-High or higher = 24 credits corresponding to FR/ITAL/SPAN 111, 112, 125, 126, 225, 226, 335 and 336.
  - Advanced-Mid= 21 credits corresponding to FR/ITAL/SPAN 111, 112, 125, 126, 225, 226 and 335.
  - Advanced-Low = 18 credits corresponding to FR/ITAL/SPAN 111, 112, 125, 126, 225 and 226.
- When the ratings of the two tests differ, the lowest will be considered.
- Students will complete the remaining 12 credits by taking literature and culture courses as stated in the program requirements.

### **POST-BACCALAUREATE TEACHER PREPARATION IN HISTORY**

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The Department of History in cooperation with the School of Education and Professional Studies offers courses of study leading to secondary teacher certification in history and in history and social studies. Information about current Connecticut teacher certification requirements may be obtained from the Office of the Dean, School of Education and Professional Studies.

### **POST-BACCALAUREATE TEACHER PREPARATION IN MATHEMATICS FOR SECONDARY EDUCATION**

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Students who already hold a bachelor's degree may pursue teacher certification in Mathematics through our post-baccalaureate program. This program prepares students for secondary education teacher certification and does not result in a master's degree.

### **POST-BACCALAUREATE TEACHER PREPARATION IN MUSIC EDUCATION**

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A student who holds a bachelor's degree but who is not certified in music education may apply for acceptance into the graduate certification program. Upon satisfactory completion of a musicianship exam and audition, the student will consult with the chair of the Department of Music in order to establish a planned program for certification. Course work used to gain certification may not be used toward a graduate degree program. Students must meet all requirements for admission to the Professional Program in the School of Education and Professional Studies. For information on admission to the Professional Program, see the School of Education and Professional Studies page, linked here.

In addition to the requirements of the School of Graduate Studies, application to the Department of Music requires the following:

- A completed application form to the Department of Music

- An essay\*
- An audition\*
- A theory examination\*\*
- A personal interview

*\*For essay and audition requirements, refer to the Department of Music's website at <http://www.music.ccsu.edu> or call 860-832-2912.*

*\*\* While this examination is primarily a placement examination, a low score could influence the decision about an applicant's acceptance.*

### **POST-BACCALAUREATE TEACHER PREPARATION IN PHYSICAL EDUCATION**

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Students who already hold a bachelor's degree may pursue teacher certification in Physical Education through our post-baccalaureate program. This program prepares students for PK-12 teacher certification and does not result in a master's degree. For information on admission to this program, see the School of Education and Professional Studies page, linked here.

### **POST-BACCALAUREATE TEACHER PREPARATION IN SCIENCE FOR SECONDARY EDUCATION**

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Students who already hold a bachelor's degree may pursue teacher certification in Science Education: Chemistry, Earth Sciences, General Science and Physics through our post-baccalaureate program. This program prepares students for Secondary teacher certification and does not result in a master's degree.

### **POST-BACCALAUREATE TEACHER PREPARATION IN TECHNOLOGY AND ENGINEERING EDUCATION**

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This post-baccalaureate certification program provides courses for college graduates, regardless of previous major, to teach technology and engineering education. This program, comprised of technical and professional courses, is offered in the late afternoon and evenings. The number of courses required to complete the program is contingent upon each student's previous industrial experience and formal degree work.

This program provides a unique opportunity for individuals seeking a career change. A minimum undergraduate cumulative grade point average of 2.70 is required for admission to this program. All students must first apply to the Graduate Admission Office. Once the student is accepted into the certification program, an advisor will be assigned who will assist in planning a program of graduate and undergraduate courses which incorporate certification requirements of the state of Connecticut. For additional information please contact the Chair, Department of Technology and Engineering Education.

### **POST-BACCALAUREATE TEACHER CERTIFICATION IN TESOL**

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Certification in TESOL is a non-degree program offered to persons with a bachelor's degree whose undergraduate course work does not meet the requirements for State of Connecticut teacher certification in Teaching English to Speakers of Other Languages. Certification is available at the PK-12 level.

A minimum of 15 credits in TESOL content areas is required before teacher candidacy and student teaching. Interested candidates may contact the TESOL program in the English Department for further information.





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