

Study Area I. Arts and Humanities

9 credits

At least 3 credits required in 200-level literature, and no more than 6 credits from any one discipline. 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 typically be exposed to courses in literature, philosophy, and fine arts.)

ART 100	Search in Art
ART 110	Introduction to Art History [I]
ART 112	History of Art I [I]
ART 113	History of Art II [I]
ART 120	Design I
ART 124	Three-Dimensional Design
ART 130	Drawing I
ART 216	Modern Art [I]
ART 224	Illustration I
ART 230	Drawing II
ART 240	Printmaking I
ART 247	Photography I
ART 250	Watercolor Painting
ART 252	Painting I
ART 260	Ceramics I
ART 261	Sculpture I
ART 264	Design-Handicraft Materials and Techniques I
CHIN 304	Topics in Chinese Literature [I] [L]
CINE 201	The Language of Film
CINE 270	Studies of World Culture Through Cinema
DAN 234	Ballroom Dance
DAN 299	Dance History [I]
DAN 398	Contemporary Dance Technique
DES 100	Introduction to Graphic/Information Design
DES 122	Fundamentals of Graphic/Information Design
ENG 203	Survey of World Literature: Ancient to Early Modern [I] [L]
ENG 204	Survey of World Literature: 17th Century to the Present [I] [L]
ENG 205	Survey in British Literature: Middle Ages to the 18th Century [L]
ENG 206	Survey of British Literature: Romanticism to the Present [L]
ENG 210	Survey of American Literature: Pre-Civil War [L]
ENG 211	Survey of American Literature: Civil War to the Present [L]
ENG 212	African-American Literature [L]
ENG 213	Studies in American Literature [L]
ENG 214	Studies in International Literature [I] [L]
ENG 215	Introduction to Women Writers [I] [L]
ENG 220	Shakespeare [L]
ENG 250	Contemporary Literature [L]
ENG 260	Introduction to Poetry [L]
ENG 261	Introduction to Fiction [L]
ENG 262	Introduction to Drama [I] [L]
ENG 347	Latino/a Literature [I] [L]
FR 304	Introduction to French Literature [I] [L]
FR 305	Introduction to Francophone Literature [I] [L]
FYS 101	First Year Seminar-Arts and Humanities
GER 304	Introduction to German Literature I [I] [L]
GER 305	Introduction to German Literature II [I] [L]
HON 110	Western Culture I
HON 210	Western Culture II: Topics in Western Culture
HON 440	Writing & Research II

HUM 100	Search in the Humanities
HUM 230	Topics in International Studies
HUM 250	Topics in European Literature [I] [L]
HUM 270	Studies of World Culture Through Cinema
HUM 330	Selected Topics in Global Cultures
HUM 360	International Studies Through Travel
IS 230	Topics in International Studies
IS 330	Selected Topics in Global Cultures
IS 360	International Studies Through Travel
ITAL 304	Introduction to Italian Literature I [I] [L]
ITAL 305	Introduction to Italian Literature II [I] [L]
LAS 375	Spanish-American Literature I [I] [L]
LAS 376	Spanish-American Literature II
LTN 347	Latino/a Literature [I] [L]
MUS 100	Search in Music
MUS 109	Fundamentals of Music
MUS 110	Listening to Classical Music [I]
MUS 111	Music of the World's People [I]
MUS 112	Computer Applications to Music
MUS 113	History of Jazz
MUS 214	Electro-acoustic Music and Sonic Art
PHIL 100	Search in Philosophy
PHIL 112	Introduction to Philosophy
PHIL 121	Introduction to Philosophy through Literature
PHIL 125	Introduction to Philosophy through Popular Culture
PHIL 135	Nature, Mind, and Science
PHIL 144	Moral Issues
PHIL 232	Medieval and Renaissance Philosophy
PHIL 235	Philosophy of Social Science
PHIL 241	Environmental Ethics
PHIL 248	Philosophy of the Arts
PHIL 250	Introduction to Asian Philosophy [I]
PHIL 255	Philosophy of Religion
PHIL 260	African Philosophy [I]
PHIL 275	Chinese Philosophy [I]
PHIL 344	Topics in Philosophical and Social Justice
PHIL 366	Existentialism [I]
PS 232	Ancient and Medieval Political Thought
REL 105	Development of Christian Thought
REL 110	World Religions [I]
REL 250	Japanese Religion [I]
REL 256	Philosophy, Religion, and Culture [I]
REL 257	Special Topics in Religion
SPAN 304	Introduction to Spanish Literature I [I] [L]
SPAN 305	Introduction to Spanish Literature II [I] [L]
SPAN 375	Spanish American Literature I [I] [L]
SPAN 376	Spanish American Literature II [I] [L]
TH 110	Introduction to Theatre
TH 111	Stagecraft
TH 117	Lighting
TH 121	Costuming
TH 126	Makeup I
TH 135	Speaking-Voice Development
TH 143	Theatre Games and Improvisations
TH 145	Acting I
TH 146	Introduction to High Impact Theatre
TH 148	Studio Performance I

TH 222

History of Fashion [I]

TH 253

Script Analysis for the Theatre

Study Area II. Social Sciences

9 credits

At least 3 credits required 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 typically be exposed to courses in economics, geography, history, and political science.)

AFAM 110	Introduction to African-American Studies
AMS 241	Introduction to Planning
CHIN 315	Topics Chinese Culture [I]
CRM 110	Introduction to the Criminal Justice System
ECON 200	Principles of Economics I
ECON 201	Principles of Economics II
ECON 250	Contemporary Economic Issues
ET 399	Engineering Economy
FR 315	Aspects of French History & Culture [I]
FR 316	Contemporary France [I]
FYS 102	First Year Seminar-Social Studies
GEOG 100	Search in Geography
GEOG 110	Introduction to Geography
GEOG 120	World Regional Geography [I]
GEOG 130	Intro. to Geography Information Science
GEOG 220	Human Geography [I]
GEOG 223	Geography of the Popular Music Industry
GEOG 241	Introduction to Planning
GEOG 244	Economic Geography [I]
GEOG 270	Geography of Hazards
GEOG 290	Geography of Tourism [I]
GEOG 291	National Parks and World Heritage Sites [I]
GEOG 333	Political Geography
GER 315	German Civilization to 1800 [I]
GER 316	German Civilization from 1800 to Present [I]
HIST 100	Search in History
HIST 121	World Civilization I [I]
HIST 122	World Civilization II [I]
HIST 161	American History to 1877
HIST 162	American History from 1877 to Present
HIST 231	Ancient Mediterranean World [I]
HIST 232	Medieval Europe [I]
HIST 233	Renaissance and Enlightenment Europe [I]
HIST 234	Modern Europe [I]
HIST 251	East Asia to 1800 [I]
HIST 252	East Asia since 1800 [I]
HIST 253	History of the South Pacific
HIST 271	Intro. to African History and Culture
HIST 277	History of Christianity I [I]
HIST 278	History of Christianity II [I]
HIST 281	History of Latin America to 1823 [I]
HIST 282	History of Latin America since 1823 [I]
HIST 291	Modern Middle East [I]
HIST 292	History of Judaism [I]
HIST 375	History of Africa to 1800 [I]
HIST 376	History of Africa Since 1800 [I]
HON 130	World Cultures I [I]
HON 230	World Cultures II: Topics in World Cultures [I]
HON 442	Writing & Research IV: Thesis Workshop

IS 225	The World as a Total System [I]
IS 240	Caribbean Cultural Patterns [I]
IS 245	Puerto Rico [I]
ITAL 315	Italian Civilization to 1861 [I]
ITAL 316	Italian Civilization from 1861 to the Present [I]
LAS 235	International Relations [I]
LAS 282	Latin American History Since 1823 [I]
LAS 316	Latin American Civilization [I]
LTN 110	Introduction to Latino Studies
PES 110	Introduction to the Study of Peace & War
PES 111	War & Peace through Films
PS 104	The World's Political Systems [I]
PS 110	American Government & Politics
PS 230	American State and Local Government
PS 235	International Relations [I]
PS 260	Public Administration
PS 270	Law and Politics
PS 280	Religion & Politics
PS 315	Internet & Media Politics
PS 334	Modern Political Thought
SPAN 315	Spanish Civilization [I]
SPAN 316	Latin American Civilization [I]
TE 110	Technological Systems

Study Area III. Behavioral Sciences

6 credits

Courses that focus on the interaction(s) between and among individuals and/or groups and social/cultural institutions. (In this study area, students will typically be exposed to courses in anthropology, psychology, and sociology.)

AMS 110	Introduction to American Studies
ANTH 140	Introduction to Anthropology [I]
ANTH 150	Introduction to Archaeology
ANTH 160	Introduction to Biological Anthropology
ANTH 170	Introduction to Cultural Anthropology [I]
ANTH 200	Dimensions of Diversity and Inequality
ANTH 210	The Ancient World
ANTH 215	Before History
ANTH 240	The Supernatural [I]
CEN 200	Introduction to Community and Civic Engagement
COMM 215	Introduction to Interpersonal Communication
COMM 230	Introduction to Mass Media
CM 110	The Built Environment and Global Society [I]
CRM 220	Ideology & Violence
CRM 230	Law Enforcement & Society
CRM 245	Diversity and Criminal Justice
ENGR 291	Engineering Diversity [D]
FYS 103	First Year Seminar-Behavioral Sciences
HON 220	Science and Society II: Social Sciences and Society
HON 250	Western/World Culture III: Comparative Topics [I]
IS 226	Intercultural Sensitivity [I]
LING 200	Introduction to Linguistics
LING 230	The Study of Language [I]
PSY 112	General Psychology I
PSY 125	Environment & Behavior
PSY 200	Learning & Memory
PSY 236	Life-Span Development [D]
PSY 241	Introduction to Health Psychology
PSY 281	Cognitive Psychology
SOC 110	Introductory Sociology
SOC 111	Social Problems
SOC 212	Race, Class, and Gender
SOC 233	The Family
SOC 240	The Sociology of Gender
SW 100	Exploration in Social Work
WGSS 200	Introduction to Women, Gender and Sexuality Studies
WGSS 240	The Sociology of Gender

Study Area IV. Natural Sciences

6-7 credits

A laboratory experience is required. Courses that focus on the scientific analysis of the natural world. (In this study area, students will typically be exposed to courses in biology, biomolecular science, chemistry, earth science, and physics.)

BIO 100	Search in Biology
BIO 101	Search in Biology with Lab
BIO 102	International Search in Biology [I]
BIO 111	Introductory Biology
BIO 113	Laboratory Experience in Biology
BIO 120	Plants of Connecticut
BIO 121	General Biology I
BIO 122	General Biology II
BIO 132	Introductory Ecology [I]
BIO 133	Laboratory in Introductory Ecology
BIO 150	Long Island Sound-Introductory Ecology
BIO 170	Introductory Field Studies in Biology
BIO 171	Introductory Field Studies in Biology [I]
BIO 211	Concepts in Biology
BIO 230	Natural History
BMS 100	Search in Biomolecular Sciences
BMS 101	Search in Biomolecular Sciences with Lab
BMS 102	Introduction to Biomolecular Science
BMS 103	Introduction to Biomolecular Science Laboratory
BMS 111	Cells and the Human Body
BMS 113	Laboratory Experience in Biomolecular Science
BMS 201	Principles of Cell and Molecular Biology
CHEM 100	Search in Chemistry and Biochemistry
CHEM 102	Chemistry of Nutrition
CHEM 111	Introductory Chemistry
CHEM 116	Introduction to Forensic Chemistry
CHEM 150	Chemistry of Allied Health I
CHEM 152	Chemistry of Allied Health II
CHEM 161	General Chemistry I
CHEM 162	General Chemistry I Laboratory
CHEM 163	General Chemistry II
CHEM 164	General Chemistry II Laboratory
ESCI 100	Search in Earth Science
ESCI 101	Search in Earth Science with Laboratory
ESCI 110	Introduction to the Earth
ESCI 117	Introduction to the Solar System
ESCI 118	Introduction to Stars and Galaxies
ESCI 121	Physical Geology
ESCI 122	Historical Geology
ESCI 129	Introduction to Meteorology
ESCI 178	Planetary Astronomy
ESCI 179	Stellar Astronomy
ESCI 278	Observational Astronomy
ET 241	Applied Statics and Strength of Materials
FYS 104	First Year Seminar-Natural Sciences
GEOG 272	Physical Geography
GEOG 275	Soils and Vegetation
HON 120	Science & Society I
ISCI 104	Science Connections
ISCI 118	Women's Contributions to Science

PHYS 111	Introductory Physics I
PHYS 113	The Sound of Music
PHYS 121	General Physics I
PHYS 122	General Physics II
PHYS 125	University Physics I
PHYS 126	University Physics II
SCI 111	Elementary Earth-Physical Sciences

Skill Area I. Communication Skills

6 Credits

ENG 110 required. * 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.

ASL 111	American Sign Language I
ASL 112	American Sign Language II
CHIN 125	Intermediate Chinese I [I]
CHIN 126	Intermediate Chinese II [I]
CHIN 225	Intermediate Chinese III [I]
CHIN 226	Intermediate Chinese IV [I]
COMM 115	Fundamentals of Communication
COMM 140	Public Speaking
COMM 256	Professional Communication
COMM 280	Business and Professional Speaking
ENG 110	Introduction to College Writing
ENG 202	Intermediate Composition
ENGR 290	Engineering Technical Writing and Presentation
ESL 108	English as a Second Language: Writing I
ESL 109	English as a Second Language: Writing II
ESL 201	Advanced Study in English as a Second Language
FR 125	Intermediate French I [I]
FR 126	Intermediate French II [I]
FR 225	Intermediate French III [I]
FR 226	Intermediate French IV [I]
FR 261	Business French
FYS 105	First Year Seminar-Communication Skills
GER 125	Intermediate German I [I]
GER 126	Intermediate German II [I]
GER 225	Intermediate German III [I]
GER 226	Intermediate German IV [I]
HON 140	Writing & Research I
HON 441	Writing & Research III: Honors Thesis
ITAL 125	Intermediate Italian I [I]
ITAL 126	Intermediate Italian II [I]
ITAL 190	Italian for Italian Speakers [I]
ITAL 225	Intermediate Italian III [I]
ITAL 226	Italian Structure and Idiom [I]
JAPN 125	Intermediate Japanese I [I]
JAPN 126	Intermediate Japanese II [I]
JAPN 225	Intermediate Japanese III [I]
JAPN 226	Intermediate Japanese IV [I]
JRN 200	Introduction to Journalism
JRN 235	News Writing and Reporting I
ML 125	Intermediate Modern Language I
ML 126	Intermediate Modern Language II
ML 200	Topics in Modern Language Studies [I]
PHIL 244	Introduction to the Philosophy of Social Justice
POL 125	Intermediate Polish I [I]
POL 126	Intermediate Polish II [I]
SPAN 125	Intermediate Spanish I [I]
SPAN 126	Intermediate Spanish II [I]
SPAN 128	Intensive Intermediate Spanish I [I]
SPAN 190	Language for Heritage Speakers of Spanish I [I]

SPAN 191	Language for Heritage Speakers of Spanish II [I]
SPAN 225	Intermediate Spanish III [I]
SPAN 226	Intermediate Spanish IV [I]
SPAN 261	Business Spanish [I]
SPAN 290	Hispanic Culture for Heritage Speakers of Spanish I [I]
SPAN 291	Hispanic Culture for Heritage Speakers of Spanish II [I]

*All entering students are required to take ENG 110 (Freshman Composition), which is an introductory course in expository writing, unless exempt due to previous coursework. A score of 450 on the writing or critical reading portion of the SAT (or 21 on the ACT) is needed to enroll in ENG 110. If a student's SAT writing score is below 450 (or 21 on the ACT), the student will be required to complete ENG 099 (Remedial English), which focuses on improvement of basic writing skills, prior to taking ENG 110. Student writing is assessed during the first week of class. Course adjustments may be made if, based on the writing assessment, it is determined that a student is enrolled in the wrong writing course.

Skill Area II. Mathematics

6 credits

A mathematics or statistics course (above 101 level) appropriate to the student's major interests, plus one additional course in MATH, STAT, CS, or FYS 106, totaling 6 credits. The courses must be selected from the Skill Area II approved course list.

CS 110	Introduction to Internet Programming and Applications
CS 113	Introduction to Computers
CS 151	Computer Science I
CS 207	Introduction to Computer Graphics
CS 213	Applications of Computing I
CS 214	Applications of Computing II
FYS 106	First-Year Seminar-- Mathematics and Computer Science
MATH 105	Survey of Mathematics for Liberal Arts
MATH 106	Mathematical Topics for Liberal Arts
MATH 110	Finite Mathematics
MATH 113	Structure of Mathematics I: Number Systems
MATH 115	Trigonometry
MATH 116	Pre-Calculus Mathematics
MATH 119	Pre-Calculus with Trigonometry
MATH 123	Applied Business Mathematics
MATH 124	Applied Calculus with Trigonometry
MATH 125	Applied Calculus
MATH 135	Applied Engineering Calculus I
MATH 136	Applied Engineering Calculus II
MATH 152	Calculus I
MATH 213	Structure of Mathematics II: Probability & Geometry
MATH 221	Calculus II
PHIL 221	Introduction to Modern Logic
STAT 104	Elementary Statistics
STAT 200	Business Statistics
STAT 201	Business Statistics II
STAT 215	Statistics for Behavioral Sciences I
STAT 216	Statistics for Behavioral Sciences II

Skill Area III. Foreign Language Proficiency

0-6 credits

Proficiency in a foreign language must be demonstrated before graduation. This requirement may be met by any of the following:

1. Three sequential years of one foreign language at the high-school level.
2. Elementary proficiency as demonstrated by successfully completing a second semester-level CCSU foreign language course (112), or the equivalent at another institution. 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 a standardized examination that demonstrates knowledge of a foreign language equivalent to completion of a second semester course or higher.
4. 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).

CHIN 111	Elementary Chinese I
CHIN 112	Elementary Chinese II
CHIN 261	Business Chinese [I]
FR 111	Elementary French I
FR 112	Elementary French II
FR 151	French for Reading Knowledge [I]
GER 111	Elementary German I
GER 112	Elementary German II
ITAL 111	Elementary Italian I
ITAL 112	Elementary Italian II
ITAL 118	Intensive Elementary Italian [I, 3 credits only]
ITAL 123	Basic Italian Review
JAPN 111	Elementary Japanese I
JAPN 112	Elementary Japanese II
LAT 111	Elementary Latin I
LAT 112	Elementary Latin II
ML 111	Elementary Modern Language I
ML 112	Elementary Modern Language II
POL 111	Elementary Polish I
POL 112	Elementary Polish II
SPAN 111	Elementary Spanish I
SPAN 112	Elementary Spanish II
SPAN 118	Intensive Elementary Spanish [I, 3 credits only]
SPAN 123	Basic Spanish Review [I]

Skill Area IV. University Requirement

2-3 credits

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 in the skill areas above or with other Skill Area IV courses. Remedial courses, MATH 101, and elementary language courses (111 or 112) will not fulfill this requirement.

PE 144	Fitness/Wellness Ventures (required of all students entering with fewer than 15 credits and recommended to be taken in a student's first year)
CET 113	Introduction to Information Processing
CS 115	Workshop in Computer Science
CS 210	Computing and Culture
GRT 112	Digital Imaging for Graphics Technology
GRT 212	Graphic Arts Processes
LSC 150	Library Resources and Skills
RDG 140	Reading Efficiency

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" [I]. 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 by [I] at the end of their course descriptions; a list of international courses is linked here. 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).

Courses with the letter [I] have been designated as fulfilling the international component of the general education requirements. The following is a list of courses with the [I] designation. This list took effect for the spring 2008 semester. In addition to the courses in this list, an approved international education experience will count toward the fulfillment of the International requirement (see the Center for International Education for more information).

AMS 422	Native Americans
ANTH 140	Introduction to Anthropology
ANTH 170	Introduction to Cultural Anthropology
ANTH 239	Work and Culture
ANTH 240	The Supernatural
ANTH 422	Native Americans
ANTH 424	Peoples and Cultures of Africa
ANTH 426	People and Cultures of Eastern Europe
ANTH 428	Cultures of Latin America
ANTH 429	Global India
ART 110	Introduction to Art History
ART 112	History of Art I
ART 113	History of Art II
ART 210	Greek Art
ART 215	The African Diaspora
ART 216	Modern Art
ART 218	Renaissance Art
ART 412	Oriental Art
ART 494	Location Studies-Art
BIO 102	International Search in Biology
BIO 132	Introductory Ecology
BIO 171	Introductory Field Studies in Biology
BIO 471	International Field Studies in Biology
CHIN 125	Intermediate Chinese I
CHIN 126	Intermediate Chinese II
CHIN 225	Intermediate Chinese III
CHIN 226	Intermediate Chinese IV
CHIN 261	Business Chinese
CHIN 304	Topics in Chinese Literature [L]
CHIN 315	Topics in Chinese Culture
CHIN 335	Advanced Chinese for Oral Expression
CHIN 336	Advanced Chinese Composition
CHIN 475	Studies in Classical Chinese
CINE 270	Studies of World Culture Through Cinema
CINE 465	Global Cinema
CM 110	The Built Environment and Global Society
COMM 296	Global Studies in Communication
COMM 455	Global Visual Communication
COMM 496	Field Studies in Communication
DAN 234	Ballroom Dance
DAN 299	Dance History

DAN 398	Contemporary Dance Technique
DES 419	History of Design
ECON 430	International Economics
ECON 435	Economic Development
ENG 203	Survey of World Literature: Ancient to Early Modern [L]
ENG 204	Survey of World Literature: 17th Century to the Present [L]
ENG 214	Studies in International Literature [L]
ENG 215	Introduction to Women Writers [L]
ENG 262	Introduction to Drama [L]
ENG 347	Latino/a Literature [L]
ENG 363	Greek Literature
ENG 364	Latin Literature
ENG 365	The Modern European Novel
ENG 367	Global Novel
ENG 465	Global Cinema
ENG 488	Studies in World Literature
ETM 340	Geometric Dimensioning & Tolerancing
FIN 330	International Finance
FR 125	Intermediate French I
FR 126	Intermediate French II
FR 151	French for Reading Knowledge
FR 225	Intermediate French III
FR 226	Intermediate French IV
FR 261	Business French
FR 304	Introduction to French Literature [L]
FR 305	Introduction to Francophone Literature [L]
FR 315	Aspects of French History & Culture
FR 316	Contemporary France
FR 335	Advanced French for Oral Practice
FR 336	Advanced French Composition
FR 350	Topics in French Literature, Culture, and Language
FR 441	Advanced Oral Practice
FR 451	The Structure of Modern French
FR 460	Advanced Grammar & Composition
FR 472	Studies in French Culture
GEOG 120	World Regional Geography
GEOG 220	Human Geography
GEOG 244	Economic Geography
GEOG 290	Geography of Tourism
GEOG 291	National Parks and World Heritage Sites
GEOG 434	Mexico, Central America, and the Caribbean
GEOG 435	Japan and Korea
GEOG 436	South America
GEOG 437	China
GEOG 446	Sub-Saharan Africa
GEOG 448	Russia and Neighboring Regions
GEOG 452	European Union
GEOG 459	Field Studies in Regional Geography
GER 125	Intermediate German I
GER 126	Intermediate German II
GER 225	Intermediate German III
GER 226	Intermediate German IV
GER 304	Introduction to German Literature I [L]
GER 305	Introduction to German Literature II [L]
GER 315	German Civilization to 1800
GER 316	German Civilization from 1800 to Present
GER 335	Advanced German for Oral Expression

GER 336	Advanced Structure & Idiom
GER 441	Advanced Oral Practice
HIST 121	World Civilization I
HIST 122	World Civilization II
HIST 231	Ancient Mediterranean World
HIST 232	Medieval Europe
HIST 233	Renaissance and Enlightenment Europe
HIST 234	Modern Europe
HIST 251	East Asia to 1800
HIST 252	East Asia since 1800
HIST 277	History of Christianity I
HIST 278	History of Christianity II
HIST 281	History of Latin America to 1823
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 341	English History to 1715
HIST 342	English History since 1715
HIST 343	Modern Ireland: 1690-Present
HIST 344	History of Modern Germany
HIST 347	History of Russia I
HIST 348	History of Russia II
HIST 353	History of Modern China
HIST 354	History of Modern Japan
HIST 356	History of East Central Europe since 1919
HIST 373	The African Diaspora in the Caribbean since 1500
HIST 375	History of Africa to 1800
HIST 376	History of Africa Since 1800
HIST 379	History of Poland: from the Piasts to Partition, 966-1795
HIST 380	Modern Poland
HIST 421	Britain at the Turn of the 20th Century
HIST 452	World War II in Europe
HON 130	World Cultures I
HON 230	World Cultures II: Topics in World Cultures
HON 250	Western/World Culture III: Comparative Topics
HUM 230	Topics in International Studies
HUM 250	Topics in European Literature [L]
HUM 330	Selected Topics in Global Cultures
HUM 360	International Studies Through Travel
IS 225	The World as a Total System
IS 226	Intercultural Sensitivity
IS 230	Topics in International Studies
IS 240	Caribbean Cultural Patterns
IS 245	Puerto Rico
IS 330	Selected Topics in Global Cultures
IS 360	International Studies Through Travel
IS 490	Field Studies Abroad
IS 497	Seminar in International Studies
ITAL 125	Intermediate Italian I
ITAL 126	Intermediate Italian II
ITAL 190	Italian for Italian Speakers
ITAL 225	Intermediate Italian III
ITAL 226	Italian Structure and Idiom
ITAL 304	Introduction to Italian Literature I [L]
ITAL 305	Introduction to Italian Literature II [L]

ITAL 315	Italian Civilization to 1861
ITAL 316	Italian Civilization from 1861 to the Present
ITAL 335	Advanced Composition and Diction
ITAL 336	Advanced Structure and Idiom
ITAL 441	Advanced Oral Practice
ITAL 470	14th-Century Italian Literature
ITAL 476	16th-Century Italian Literature
ITAL 488	Italian Life and Culture
JAPN 125	Intermediate Japanese I
JAPN 126	Intermediate Japanese II
JAPN 225	Intermediate Japanese III
JAPN 226	Intermediate Japanese IV
JAPN 335	Japanese for Oral Expression I
JAPN 336	Japanese for Oral Expression II
LAS 235	International Relations
LAS 282	Latin American History Since 1823
LAS 316	Latin American Civilization
LAS 375	Spanish American Literature I [L]
LAS 428	Cultures of Latin America
LAS 436	Spanish American Literature I
LAW 390	Topics in International Business Law
LING 230	The Study of Language
LTN 347	Latino/a Literature [L]
MATH 344	Mathematics in Diverse Cultures
MGT 321	International Management
MGT 395	Field Studies in International Business
MGT 462	International Human Resource Management
MGT 495	Seminar in International Business
MKT 321	International Marketing
MKT 495	Field Studies in International Marketing
ML 126	Intermediate Modern Language II
ML 200	Topics in Modern Language Studies
MUS 110	Listening to Classical Music
MUS 111	Music of the World's People
MUS 211	Ethnomusicology
MUS 235	Music History I
MUS 236	Music History II
MUS 335	Music History III
PES 345	Philosophy of War and Peace
PHIL 211	Global Justice
PHIL 250	Introduction to Asian Philosophy
PHIL 260	African Philosophy
PHIL 275	Chinese Philosophy
PHIL 332	The Age of Ideology
PHIL 345	Philosophy of War & Peace
PHIL 366	Existentialism
PHIL 376	Buddhist Philosophy
POL 125	Intermediate Polish I
POL 126	Intermediate Polish II
PS 104	The World's Political Systems
PS 235	International Relations
PS 336	West European Governments
PS 338	International Organization
PS 339	International Law
PS 345	International Terrorism
PS 380	International Conflict and Security
PS 420	Government and Politics of Latin America

PS 421	Government and Politics of Africa
PS 425	Asian Politics
PS 434	Government and Politics of the Middle East and North Africa
PS 435	Russian and Eastern Europe
PSY 350	Cross-Cultural Psychology
REL 110	World Religions
REL 250	Japanese Religion
REL 256	Philosophy, Religion, and Spirituality
SET 490	Topics in International Field Studies
SOC 424	Genocide and the Modern World
SOC 426	Sociology of Revolution
SOC 428	Globalization and Its Discontents
SOC 494	Sociological Fields Abroad
SPAN 123	Basic Spanish Review
SPAN 125	Intermediate Spanish I
SPAN 126	Intermediate Spanish II
SPAN 128	Intensive Intermediate Spanish I
SPAN 190	Language for Heritage Speakers of Spanish I
SPAN 191	Language for Heritage Speakers of Spanish II
SPAN 225	Intermediate Spanish III
SPAN 226	Intermediate Spanish IV
SPAN 261	Business Spanish
SPAN 290	Hispanic Culture for Heritage Speakers of Spanish I
SPAN 291	Hispanic Culture for Heritage Speakers of Spanish II
SPAN 300	Literary Analysis
SPAN 304	Introduction to Spanish Literature I [L]
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



FYE HOME

FACULTY TRAINING

STUDENT RESOURCES

TEACHING RESOURCES

LIBRARY RESOURCES

FYE COMMITTEE

RELATED LINKS

HISTORY OF FYE

LEARNING OUTCOMES

ASSESSMENT & RESEARCH

PEER LEADERS

CONTACT

First Year Experience @ CCSU

An Overview

“FYE (First Year Experience) is the combination of all of the services, programs, curricular and co-curricular activities that supports a student’s transition from high school to college as well as provides a foundation for academic success at a particular institution.”¹ While most of us think of FYE as a course offering at CCSU, the national perspective on FYE is much more comprehensive. It begins at admission and continues through the completion of the first year of college. Among the many common first year experiences at CCSU are the summer advising day, opening orientation, welcome week activities, an ‘FYE’ curricular experience, a course advising experience, faculty-student contact outside of the classroom, and academic achievement in their courses. It may also include experiences with residential life, the financial aid process, on or off campus employment, athletics, and co-curricular activities.

¹(Approaches to Improving First Year Student Experiences, Joni Petschauer, Academic Impressions Webcast, 11/8/07)

Curricular models eligible for FYE designation

Required for all students who enter with fewer than 15 credits and to be taken in the student’s first semester.

- I. [FYE 101](#) (a graded 1 credit course) linked with another course.
- II. General education course with embedded competencies and skills necessary to make a successful transition to college as articulated in the [learning outcomes of FYE 101](#)
- III. “First Year majors only” course with embedded competencies and skills necessary to make a successful transition to college as articulated in the [learning outcomes of FYE 101](#)
- IV. The Honors Program ([click here for further information](#))
- V. [Learning Communities](#) (linked with FYE 101 or FYE embedded between the two linked courses)
- VI. [First Year Seminar courses](#) (with special topics for first-year students)

In these courses, students will discuss academic and related issues and learn about campus resources relevant to first-year students as they make the transition from high school to college learning environments.

Central Connecticut State University | PO Box 4010 | 1615 Stanley Street | New Britain, Connecticut 06050-4010

Central Connecticut State University | 1615 Stanley Street, New Britain, CT 06050
860.832.CCSU or toll free instate 1-888-733-CCSU

Copyright © 2007 [Central Connecticut State University]. All rights reserved.
webmaster@ccsu.edu

Major in Accounting, BS (30 credits)

Admission Requirements

Accounting Foundation (21 credits)

AC 300 Foundations of Accounting: The Profession, Processes, and Analysis	3
AC 301 Cost Management Systems	3
AC 302 Introduction to Income Taxation	3
AC 312 Financial Reporting I	3
AC 313 Financial Reporting II	3
AC 340 Accounting Information Systems	3
AC 445 Auditing	3

Directed Accounting Electives (9 credits)

Select three courses from the following:

AC 311 Accounting Applications	3
AC 402 Fundamentals of Corporate Taxation	3
AC 404 Taxation of Business Pass-Through Entities	3
AC 407 Advanced Accounting	3
AC 410 Fraud Examination	3
AC 420 Managerial Analysis & Cost Control	3
AC 421 Accounting for Lean Enterprises	3
AC 430 Accounting for Non-Profit Organizations	3
AC 455 Internal Auditing	3
AC 490 Current Accounting Topics	3
AC 497 Independent Study	3
AC 498 Internship in Accounting	3
LAW 400 Advanced Business Law	3
FIN 301 Intermediate Managerial Finance	3

Major in Anthropology, BA (39 credits)

ANTH 150 Introduction to Archaeology	3
ANTH 160 Introduction to Biological Anthropology	3
ANTH 170 Introduction to Cultural Anthropology	3
ANTH 335 Theories of Human Evolution and Behavior	3
ANTH 340 Theories of Culture	3
ANTH 374 Field Research Methods	3
ANTH 375 Anthropological Data Analysis	3
ANTH 490 Senior Thesis	3

and 3 credits from the following:

ANTH 401 City Life and Culture	3
ANTH 416 Archaeology of Africa	3
ANTH 418 New England Prehistory	3
ANTH 420 African Diaspora Archaeology	3
ANTH 422 Native Americans	3
ANTH 424 Peoples and Cultures of Africa	3
ANTH 426 People and Cultures of Eastern Europe	3
ANTH 428 Cultures of Latin America	3

and one course from the following:

ANTH 433 Independent Study in Anthropology	1-3
ANTH 437 Internship in Anthropology	3
ANTH 451 Field School in Cultural Anthropology	3-6

and 9 credits from elective courses in anthropology, with all of the electives at the 300 level or higher. A minor is required for this major.

Major in Art, BA (60 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 216 Modern Art	3
ART 261 Sculpture	3
ART 230 Drawing II	3

Individual Planned Program of Study (18 credits)

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.

Directed Electives or a Minor in a field outside of the Department of Art (18 credits)

Major-related electives, selected in consultation with advisor, or a minor in another department

Capstone (3 credits)

ART 499 Capstone in Art 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.

Major in Athletic Training, BS (not certifiable for teaching)

73 credits as follows:

Lecture Courses (58 credits)

EXS 110	Concepts in Health & Fitness	3
EXS 112	Introduction to Athletic Training	2
EXS 207	Anatomy and Physiology in Exercise Science I	4
EXS 208	Anatomy and Physiology in Exercise Science II	4
EXS 216	Kinesiology	3
EXS 217	Care and Treatment of Athletic Injuries	3
EXS 218	Scientific Basis for Athletic Training	4
EXS 240	Therapeutic Modalities in Athletic Training	4
EXS 307	Human Nutrition	3
EXS 317	Therapeutics in Athletic Training	4
EXS 332	Psychological Aspects of Sport	3
EXS 408*	Physiology of Sport and Exercise	3
EXS 409	Clinical Exercise Physiology	3
EXS 413*	Organization and Administration of Athletic Training	3
EXS 415*	Fitness Assessment and Exercise Prescription	3
EXS 421*	Pharmacology in Sports Medicine	3
BMS 380	Emergency Medical Technician (EMT)	6

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

* Require admission to the professional program prior to enrollment

Related Requirements: BIO 111 or BIO 121 or BMS 102 or BMS 111; CHEM 111 or CHEM 150 or CHEM 161/162; PHYS 111 (all with C- or better); also ENG 110, COMM 140, CS 115, PSY 236, STAT 104.

No minor is required for this major.

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 certified athletic trainer. 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 21 for fall candidates and February 21 (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 athletic training education program. Acceptance into the professional program should be completed by the second semester sophomore year. Students not meeting this deadline must meet with the program director to continue in the professional program.

- Completion of application to the professional program for athletic training;
- Successful completion of 200 observation hours in the clinical aspect of athletic training at CCSU;
- Completion of 45 credits of academic work at CCSU as an athletic training major;
- Successful completion of EXS 112, EXS 213, and EXS 217 (at CCSU), with a grade of C- or better in all courses;
- Successful completion of BMS 380, or EMT-B certification;
- University GPA of 2.50;

- Departmental GPA of 2.50;
- Two letters of recommendation (from persons who can best assess the candidate's potential);
- 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 (500-750 words); and
- An interview with the personnel committee of the Department of Physical Education and Human Performance, including at least one clinical supervisor.

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, the following requirements must be maintained in order to remain in "good standing" within the athletic training education program.

- Students must receive a letter grade of C or higher in all professional program courses;
- Students must maintain a University GPA of 2.50;
- Students must maintain a departmental GPA of 2.50;
- Students must successfully demonstrate required clinical skill competencies; and
- Students must have a current state of Connecticut or National Registry EMT-B Certification.

If a candidate drops below the required GPA levels and/or fails to complete the clinical skill competencies, he or she may be denied enrollment to professional program courses, practicum courses, and internship assignments until the GPA or competencies reach the appropriate level.

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.

Transfer Students Policy Transfer students must meet the same course requirements and application procedures as CCSU students. 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, at CCSU, EXS 112: Introduction to Athletic Training, and EXS 217: Care and Treatment of Athletic Injuries.

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 a given year.

For acceptance into the athletic training education program, transfer students must complete a required (minimum) 200 clinical hours.

Major in Biochemistry, BS

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.

Major in Biochemistry, BS (Non-teaching, 56-58 credits)

Biochemistry Core Requirements (37 credits)

BMS 102	Introduction to Biomolecular Science	3
BMS 103	Introduction to Biomolecular Science Laboratory	1
BMS 190	Introduction to Research I	0.5
BMS 201	Principles of Cell and Molecular Biology	4
BMS 290	Introduction to Research II	0.5
CHEM 161	General Chemistry I	3
CHEM 162	General Chemistry I Laboratory	1
CHEM 163	General Chemistry II	3
CHEM 164	General Chemistry II Laboratory	1
CHEM 301	Analytical Chemistry	4
CHEM 210	Organic Chemistry I	3
CHEM 211	Organic Chemistry I Laboratory	1
CHEM 212	Organic Chemistry II	3
CHEM 213	Organic Chemistry II Laboratory	1
CHEM 316	Spectrometric Identification of Organic Compounds	3
CHEM 320	Biophysical Chemistry	3
CHEM 432	Chemistry Seminar	2

Directed Electives (10-12 credits)

One course chosen from:

BMS 306	Genetics	4
BMS 307	Genomics	4
BMS 311	Cell Biology	4
BMS 316	Microbiology	4

and 6-8 additional credits chosen from the 300-level BMS courses listed above or from the following:

BMS 415	Advanced Exploration in Cell, Molecular, and Physiological Biology	3
BMS 490	Topics in Biomolecular Sciences	3
BMS 495	Capstone in Molecular Biology	4
CHEM 456	Toxicology	3

Research Requirements (2 credits)

Two credits of research chosen from any of BMS 390, 491, CHEM 238, or 438 (although a two-semester sequence of BMS 390 and 491, or CHEM 238 and 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.

Capstone Courses (7 credits)

CHEM 458	Advanced Biochemistry	3
CHEM 455	Biochemistry/Laboratory	1

and one of the following courses:

BMS 496 Capstone in Biosynthesis, Bioenergetics, and Metabolic Regulation 3

OR

CHEM 354 Biochemistry 3

Related Requirements (12 credits)

MATH 152 Calculus I 4

PHYS 121 OR 125 General OR University Physics I 4

PHYS 122 OR 126 General OR University Physics II 4

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 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 Developmental Biology 3

BMS 570 Advanced Genetics 3

CHEM 551 Topics in Biochemistry 3

BS in Biochemistry (American Chemical Society Certified) (58 credits)

Biochemistry Core Requirements (37 credits)

BMS 102	Introduction to Biomolecular Science	3
BMS 103	Introduction to Biomolecular Science Laboratory	1
BMS 190	Introduction to Research I	0.5
BMS 201	Principles of Cell and Molecular Biology	4
BMS 290	Introduction to Research II	0.5
CHEM161	General Chemistry I	3
CHEM 162	General Chemistry I Laboratory	1
CHEM 163	General Chemistry II	3
CHEM 164	General Chemistry II Laboratory	1
CHEM 301	Analytical Chemistry	4
CHEM 210	Organic Chemistry I	3
CHEM 211	Organic Chemistry I Laboratory	1

CHEM 212 Organic Chemistry II	3
CHEM 213 Organic Chemistry II Laboratory	1
CHEM 316 Spectrometric Identification of Organic Compounds	3
CHEM 320 Biophysical Chemistry	3
CHEM 432 Chemistry Seminar	2

Biochemistry Core plus an additional 8 credits in Chemistry

CHEM 322 Physical Chemistry of Quantum & Statistical Mechanics	3
CHEM 323 Physical Chemistry Lab	1
CHEM 402 Instrumental Methods in Analytical Chemistry	4

Directed Electives (4 credits)

One course chosen from:

BMS 306 Genetics	4
BMS 307 Genomics	4
BMS 311 Cell Biology	4
BMS 316 Microbiology	4

Research Requirements (2 credits)

CHEM 238* Introduction to Research	1
CHEM 438** Undergraduate Research	1

* BMS 390 may be substituted

**BMS 491 may be substituted

Capstone Courses (7 credits)

CHEM 354 Biochemistry	3
CHEM 458 Advanced Biochemistry	3
CHEM 455 Biochemistry/Laboratory	1

Related Requirements (16 credits)

MATH 152 Calculus I	4
MATH 221 Calculus II	4
PHYS 125 University Physics I	4
PHYS 126 University Physics II	4

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 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 Developmental Biology 3

BMS 570 Advanced Genetics 3

CHEM 551 Topics in Biochemistry 3

Major in Biology, BS (Non-teaching)

Biology Core (15-20 credits):

BIO 121 General Biology I	4
BIO 122 General Biology II	4
BIO 200 Integrative Biology	4
BIO 290 Biology Research Experience I	2
BIO 390 Biology Research Experience II	1
or	
BIO 391 Internship in Biology	1-6

General Biology (32 total credits in biology required)

Biology core, plus 12-17 credits of any other 200-level or higher BIO or BMS courses. 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 (28-30 credits):

MATH 124 Applied Calculus with Trigonometry	4
or	
MATH 152 Calculus I	4
or	
MATH 125 Applied Calculus	3
and	
MATH 115 Trigonometry	3
CHEM 161 General Chemistry I	3
CHEM 162 General Chemistry I Lab	1
CHEM 163 General Chemistry II	3
CHEM 164 General Chemistry II Lab	1
CHEM 210 Organic Chemistry I	3
CHEM 211 Organic Chemistry I Lab	1
CHEM 212 Organic Chemistry II	3
CHEM 213 Organic Chemistry II Lab	1
PHYS 121 General Physics I	4
and	
PHYS 122 General Physics II	4
or	
PHYS 125 University Physics I	4
and	
PHYS 126 University Physics II	4

This program includes consideration of all the major concepts and areas of biology. Students are encouraged to see connections in biological processes from the standpoint of all sciences. Students may select different courses to build on the knowledge gained in their first and second years of study and design a biology curriculum that suits their interests. With this degree, students may enter careers in research, health-related fields, industry, or graduate study in biology.

Specialization in Ecology, Biodiversity, and Evolutionary Biology (32 total credits in biology)

Biology core, plus 12-17 credits as follows:

One of the following:

BIO 402 Evolutionary & Ecological Genetics	3
BIO 405 Ecology	4
BIO 434 Ecology of Inland Waters	4

BIO 440 Evolution	3
BIO 480 Animal Behavior	3

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 Aquatic Plant Biology	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	2
BIO 402 Evolutionary & Ecological Genetics	3
BIO 315 Microbial Ecology	4
BIO 322 Vertebrate Zoology	4
BIO 326 Mushrooms, Mosses, & More	4
BIO 327 Vascular Plants	4
BIO 405 Ecology	4
BIO 410 Ecological Physiology	4
BIO 420 Ornithology	4
BIO 421 Marine Invertebrate Biology	4
BIO 425 Aquatic Plant Biology	4
BIO 434 Ecology of Inland Waters	4
BIO 436 Environmental Resources and Management	3
BIO 438 Aquatic Pollution	4
BIO 440 Evolution	3
BIO 444 Plant Taxonomy	3
BIO 469 Entomology	4
BIO 470 Field Studies in Biology	1-4
BIO 471 International Field Studies in Biology	1-4
BIO 480 Animal Behavior	3
BIO 488 Animal Behavior Laboratory	2
BIO 489 Vertebrate Dissection	2
BIO 490** Topics in Biology	3-4
BIO 491** Advanced Studies in Biology	1-3
BIO 499** Undergraduate Thesis in Biology	1

**with a topic focus approved by the E/B/E faculty advisor

Related Requirements (28-30 credits):

MATH 124 Applied Calculus with Trigonometry	4
or	
MATH 152 Calculus I	4
or	
MATH 125 Applied Calculus	3

and

MATH 115 Trigonometry	3
CHEM 161 General Chemistry I	3
CHEM 162 General Chemistry I Lab	1
CHEM 163 General Chemistry II	3
CHEM 164 General Chemistry II Lab	1
CHEM 210 Organic Chemistry I	3
CHEM 211 Organic Chemistry I Lab	1
CHEM 212 Organic Chemistry II	3
CHEM 213 Organic Chemistry II Lab	1
PHYS 121 General Physics I	4

and

PHYS 122 General Physics II	4
-----------------------------	---

or

PHYS 125 University Physics I	4
-------------------------------	---

and

PHYS 126 University Physics II	4
--------------------------------	---

This 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.

Specialization in Environmental Science (32 total credits in biology required)

Biology core, plus 12-17 credits as follows :

BIO 436	Environmental Resources and Management	3
---------	--	---

or

BIO 438	Aquatic Pollution	4
---------	-------------------	---

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	Aquatic Plant Biology	4
BIO 444	Plant Taxonomy	3

One of the following:

BIO 331	Neurobiology	4
BIO 410	Ecological Physiology	4
BIO 412	Human Physiology	3

and

BIO 413	Human Physiology Lab	1
BIO 449	Plant Physiology	3

and

BIO 450	Investigations in Plant Physiology	1
BIO 405	Ecology	4

or

BIO 434	Ecology of Inland Waters	4
BIO electives to complete 32 credits		
Related Requirements (38-41 credits):		
MATH 124	Applied Calculus with Trigonometry	4
or		
MATH 152	Calculus I	4
or		
MATH 125	Applied Calculus	3
and		
MATH 115	Trigonometry	3
CHEM 161	General Chemistry I	3
CHEM 162	General Chemistry I Lab	1
CHEM 163	General Chemistry II	3
CHEM 164	General Chemistry II Lab	1
CHEM 210	Organic Chemistry I	3
CHEM 211	Organic Chemistry I Lab	1
CHEM 212	Organic Chemistry II	3
CHEM 213	Organic Chemistry II Lab	1
CHEM 301	Analytical Chemistry	4
CHEM 406	Environmental Chemistry	3
ESCI 121	Physical Geology	4
or		
ESCI 450	Environmental Geology	3
PHYS 121	General Physics I	4
and		
PHYS 122	General Physics II	4
or		
PHYS 125	University Physics I	4
and		
PHYS 126	University Physics II	4

This 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.

Major in Biomolecular Sciences, BS (Non-teaching, 35 credits)

Core (11 credits):

BMS 102* Introduction to Biomolecular Science	3
BMS 103* Introduction to Biomolecular Science Laboratory	1
BMS 190 Introduction to Research I	0.5
BMS 201 Principles of Cell and Molecular Biology	4
BMS 290 Introduction to Research II	0.5
BMS 390 Independent Research in Biomolecular Science	1
BMS 491 Advanced Independent Research in Biomolecular Science 1-3	

and either the General Program or the Biotechnology Specialization, which follow.

*BIO 121 may be substituted for BMS 102/103.

General Program

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 or for graduate study in such areas as genetics, microbiology, molecular biology, or cell physiology.

This program requires completion of the core, plus three laboratory courses.

General Program Requirements

BMS 306 Genetics	3
or	
BMS 307 Genomics	4
BMS 311 Cell Biology	4
BMS 316 Microbiology	4

Directed Electives (additional credits to total 35 credits in the major, chosen from the following):

BMS 306 Genetics	3
BMS 307 Genomics	4
BMS 308 Genetics Laboratory	1
BMS 318 Anatomy and Physiology I	4
BMS 319 Anatomy and Physiology II	4
BMS 320 Histology	2
BMS 321 Experimental Developmental Biology	2
BMS 322 Comparative Animal Physiology	4
BMS 340 Biomolecular Techniques	2
BMS 380 Emergency Medical Technician (3 credits only of this 6-credit course)	3
BMS 391 Internship in Biomolecular Science	1-3
BMS 412 Human Physiology	3
BMS 413 Human Physiology Laboratory	1
BMS 414 Pharmacology, Physiology, and Drug Development	3
BMS 415 Advanced Exploration in Cell, Molecular, and Physiological Biology	3
BMS 416 Experimental Microbiology	2
BMS 490 Topics in Biomolecular Sciences	1-4
BMS 492 Mentorship in Biomolecular Science	1
BMS 495 Capstone in Molecular Biology	4
BMS 496 Capstone in Biosynthesis, Bioenergetics and Metabolic Regulation	3
BMS 497 Biosynthesis, Bioenergetics and Metabolic Regulation Laboratory	1
BMS 499 Undergraduate Thesis in Biomolecular Sciences	1

CHEM 320 Biophysical Chemistry	3
CHEM 354 Biochemistry	3
CHEM 455 Biochemistry Laboratory	1
CHEM 456 Toxicology	3
CHEM 458 Advanced Biochemistry	3
BIO 530 Immunology	3
BIO 449 Plant Physiology	3
BIO 450 Investigations in Plant Physiology	1

Biotechnology Specialization

This program offers a strong focus on the principles of cell and molecular biology and emphasizes the practice of biomolecular research. It is designed to prepare students for advanced study in the biomolecular sciences or careers that use the concepts and techniques of molecular and cellular biology.

This program requires completion of the core, plus four laboratory courses, including:

Biotechnology Specialization Requirements

BMS 306 Genetics	4
or	
BMS 307 Genomics	4
BMS 311 Cell Biology	4
BMS 316 Microbiology	4
BMS 495 Capstone in Molecular Biology	4

Directed Electives

BMS 306 Genetics	4
BMS 307 Genomics	4
BMS 320 Histology	2
BMS 321 Experimental Developmental Biology	2
BMS 340 Biomolecular Techniques	2
BMS 391 Internship in Biomolecular Science	1-3
BMS 415 Advanced Exploration in Cell, Molecular, and Physiological Biology	3
BMS 416 Experimental Microbiology	2
BMS 490 Topics in Biomolecular Sciences	3-4
BMS 496 Capstone in Biosynthesis, Bioenergetics, and Metabolic Regulation	3
BMS 497 Biosynthesis, Bioenergetics and Metabolic Regulation Laboratory	1
BMS 499 Undergraduate Thesis in Biomolecular Sciences	1
CHEM 354 Biochemistry	3
CHEM 455 Biochemistry Laboratory	1
CHEM 456 Toxicology	3
CHEM 458 Advanced Biochemistry	3
BIO 449 Plant Physiology	3
BIO 450 Investigations in Plant Physiology	1

Related Requirements (16-28 credits)

In addition to the 35 credits in the major, made up of the core and one of the advanced components described above, the student must take:

MATH 119 Pre-Calculus with Trigonometry	4
MATH 125 Applied Calculus	3
or	
MATH 152 Calculus I	4
CHEM 161 General Chemistry I	3

CHEM 162 General Chemistry I Lab	1
CHEM 163 General Chemistry II	3
CHEM 164 General Chemistry II Lab	1
CHEM 210 Organic Chemistry I	3
CHEM 211 Organic Chemistry I Laboratory	1
CHEM 212 Organic Chemistry II	3
CHEM 213 Organic Chemistry II Laboratory	1
PHYS 121 General Physics I	4
PHYS 122 General Physics II	4

Students must also maintain a student portfolio. While no minor is required for the BS in biomolecular sciences, a minor in science may be elected with a C- or better in related requirement courses CHEM 161, 162, 163, 164, PHYS 121, and 122. Some related requirement courses may also be counted to fulfill appropriate portions of the student's general education program.

Cross-listed Courses

BMS 318, 319, 412, and 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 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 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:

BMS 500 Seminar in Biomolecular Science	1
BMS 516 Medical Microbiology	3
BMS 519 Physiology of Human Aging	3
BMS 540 Advanced Topics in Biomolecular Science	3-4
BMS 562 Developmental Biology	3
BMS 570 Advanced Genetics	3

Major in Chemistry, BS (General Program)

Chemistry Core (27 credits)

CHEM 161 General Chemistry I	3
CHEM 162 General Chemistry I Lab	1
CHEM 163 General Chemistry II	3
CHEM 164 General Chemistry II Lab	1
CHEM 210 Organic Chemistry I	3
CHEM 211 Organic Chemistry I Lab	1
CHEM 212 Organic Chemistry II	3
CHEM 213 Organic Chemistry II Lab	1
CHEM 238 Introduction to Research	1
CHEM 301 Analytical Chemistry	4
CHEM 316 Spectrometric Identification of Organic Compounds	3
CHEM 432 Chemistry Seminar	2
CHEM 438 Undergraduate Research	1

BS in Chemistry

Chemistry core plus 10 credits selected from the following.

Choose 3 credits from:

CHEM 354 Biochemistry

OR

CHEM 406 Environmental Chemistry

OR

CHEM 485 Topics in Chemistry

Choose 3 credits from:

CHEM 320 Biophysical Chemistry

OR

Chem 321 Physical Chemistry of Thermodynamics & Kinetics

OR

CHEM 322 Physical Chemistry of Quantum & Statistical Mechanics

Choose 4 credits from:

CHEM 402 Instrumental Methods in Analytical Chemistry

OR

Choose 3 credits from:

CHEM 460 Inorganic Symmetry & Spectroscopy

OR

CHEM 461 Descriptive Inorganic Chemistry

WITH

1 additional credit from:

Chem 323 Physical Chemistry Lab

OR

CHEM 455 Biochemistry Lab

OR

CHEM 462 Inorganic Chemistry Lab

Related Requirements (16 credits):

PHYS 121 OR 125 General OR University Physics I 4

PHYS 122 OR 126 General OR University Physics II 4

MATH 119 Pre-Calculus with Trigonometry 4

MATH 152 Calculus I 4

A minor is not required for this major.

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 22 credits as follows:

CHEM 321 Physical Chemistry of Thermodynamics & Kinetics 3

CHEM 322 Physical Chemistry of Quantum & Statistical Mechanics 3

CHEM 323 Physical Chemistry Lab 1

CHEM 354 Biochemistry 3

CHEM 402 Instrumental Methods in Analytical Chemistry 4

CHEM 455 Biochemistry Lab 1

CHEM 460 Inorganic Symmetry & Spectroscopy 3

CHEM 461 Descriptive Inorganic Chemistry 3

CHEM 462 Inorganic Chemistry Lab 1

Related Requirements (19-20 credits)

PHYS 125 University Physics I 4

PHYS 126 University Physics II 4

MATH 152 Calculus I 4

MATH 221 Calculus II 4

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

A minor is not required for this major.

Major in Civil Engineering Technology, BS (130 credits minimum)

Accredited by TAC of ABET

Advisors: S.C. Basim, P.E. (860-832-1807) and C. Anderson, P.E. (860 832-1849)

This major provides students with a background in design support, construction, and maintenance of the infrastructure. Graduates may work in consulting firms, construction organizations, testing laboratories, municipal governments, and utility companies. Emphasis is on the areas of surveying, materials, structures, and use of the computer in the civil and construction industries. Students must complete the coursework in four categories: general education, major requirements, directed electives, and additional requirements.

Core Requirements (60 credits)

ENGR 150	Introduction to Engineering	3
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
ETC 122	Introduction to CAD for AEC I	3
ETC 353	Introduction to Engineering Surveying	
or		3
CM 353	Introduction to Surveying	
ETC 397	Structural Analysis	3
ETC 451	Soil Mechanics and Foundations	3
ETC 454	Introduction to Transportation Engineering	3
ETC 457	Advanced Surveying	3
or		
ETC 458	GPS Mapping for GIS	3
ETC 470	Structural Steel Design	3
ETC 471	Reinforced Concrete Structures	3
ETC 475	Hydrology and Storm Drainage	3
ETC 497	Civil Technical Practice and Senior Project Research	2
ETC 498	Civil ET Senior Project (Capstone)	2

Students in ETC 498 must register to take the NCEES Fundamentals of Engineering (FE) examination.

Directed Electives (2-9 credits)

The following courses, selected in consultation with an academic advisor, satisfy the directed technical electives requirement:

ETC 472	Timber Structures	3
ETC 476	Environmental Technology	3
ET 495	Topics in Engineering Technology	3
CM 155	Construction Documents	3
CM 455	Construction Project Management	3
GEOG 378	Geographic Information Systems	3
CET 113	Introduction to Information Processing	3
ENGR 490	Fundamentals of Engineering (FE)	3

Additional Requirements (30 credits)

CET 236	Circuit Analysis	3
CHEM 161	General Chemistry I	3
CHEM 162	General Chemistry I Laboratory	1
CM 356	Materials of Construction	4

ET 240	Spreadsheet and Engineering Problem Solving Tools	
or		3
CS 213	Applications of Computing I	
ETM 358	Applied Thermodynamics	3
MATH 119	Pre-Calculus with Trigonometry	4
or		
MATH 116	Pre-Calculus Mathematics	3
STAT 104	Elementary Statistics	3
ENG 403	Technical Writing	3

Electives (3 credits, unrestricted)

General Education Requirements for Engineering Technology (ET) Majors (40-49 credits)

Study Area I: Arts & Humanities	9
3 credits of literature and 6 credits of literature, philosophy, or fine arts. No more than 6 credits from any one discipline.	
Study Area II: Social Sciences	6
3 credits of history and 3 credits of economics, geography, history, or political science or ET 399 (Engineering Economy)	
Study Area III: Behavioral Sciences	3
3 credits of anthropology, psychology, or sociology	
Study Area IV: Natural Sciences	8
PHYS 121 or 125**; PHYS 122 or 126**	
Skill Area I: Communication Skills	6
ENG 110* and COMM 140	
Skill Area II: Mathematics	6-8
MATH 135 or MATH 152**; MATH 136 or MATH 221**	
Skill Area III: Foreign Language Proficiency	0-6
Skill Area IV: University Requirement	2-3
PE 144 (or ENGR 150 for transfer students)	

* Placement exam may be required before enrolling in English or mathematics courses.

** Recommended

ADMISSIONS TIMETABLE

The CCSU Department of Engineering will be phasing-out the Civil Engineering Technology program over the next few years and transitioning to the Civil Engineering program. The department will continue to admit students to the Civil Engineering Technology program under the following schedule:

Status of admitted student Last start date of study

- High school graduate/first year Fall 2010
- Community college transfer (with 30 semester credits at date of entry) Fall 2011
- Community college transfer (with a two-year associates degree in Engineering Science or Technological Studies) Fall 2012

Major in Civil Engineering, BS (127 credits minimum)

Advisors: C. Anderson, P.E., D.WRE (860-832-1849), S. Basim, PE (860-832-1807), and B. Zhou, E.I. (860-832-0075)

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 built 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.

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.

General Education Requirements (40-49 credits)

Study Area I: Arts & Humanities

Literature	3
Philosophy or fine arts	3
Literature, philosophy or fine arts	3

Study Area II: Social Sciences

History	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

ENG 110* Freshman Composition	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	0-6
--	-----

Skill Area IV: University Requirement	2-3
---------------------------------------	-----

PE 144 Fitness/Wellness Ventures	
----------------------------------	--

or for transfer students

ENGR 150 Introduction to Engineering	
--------------------------------------	--

* A placement exam may be required before enrolling in English or Mathematics courses.

Major Requirements (53 credits, 50 for transfer students taking ENGR 150 as Skill Area IV)

ENGR 150	Introduction to Engineering	3
ENGR 251	Engineering Mechanics I - Statics	3
ENGR 252	Engineering Mechanics II - Dynamics	3
ENGR 257	Mechanics of Materials	3
ME 258	Engineering Thermodynamics	3
ME 354	Fluid Mechanics	3
CE 253	Intro to Engineering Surveying	3
CE 357	Advanced Surveying	3
or		
CE 458	GPS Mapping for GIS	3
CE 357	Hydraulic Engineering	3
CE 397	Structured Analysis	3
CE 451	Soil Mechanics & Foundations /w Lab.	4
CE 454	Intro. to transportation Engineering	3
CE 470	Structural Steel Design	3
CE 471	Reinforced Concrete Structures	3
CE 475	Hydrology and Storm Drainage	3
CE 476	Environmental Engineering	3
CE 497	Prof. Practice & Sr. Project Research	4
CE498	Senior Design Project - Capstone**	2

** Completion of CE 498 requires that students register to take the NCEES Fundamentals of Engineering (FE) Exam.

Additional Requirements (34 or 35 credits)

CET 236	Circuit Analysis	3
CHEM 161	General Chemistry I	3
CHEM 162	General Chemistry I Laboratory	1
ETM 356 or	Materials Analysis or	3
CM 356	Materials of Constuction	4
ENGR 240	Spreadsheet & Engr. Prob. Solving Tools	3
ETC 122	Intro. to CAD for AEC 1	3
MATH 226	Linear Algebra and Probability for Engineers	4
MATH 355	Introduction to Differential Equations w ith Applications	4
BIO or BMS or	Additional Science Elective w / Lab.	4
ESCI	BIO 121 or BMS 102/103 or ESCI 121)	
	Directed Technical Elective	3
	Directed Technical Elective	3

(Recommended: CE 472, CE 458, ENGR 490 or MATH 222)

Major in Communication, BA

39 credits in the department and related courses, including 9 credits of required courses within an emphasis area, 18 credits of departmental electives, and 12 credits of core requirements

COMM 140 Public Speaking	3
COMM 230 Introduction to Mass Media	3
COMM 240 Survey of the Field of Communication	3
and	
COMM 301 Critical Thinking	3
or	
COMM 302 Problem-Solving and Decision Making	3

As part of their 39 credit major, students must take a total of 21 credits from 300/400-level courses, with a minimum of 9 credits from 400-level courses.

Courses are grouped according to certain emphases within the broad field of communication, allowing the student the choice of an emphasis that is compatible with his or her aims and interests. These emphases are:

- Media production and performance (for students wishing to emphasize all aspects of the production of stories, including study in theoretical, critical, and aesthetic foundations as well as instruction in technical approaches and innovations in media production);
- Media studies (for students who want to gain a better understanding of the systems and institutions distributing mediated information in society);
- Promotion/public relations (for students who wish to develop communication skills for commercial, as well as non-commercial, employment in publicity, promotions, sales and corporate communication, and community services); and
- Organizational communication (for students interested in pursuing consulting or in serving as managers for private and public institutions). In addition to these educational and occupational opportunities, a student might choose to pursue directions which could lead to an advanced degree in communication.

In addition to the 12 credit core, each track has the following selected requirements:

Media Production and Performance Track

[In this track, students create documentaries, public service announcements, podcasts, websites, films, blogs and learn about new trends in the field of media, including formats in entertainment and news for delivery across platforms.]

Required courses (9 credits)

COMM 405 Principles and Processes of Mass Communication	3
COMM 330 Digital Film and Television Production	3
COMM 336 Media Literacy	3
or	
COMM 338 Analysis of News	3

Directed Electives

18 credits, of which at least 6 credits must be from a list of selected media production and performance courses.

Media Studies Track

[In this track, students focus primarily upon the critical, theoretical and aesthetical foundations of media and its institutions.]

Required courses (9 credits)

COMM 405 Principles and Processes of Mass Communications	3
COMM 330 Digital Film and Television Production	3
COMM 336 Media Literacy	3
or	
COMM 338 Analysis of News	3

Directed Electives

18 credits, of which at least 6 credits must be from a list of selected media studies courses.

Public Relations/Promotions Track

Required courses (9 credits)

COMM 215 Introduction to Interpersonal Communication	3
COMM 234 Introduction to Public Relations	3
COMM 443 Communication and Social Influence	3

Directed Electives

18 credits, of which at least 6 credits must be from a list of selected public relations courses).

Organizational Communication Track

Required courses (9 credits)

COMM 215 Introduction to Interpersonal Communication	3
COMM 253 Introduction to Organizational Communication	3
COMM 453 Organizational Communication	3

Directed Electives

18 credits, of which at least 6 credits must be from a list of selected organizational communication courses.

Students should obtain a Curriculum Guide Sheet from the Department of Communication to determine the appropriate departmental electives for their emphasis area.

The Department of Communication maintains a policy for continuation in the major. Communication majors must complete COMM 140 and COMM 240 (with a C- or better) before they reach 60 credits. Majors must maintain an overall GPA of 2.00 or better to stay in the major.

Curriculum Guide Sheets listing required and recommended courses for each emphasis are available in the department. A maximum of 6 credits in related courses from outside the department may be counted toward the major. Furthermore, completion of a minor in a related field of study in another department at the University is required. Students should complete a Program Change form as soon as possible to declare their minor.

Major in Computer Engineering Technology, BS (124 credits)

The BS in computer engineering technology (CET) was granted licensure in November 2004. The CET degree responds to the fact that computers and networks have been two of the leading technologies driving engineering job markets. As with many of the programs in the School of Technology, students explore hardware and software in a hands-on dedicated networking laboratory. Students will use computational methods, computers, and modern technical tools in engineering practice, in addition to learning about state-of-the-art technology in the areas of wired and wireless network communication, engineering design, advanced PC operating systems, internet technology, and computer programming.

As students gain knowledge of hardware and engineering processes and prepare to take industry-based certification exams, they can look forward to well-paying careers. Some will become systems administrators, network administrators, system designers, quality control engineers, and software developers. Others may find positions as information technologists, lab technicians, system maintenance experts, system testers, and help desk operators. There is a graduation requirement of a capstone assessment during a student's final year of study.

Core Requirements (27 credits)

ENGR 150	Introduction to Engineering	3
ET 251	Applied Mechanics I-Statics	3
ETM 260	CAD and Integrated Manufacturing	3
	or	
MFG 121	Technical Drafting & CAD	3
CHEM 161	General Chemistry I	3
ET 357	Strength of Materials	3
STAT 104	Elementary Statistics	3
ENG 403	Technical Writing	3
CS 151	Computer Science I	3
	or	
CS 213	Applications of Computing I	3
CS 152	Computer Science II	3
	or	3
CS 214	Applications of Computing II	3

Specialization Requirements (42 credits)

CEGT 200	Seminar	1
CET 113	Introduction to Information Processing	3
CET 201	Photonics Principles	3
CET 229	Computer Hardware Architecture	3
CET 236	Circuit Analysis	3
CET 249	Introduction to Networking Technology	3
CET 323	Electronic Circuits	3
CET 339	Computer System Administration	3
CET 346	Signals & Systems	3
CET 349	Networking Devices	3
CET 363	Digital Circuits	3
CET 449	Advanced Networking	3
CET 453	Microcomputers	3
CET 466	Logic Design	3
CET 497	Senior Seminar	1
CET 498	Senior Project (Capstone)	2

Directed Electives (8 credits)

Suggested directed electives. Other courses may be selected in consultation with an advisor.

CET 301	Fiber-Optics Communications	3
CET 459	Network Security Technologies	3
CET 479	Internet Technologies	3
CS 153	Computer Science III	3
	(MATH 152/221 required)	
ETM 356	Materials Analysis	3

General Education Requirements (44-46 credits)

Computer engineering technology majors are required to complete the following courses as part of their general education for all baccalaureate degree programs:

ENG 110	Freshman Composition	3
COMM 140	Public Speaking	3
MATH 135	Applied Engineering Calculus I	3
	and	
MATH 136	Applied Engineering Calculus II	3
	or	
MATH 152	Calculus I	4
	and	
MATH 221	Calculus II	4
PE 144	Fitness/Wellness Ventures	2
PHYS 121	General Physics I	4
	and	
PHYS 122	General Physics II	4
	or	
PHYS 125	University Physics I	4
	and	
PHYS 126	University Physics II	4

Major in Computer Science, BS (Alternative, Non-teaching, 38 credits)

This alternative major may be completed in as few as four semesters. A minor is required for this major.

30 credits of computer science courses, including:

CS 151 Computer Science I	3
CS 152 Computer Science II	3
CS 153 Computer Science III	3
CS 253 Data and File Structures	3
CS 254 Computer Organization and Assembly Language Programming	3

and 15 credits of computer science courses numbered CS 210 or higher.

8 credits in mathematics:

MATH 152 Calculus I	4
MATH 218 Discrete Mathematics	4

Major in Computer Science, BS (Honors) (Non-Teaching; CAC/ABET-accredited, 64 credits)

CORE COURSES (24 semester hours):

CS 151 Computer Science I	3
CS 152 Computer Science II	3
CS 153 Computer Science III	3
CS 253 Data and File Structures	3
CS 254 Computer Organization and Assembly Language Programming	3
CS 354 Digital Systems Design	3
CS 355 Introduction to Systems Programming	3
CS 385 Computer Architecture	3

ADVANCED ELECTIVES (12 semester hours) choice of 12 hours from:

CS 407 Advanced Topics in Computer Science	1-3
CS 410 Introduction to Software Engineering	3
CS 423 Computer Graphics	3
CS 425 Image Processing	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 473 Simulation Techniques	3
CS 481 Operating Systems Design	3
CS 483 Theory of Computation	3
CS 490 Computer Communications Networks & Distributing Processing	3
CS 491 Wireless Communication Networks	3
CS 492 Computer Security	3
CS 495 Legal, Social, Ethical, and Economic Issues in Computing	3

AUXILIARY ELECTIVES (4 semester hours) selected from the Advanced Electives or from the following:

Additional courses selected from the advanced directed electives listed above or from the following:

CS 290 Topics in Computer Science	1-3
CS 300 Computer Science Work Experience I	3
CS 301 Computer Science Work Experience II	3
CS 398 Independent Study in Computer Science	1-3
CS 498 Senior Project	1-3
CS 499 Seminar in Computer Science	3

MATH/STATISTICS (15 semester hours)

MATH 152 Calculus I	4
MATH 218 Discrete Mathematics	4
MATH 221 Calculus II	4
STAT 315 Mathematical Statistics I	3

SCIENCE/QUANTITATIVE (15 semester hours) A choice of one of the following sequences (8 hours):

BIO 121 General Biology I	4
BIO 122 General Biology II	4

or

CHEM 161 General Chemistry I 3

CHEM 162 General Chemistry I Lab 1

CHEM 163 General Chemistry II 3

CHEM 164 General Chemistry II Lab 1

or

ESCI 121 Physical Geology 4

ESCI 122 Historical Geology 4

or

PHYS 125 University Physics I 4

PHYS 126 University Physics II 4

PHILOSOPHY (3 semester hours): PHIL 245 (3) or PHIL 242 (3)

Computer science honors program majors are not required to complete a minor. Students in this honors program are required to take a proficiency test specified by the department during their senior year.

Major in Construction Management, BS (78 credits)

Accredited by ACCE

Advisors: J. Kovel (860-832-0192), R. J. Perreault (860-832-1836), L. Reeder (860-832-1835), E. Sarisley (860-832-1817)

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. This is a 130-credit program.

Core Requirements (57 credits)

CM 135	Construction Graphics/Quantity Take-Off	3
CM 155	Construction Documents	3
CM 235	Building Construction Systems	3
CM 245	Heavy/Highway Construction Systems	3
CM 275	Introduction to 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 435	Construction Superintendency	3
CM 455	Construction Project Management	3
CM 465	Construction Internship	3
CM 475	Construction Business Principles	3
CM 485	Construction Management Senior Seminar	1
ET 241	Applied Statics and Strength of Materials	3
ETC 122	Introduction to CAD for AEC I	3
ETC 405	Applied Structural Systems	3

Electives (0-6 credits, unrestricted)

Other Required Electives (21 credits):

AC 211	Introduction to Financial Accounting	3
CET 113	Introduction to Information Processing	3
ENG 403	Technical Writing	3
LAW 250	Legal Environment of Business	3
MGT 295	Fundamentals of Management and Organizational Behavior	3
MKT 295	Fundamentals of Marketing	3
MATH 125	Applied Calculus	3

Requirements in General Education (46-53 credits):

Study Area I: Arts & Humanities	9
3 credits of literature, 3 credits of arts and humanities, and PHIL 240	
Study Area II: Social Sciences	9
3 credits of history, and ECON 200 and 201	
Study Area III: Behavioral Sciences	6
3 credits of behavioral science and PSY 112	
Study Area IV: Natural Sciences	8
CHEM 161/162 or ESCI121, and PHYS 121	
Skill Area I: Communications Skills	6

ENG 110 and COMM 140

Skill Area II: Mathematics 6

MATH 115 or MATH 119, and STAT 200

Skill Area III: Foreign Language 0-6

Skill Area IV: University Requirement 2-3

PE 144

Additional Requirements

Students must complete an exit interview during April-May of the year of graduation.

Note: A total of 130 credits are required for the degree.

Major in Criminology, BA (39 credits)

CRM 110	Introduction to the Criminal Justice System	3
CRM 230	Law Enforcement And 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	3
and		
3 credits of a 200-level CRM elective;		
9 credits of 300-level electives;		
9 credits of 400-level CRM electives		
Related Requirements:		
PHIL 144	Moral Issues (w ith a grade of C- or higher)	3
and		
STAT 104	Elementary Statistics (w ith a grade of C- or higher)	3
or		
STAT 200	Business Statistics (w ith a grade of C- or higher)	3
or		
STAT 215	Statistics for Behavioral Sciences I (w ith a grade of C- or higher)	3

Major in Earth Sciences with Specialization in Earth Sciences, BS (Non-teaching, 36 credits)

ESCI 121 Physical Geology 4

ESCI 122 Historical Geology 4

ESCI 129 Introduction to Meteorology 4

ESCI 178 Planetary Astronomy 4

or

ESCI 179 Stellar Astronomy 4

ESCI 290 Field Methods in Geology 2

ESCI 335 Physical Oceanography 3

ESCI 360 Research Methods in the Earth Sciences 1

In addition, 1 to 3 credits of the following are required:

ESCI 460 Senior Project 1-3

or

ESCI 480 Internship in Earth Sciences 1-3

The remaining 11 to 13 credits will be selected in consultation with the student's advisor.

In addition, the following are required:

CHEM 161 General Chemistry I 3

CHEM 162 General Chemistry I Lab 1

CHEM 163 General Chemistry II 3

CHEM 164 General Chemistry II Lab 1

MATH 152 Calculus I 4

MATH 221 Calculus II 4

PHYS 125 University Physics I 4

PHYS 126 University Physics II 4

A minor is not required.

Major in Earth Sciences with Specialization in Geology, BS (Non-teaching, 36 credits)

ESCI 121 Physical Geology	4
ESCI 122 Historical Geology	4
ESCI 221 Mineralogy	4
ESCI 223 Stratigraphy and Sedimentology	4
ESCI 290 Field Methods in Geology	2
ESCI 321 Structural Geology	4
ESCI 322 Igneous and Metamorphic Petrology	4
ESCI 360 Research Methods in the Earth Sciences	1
ESCI 424 Geomorphology	4

In addition, 2 to 4 credits from ESCI 460 or 4 credits from an external geology field camp approved by the Department Chair are required.

The remaining 1 to 3 credits will be selected from:

ESCI 378 Comparative Planetology	3
ESCI 431 Introduction to Hydrogeology	4
ESCI 450 Environmental Geology	3
ESCI 478 Planetary Image Analysis	3
ESCI 480 Internship in Earth Sciences	1-3
ESCI 490 Topics in Earth Science	3-4

or other electives as selected in consultation with the student's advisor

In addition, the following are required:

CHEM 161 General Chemistry I	3
CHEM 162 General Chemistry I Lab	1
CHEM 163 General Chemistry II	3
CHEM 164 General Chemistry II Lab	1
MATH 152 Calculus I	4
MATH 221 Calculus II	4
PHYS 125 University Physics I	4
PHYS 126 University Physics II	4

A minor is not required.

Major in Economics, BA (30 credits)

Core (15 credits)

ECON 200 Principles of Economics I 3

ECON 201 Principles of Economics II 3

ECON 300 Macroeconomics 3

ECON 305 Microeconomics 3

ECON 308 Political Economy 3

And 15 credits of ECON electives:

In addition, students must take the following:

MATH 125 Applied Calculus 3

STAT 215 Statistics for Behavioral Sciences 3

Undergraduate Teacher Certification Programs

- [Elementary Education, BS](#)
- [Secondary Education and All Level Subjects, BS](#)

Elementary Education

- [English, BS \(Certifiable for elementary education\)](#)
- [General Science: Specialization in Biology or Earth Sciences \(Certifiable for elementary education\)](#)
- [Geography with Specialization in General/Regional Geography, BS \(Certifiable for elementary education\)](#)
- [History, BS \(Certifiable for elementary education\)](#)
- [Mathematics, BS \(Certifiable for elementary teaching\)](#)

Secondary Education

- [Biology, BS \(Certifiable for teaching grades 7-12\)](#)
- [Chemistry, BS \(Certifiable for secondary teaching\)](#)
- [Earth Sciences, BS \(Certifiable for secondary teaching\)](#)
- [English, BS \(Certifiable for secondary education\)](#)
- [French, BS \(Certifiable for secondary teaching\)](#)
- [General Science with Specialization in General Science, BS \(Certifiable for secondary teaching\)](#)
- [German, BS \(Certifiable for secondary teaching\)](#)
- [History, BS \(Certifiable for secondary teaching of history and social studies\)](#)
- [Italian, BS \(Certifiable for secondary teaching\)](#)
- [Mathematics, BS \(Certifiable for secondary teaching\)](#)
- [Physics, BS \(Certifiable for secondary teaching\)](#)
- [Social Sciences, BS \(Certifiable for secondary teaching\)](#)
- [Spanish, BS \(Certifiable for secondary teaching\)](#)
- [Social Science with Minor in Geography, BS \(Certifiable in social studies\)](#)

All Level Subjects (K-12)

- [Art Education, BS Ed](#)
- [Music Education, BS \(Certifiable for PK-12 teaching\)](#)
- [Physical Education, BS Ed](#)
- [Technology Education \(K-12\), BS](#)

Major in Electronics Technology, BS (122 credits)

Advisor: D. Zanella (860-832-1841)

Accredited by NAIT

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.

Core Requirements (24 credits)

TM 190	Introduction to Quality Assurance	3
TM 310	Industrial Safety	3
TM 362	Leadership Skills for Supervisors	3
TM 401	Industrial Internship	3
MGT 295	Fundamentals of Management and Organizational Behavior	3
ENG 403	Technical Writing	3
AC 210	Principles of Industrial Accounting	3
MKT 295	Fundamentals of Marketing	3

Specialization Requirements (30 credits)

CEGT 200	Seminar	1
CET 113	Introduction to Information Processing	3
CET 223	Basic Electrical Circuits	3
CET 233	Advanced Electrical Circuits	3
CET 323	Electronic Circuits	3
CET 363	Digital Circuits	3
CET 443	Electronic Communication	3
CET 453	Microcomputers	3
EMEC 303	Electromechanical Converters	3
MFG 121	Technical Drafting & CAD	3
CS 151	Computer Science I	3
or		
CS 213	Applications of Computing I	3

Directed Electives (8 credits)

Chosen with an advisor.

General Education Requirements (44-46 credits)

ENG 110	Freshman Composition	3
COMM 140	Public Speaking	3
STAT 104	Elementary Statistics	3
MATH 115	Trigonometry	3
ECON 201	Principles of Economics II	3
CHEM 111	Introductory Chemistry	3
PHYS 111	Introductory Physics I	3

Note: A minor is not required for this major.

Major in English, BA (42 credits)

15 credits as follow :

ENG 298 Introduction to Literary Studies	3
ENG 398 Studies in Literary Theory and Research	3
ENG 205 Survey of British Literature: Middle Ages to the 18 th Century	3
ENG 210 Survey of American Literature: Pre-Civil War	3
ENG 203 Survey of World Literature: Ancient to Early Modern	3
or	
ENG 204 Survey of World Literature: 17 th Century to the Present	3

3 credits from the follow ing:

ENG 203 Survey of World Literature: Ancient to Early Modern	3
ENG 204 Survey of World Literature: 17 th 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

and 3 credits from the follow ing:

LING 200 Introduction to Linguistics	3
LING 230 The Study of Language	3
LING 400 Linguistics Analysis	3
LING 430 Studies in Linguistics & the English Language	3
LING 431 The History of the English Language	3

In addition, 24 credits* on the 300-400 level as follow s:

6 credits in British literature, at least one in a period preceding 1798 and at least one in a period follow ing 1798; 6 credits in American literature, one in a period preceding 1865 and one in a period follow ing 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 (ENG 372, 374, 375, 401, 483, 484, 485; 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, 358, 388, 448, 458, 449, and 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.

A minor is required for this major.

*Depending on its topic, ENG 398 may count as one of the 300-400 level required or elective literature courses.

Major in Finance, BS

Admission Requirements

Majors in finance must complete the 27-credit common business core requirements plus the following 30 credits.

Finance Core

FIN 301	Intermediate Managerial Finance	3
FIN 310	Principles of Investments	3
FIN 320	Financial Markets and Institutions	3
	Directed finance electives	12
	Finance, accounting, or economics electives	9

Directed Finance Electives (12 credits)

The finance program requires completion of 12 credits selected from the following list of courses. Consultation with an advisor is recommended if the student wishes to pursue a specific specialization or career goal.

FIN 321	Insurance	3
FIN 330	International Finance	3
FIN 400	Advanced Managerial Finance	3
FIN 410	Securities Analysis	3
FIN 411	Financial Statement Analysis	3
FIN 420	Bank Management	3
FIN 422	Risk Management	3
FIN 425	Financial Derivatives	3
FIN 490	Independent Study in Finance	3
FIN 498	Finance Seminar	3
FIN 499	CFA Seminar	3
ECON 450	Money, Credit, and Banking	3

Finance, Accounting, or Economics Electives

Students must complete 9 credits of 300- or 400-level courses, which may include LAW 400 Advanced Business Law.

Specialization in Banking (12 credits)

For students interested in preparing for careers in banking. Required courses include:

ECON 450	Money, Credit, & Banking	3
FIN 411	Financial Statement Analysis	3
FIN 420	Bank Management	3
FIN 330	International Finance	3
	or	
FIN 425	Financial Derivatives	3

Specialization in Investments (12 credits)

For students interested in preparing for careers in investments. Required courses include:

FIN 410	Securities Analysis	3
FIN 411	Financial Statement Analysis	3
	and two of the following three courses:	
FIN 425	Financial Derivatives	3
FIN 499	CFA Seminar	3
ECON 310	Mathematical Economics I	3

For students preparing for careers in the insurance industry. Required courses include:

FIN 321 Insurance 3

FIN 422 Risk Management 3

FIN 425 Financial Derivatives 3

And one finance elective 3

Major in French, BA (30 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
FR 305 Introduction to Francophone Literature	3
FR 315 Aspects of French History & Culture	3
FR 316 Contemporary France	3
Directed electives	6

Major in General Science with Specialization in Environmental Interpretation, BS (53-57 credits)

BIO 121	General Biology I	4
BIO 122	General Biology II	4
BIO 200	Integrative Biology	4
STAT 104	Elementary Statistic	3

or

CS 113	Introduction to Computers	3
ESCI 121	Physical Geology	4

Structured Elective Component: Earth and Planetary Sciences

Four courses from the following or other courses in earth science approved by the chair of the Physics and Earth Sciences Department

ESCI 129	Introduction to Meteorology	4
ESCI 178	Planetary Astronomy	4
ESCI 179	Stellar Astronomy	4
ESCI 424	Geomorphology	3
ESCI 450	Environmental Geology	3

Structured Elective Component: Life Sciences

Two courses from the following, selected in consultation with an advisor:

BIO 120	Plants of Connecticut	3
BIO 150	Long Island Sound - Introductory Ecology	4
BIO 230	Natural History	2
BIO 315	Microbial Ecology	4
BIO 322	Vertebrate Zoology	4
BIO 326	Mushrooms, Mosses & More	4
BIO 327	Vascular Plants	4
BIO 405	Ecology	4
BIO 420	Ornithology	4
BIO 421	Marine Invertebrate Biology	4
BIO 425	Aquatic Plant Biology	4
BIO 444	Plant Taxonomy	3
BIO 470	Field Studies in Biology	1-4
BIO 471	International Field Studies in Biology	1-4
BIO 480	Animal Behavior	3

Directed Electives

In lieu of a minor, at least 15 credits, with the advisor's approval, from the following or other courses in any of the natural sciences:

ART 490	Curatorship	3
GEOG 256	Maps & Map Reading	3
GEOG 272	Physical Geography	3
GEOG 276	Elementary Cartography	3
GEOG 433	Issues in Environment Protection	3
GEOG 442	Field Methods in Geography	3
ANTH 150	Introduction to Archaeology	3
ANTH 151	Lab in Introductory Archaeology	1
ANTH 422	Native Americans	3
ANTH 425	Human Ecology	3
SCI 518	Teaching Science in the Out-of-Doors	3

At least 9 credits of the elective component must be from courses in biology, chemistry, physics, and the earth sciences, and must be completed at the 300 level or above. Three credits of internship (SCI 453) are also required.

Note: S. Burns and J. Jarrett are members of the advisory committee for this program.

Major in Secondary Education and All Level Subjects, BS

Coordinator: K. Love (860-832-2124)

Program Requirements (130 credits) General education requirements for secondary programs are as follows: 6 credits in English (ENG 110 is required), HIST 161 or 162, PSY 236, 6 credits of science, and 6 credits in mathematics. For all-level program requirements, students should consult the chair of their major department to determine the recommended general education courses.

Major (36-57 credits) Students in secondary education and all-level subjects programs can be certified to teach in specific areas of specialization as follows:

- For secondary education: biology, chemistry, earth science, English, French, general science, German, history & social studies, Italian, mathematics, physics, or Spanish, and
- For all-level subjects: art, music, physical education, technology, or engineering education

See Schools of Arts and Sciences or Technology sections for specific course requirements.

Minor (18-24 credits) The completion of a minor or a certifiable minor is required unless specifically noted in the individual major. Options for certifiable minors for science majors include biology, chemistry, earth science, and general science. Specific course requirements for minors can be found in the Carol A. Ammon School of Arts and Sciences sections.

Professional education (24-34 credits) Enrollment in the following courses requires acceptance to the professional program in the School of Education and Professional Studies.

For secondary education program:

RDG 440	Literacy in the Secondary School	3
EDTE 316	Principles of Learning (Sec/K-12)	4
EDSC 425	Principles of Secondary Education	3

For all-level subjects program:

The following must be completed prior to acceptance into program:

EDTE 314	Applied Learning Theories (K-12 Programs)	3
----------	---	---

Enrollment in the following courses requires acceptance to the professional program:

SPED 315	Introduction to Educating Learners with Exceptionalities	3
EDSC 425	Principles of Secondary Education	3
EDF 415	Educational Foundations	3
EDSC 4XX*	Student Teaching	1-9

*Course numbers and availability of student teaching vary based on certification field.

Major methods courses are taken in conjunction with the major academic department. Additional professional education course work related to the academic discipline is required.

Major in Elementary Education, BS

Coordinator: G. Cueto (860-832-2434)

Program Requirements (130 credits) ENG 110, MATH 113, MATH 213 and BIO 211, HIST 161 or 162, PSY 236, SCI 111, either PSY 361 or 362.

Subject-matter Major (33-39 credits) Single subject-matter majors include English, geography, history, mathematics, general science with a specialization in biology, and general science with a specialization in earth science.

Additional majors may be offered in the future due to change in state of Connecticut regulations. See Carol A. Ammon School of Arts and Science sections for specific course requirements.

Professional education (49 credits): Courses are taken in clusters as follows:

EDTE 210 Education and Teacher Leadership in Diverse Learning Communities	4
EDT 210 Introduction to Educational Technology	1

Enrollment in the following courses requires acceptance to the professional program in the School of Education and Professional Studies. Applications are accepted in the second week of the fall and spring semesters.

RDG 315 Comprehensive Reading Instruction I	3
EDTE 315 Principles of Learning: Elementary	4
SPED 315 Introduction to Educating Learners with Exceptionalities	3
RDG 316 Comprehensive Reading Instruction II	3
EDEL 322 Effective Elementary Teaching	3
EDTE 320 Practicum in Elementary Education I	1
EDF 415 Educational Foundations	3
EDT 415 Developing Instructional Materials	1
EDTE 420 Practicum in Elementary Education II	1-2
FA 412 Fine Arts Across the Curriculum	3
MATH 412 Elementary Mathematical Methods	3
RDG 412 Literacy in the Elementary School	3
SCI 412 Elementary Science Methods	2
EDEL 415 Elementary Social Studies Methods	1
EDEL 430 Elementary Education Student Teaching	1-9
EDTE 430 Topic Seminar in Leadership and Learning Communities	1

The completion of a minor is not required.

Major in English, BS (Certifiable for elementary education, 39 credits)

Core (24 credits)

ENG 205 Survey of British Literature: Middle Ages to the 18th Century 3
 ENG 210 Survey of American Literature: Pre-Civil War 3

ENG 203 Survey of World Literature: Ancient to Early Modern 3
 OR

ENG 204 Survey of World Literature: 17th Century to the Present 3
 OR

ENG 206 Survey of British Literature: Romanticism to the Present 3
 OR

ENG 211 Survey of American Literature: Civil War to the Present 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

Composition Sequence (6 credits): either,

Expository:

ENG 202 Intermediate Composition 3

AND

ENG 401 Advanced Composition 3

OR

Fiction:

ENG 371 Creative Writing: Fiction I 3

AND

ENG 372 Creative Writing: Fiction II 3

OR

Poetry:

ENG 373 Creative Writing: Poetry I 3

AND

ENG 374 Creative Writing: Poetry II 3

OR

Creative Nonfiction:

ENG 370 Creative Nonfiction I 3

AND

ENG 375 Creative Nonfiction II 3

OR

Journalism:

JRN 200 Introduction to Journalism 3

AND EITHER

JRN 235 News Writing and Reporting I 3

or one of the following with permission of instructor/program coordinator:

JRN 380 Feature Writing 3

JRN 381 Opinion Writing 3

JRN 418 Studies in Journalism 3

Directed Electives (9 credits)

ENG 270	Dramatic Enactment	3
OR		
ENG 274	Storytelling	3

and 6 credits, selected in consultation with advisor, from the following: ENG 220, 300 - 400 level courses in British, American or World literature, Cinema Studies (CINE) courses.

No minor is required for this major.

For Certification in Elementary Education, Primary Subject Matter Area in English* (24 credits)

ENG 205	Survey of 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 270	Dramatic Enactment	3
or		
ENG 274	Storytelling	3
ENG 491	Children's Literature	3
LING 230	The Study of Language	3

3 elective credits at the 300-400 level in British, American or world literature, or ENG 220, selected in consultation with an advisor. See department for details.

*Please consult with the School of Education and Professional Studies concerning additional requirements for dual subject programs and interdisciplinary majors.

Major in General Science: Specialization in Biology or Earth Sciences (Certifiable for elementary education, 39-42 credits)

Core (24-32 credits)

Physics (6-8 credits)

PHYS 111 Introductory Physics I 3

PHYS 113 The Sound of Music 3

or

PHYS 121 General Physics I 4

PHYS 122 General Physics II 4

or

PHYS 125 University Physics I 4

PHYS 126 University Physics II 4

Chemistry (6-8 credits)

CHEM 102 Chemistry of Nutrition 3

CHEM 111 Introductory Chemistry 3

or

CHEM 161 General Chemistry I 3

CHEM 162 General Chemistry I Lab 1

CHEM 163 General Chemistry II 3

CHEM 164 General Chemistry II Lab 1

Biology (6-8 credits)

BIO 111 Introductory Biology 3

BIO 211 Concepts in Biology 3

BIO 132 Introductory Ecology 3

or

BIO 121 General Biology I 4

BIO 122 General Biology II 4

Earth Science (6-8 credits)

ESCI 111 Elementary Earth Science 3

ESCI 121 Physical Geology 4

ESCI 129 Introduction to Meteorology 4

ESCI 178 Planetary Astronomy 4

Specialization

A minimum of 18 credits in either specialization below , including 6-8 credits in the core of the specialization

Specialization in Biology

Core

BIO 121 General Biology I 4

BIO 122 General Biology II 4

Electives

BIO 200 General Biology III 4

and 6-11 credits of BIO electives at the 300 or 400 level, selected in consultation with an advisor

Specialization in Earth Science

Core

ESCI 121 Physical Geography 4

ESCI 129 Introduction to Meteorology 4

ESCI 178	Planetary Astronomy	4
----------	---------------------	---

Electives

Choose a minimum of 6 credits (as needed to reach 39 credits) from the following:

ESCI 122	Historical Geology	4
----------	--------------------	---

ESCI 179	Stellar Astronomy	4
----------	-------------------	---

ESCI 335	Physical Oceanography	3
----------	-----------------------	---

or other electives as approved by advisor

Major in Geography with Specialization in General/Regional Geography, BA

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.

GEOG 110 Introduction to Geography	3
or	
GEOG 120 World Regional Geography	3
GEOG 130 Introduction to Geography 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 Soils and Vegetation	3
GEOG 374 Climatology	3
GEOG 433 Issues in Environmental Protection	3
GEOG 472 Topics in Physical Geography	3
GEOG 473 Geography of Natural Resources	3
GEOG 475 Energy Resources & Climate Change	3

3 credits from the following:

GEOG 220 Human Geography	3
GEOG 223 Geography of the Popular Music Industry	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 440 Rural Land Planning	3
GEOG 441 Community and 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 256 Maps & Map Reading	3
GEOG 266 Air Photo Interpretation	3
GEOG 276 Elementary Cartography	3
GEOG 378 Geographic Information Systems	3
GEOG 442 Field Methods in Geography	3

6 credits from the following:

GEOG 330 United States and Canada	3
GEOG 434 Mexico, Central America, and the Caribbean	3
GEOG 435 Japan and Korea	3
GEOG 436 South America	3
GEOG 437 China	3
GEOG 446 Sub-Saharan Africa	3
GEOG 448 Russia and Neighboring Regions	3
GEOG 452 European Union	3
GEOG 459 Field Studies in Regional Geography	3-6
GEOG 481 Topics in Regional Geography	3

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.

Major in History, BS (Certifiable for elementary education, 39 credits)

HIST 121	World Civilization I	3
HIST 122	World Civilization II	3
HIST 301	The Historical Imagination	3

(taken prior to the first 400-level history course)

9 credits of 300-level U.S. history surveys

HIST 490	Senior Seminar	3
----------	----------------	---

(taken after 24 credits of history courses, including HIST 301 and 6 credits of history courses at the 400-level)

6 credits of European history above the 100-level, 6 credits of non-western history above the 100-level (3 of the 6 credits must appear on the state-approved non-western history course list), and 12 credits in 400-level history courses

For additional course requirements in education, consult with the School of Education and Professional Studies.

Major in Mathematics, BS (Certifiable for elementary teaching, 33 credits)

Core (21-22 credits)

MATH 113 Structures 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 Structures of Mathematics IV: Development of Geometric Ideas	3
MATH 409 Mathematics through Computers	3
STAT 215 Statistics for Behavioral Sciences	3
MATH 125 Applied Calculus	3
or	
MATH 152 Calculus I	4

Directed Electives (11-12 credits)

MATH 110 Finite Mathematics	3
MATH 115 Trigonometry	3
MATH 116 Pre-Calculus Mathematics (formerly MATH 121)	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 in Diverse Cultures	3
STAT 216 Statistics for Behavioral Sciences II	3

Note: Majors should consult with the School of Education and Professional Studies concerning additional education requirements.

Major in Biology, BS (Certifiable for teaching grades 7-12, 32-34 credits in biology)

BIO 121 General Biology I	4
BIO 122 General Biology II	4
BIO 200 Integrative Biology	4
BIO 290 Biology Research Experience I	2
BIO 390 Biology Research Experience II	1
Animal Diversity Elective	

One of the following:

BIO 322 Vertebrate Zoology	4
BIO 420 Ornithology	4
BIO 421 Marine Invertebrate Biology	4
BIO 469 Entomology	4
Plant Diversity Elective	

One of the following:

BIO 326 Mushrooms, Mosses & More	4
BIO 327 Vascular Plants	4
BIO 425 Aquatic Plant Biology	4
BIO 444 Plant Taxonomy	3
Genetics/Microbiology Elective	

One of the following:

BIO 402 Evolutionary & Ecological Genetics	3
BIO 315 Microbial Ecology	4
BMS 306 Genetics	4
BMS 316 Microbiology	4
Physiology Elective	

4 credits from the following:

BIO 318 Anatomy and Physiology I	4
BIO 319 Anatomy and Physiology II	4
BIO 331 Neurobiology	4
BIO 410 Ecological Physiology	4
BIO 412 Human Physiology	3
BIO 413 Human Physiology Lab	1
BIO 449 Plant Physiology	3
BIO 450 Investigations in Plant Physiology	1
BIO 481 Skeletal Biology	4
Ecology/Evolution Elective	

3-4 credits from the following:

BIO 405 Ecology	4
BIO 434 Ecology of Inland Waters	4
BIO 440 Evolution	3
BIO 470 Field Studies in Biology	1-4
BIO 480 Animal Behavior	3

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.

Required Courses

MATH 124 Applied Calculus with Trigonometry	4
or	
MATH 152 Calculus I	4
or	
MATH 125 Applied Calculus	3
and	
MATH 115 Trigonometry	3
CHEM 161 General Chemistry I	3
CHEM 162 General Chemistry I Lab	1
CHEM 163 General Chemistry II	3
CHEM 164 General Chemistry II Lab	1
CHEM 250 Basic Organic and Biochemistry	4
or	
CHEM 210 Organic Chemistry I	3
and	
CHEM 211 Organic Chemistry I Lab	1
PHYS 121 General Physics I	4
and	
PHYS 122 General Physics II	4
or	
PHYS 125 University Physics I	4
and	
PHYS 126 University Physics II	4
EDTE 316 Principals of Learning (Sec/K-12)	4
EDF 415 Educational Foundations	3
SPED 315 Introduction to Educating Learners with Exceptionalities	3
EDSC 425 Principles of Secondary Education	3
EDSC 435 Secondary Education Student Teaching	3-9
SCI 416 Educational Technology in Secondary Science	1
SCI 417 Teaching of Science in the Secondary School	3
SCI 419 Student Teaching Seminar	1
SCI 420 History and Nature of Science	3
RDG 440 Literacy in Secondary School	3

30 credits also must come from the following courses, which require prior acceptance into the Professional Program in the School of Education and Professional Studies:

SPED 315 Introduction to Educating Learners with Exceptionalities	3
EDTE 316 Principles of Learning: Sec/K-12	4
EDF 415 Educational Foundations	3
EDSC 425 Principles of Secondary Education	3
EDSC 435 Secondary Education Student Teaching	3-9
RDG 440 Literacy in Secondary School	3
SCI 416 Educational Technology in Secondary Science	1
SCI 417 Teaching of Science in the Secondary School	3
SCI 419 Student Teaching Seminar	1

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.

Major in Chemistry, BS (Certifiable for secondary teaching, 36 credits)

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 Core (34 credits)

CHEM 161 General Chemistry I	3
CHEM 162 General Chemistry I Lab	1
CHEM 163 General Chemistry II	3
CHEM 164 General Chemistry II Lab	1
CHEM 210 Organic Chemistry I	3
CHEM 211 Organic Chemistry I Lab	1
CHEM 212 Organic Chemistry II	3
CHEM 213 Organic Chemistry II Lab	1
CHEM 301 Analytical Chemistry	4
CHEM 321 Physical Chemistry of Thermodynamics & Kinetics	3
CHEM 322 Physical Chemistry of Quantum & Statistical Mechanics	3
CHEM 323 Physical Chemistry Lab	1
CHEM 402 Instrumental Methods in Analytical Chemistry	4
CHEM 461 Descriptive Inorganic Chemistry	3

Related Requirements

BIO 121 General Biology I	4
or	
BMS 102 Introduction to Biomolecular Science	3
and	
BMS 190 Introduction to Research I	0.5
PHYS 125 University Physics I	4
PHYS 126 University Physics II	4
SCI 420 History of Nature and Science	3
MATH 152 Calculus I	3
MATH 221 Calculus II	3
Science electives approved by the chair	3

30 credits also must come from the following courses, which require prior acceptance into the Professional Program in the School of Education and Professional Studies:

SPED 315 Introduction to Educating Learners with Exceptionalities	3
EDTE 316 Principles of Learning: Sec/K-12	4
EDF 415 Educational Foundations	3
EDSC 425 Principles of Secondary Education	3
EDSC 435 Secondary Education Student Teaching	3-9
RDG 440 Literacy in Secondary School	3
SCI 416 Educational Technology in Secondary Science	1
SCI 417 Teaching of Science in the Secondary School	3
SCI 419 Student Teaching Seminar	1

For students contemplating graduate work, a year of German or Russian is recommended. Students who major in chemistry are not required to complete a minor, but are urged to minor in general science.

Major in Earth Sciences, BS (Certifiable for secondary teaching, 32 credits)

ESCI 121 Physical Geology	4
ESCI 122 Historical Geology	4
ESCI 129 Introduction to Meteorology	4
ESCI 178 Planetary Astronomy	4

or

ESCI 179 Stellar Astronomy	4
ESCI 335 Physical Oceanography	3

and 13 credits of Earth Science courses at the 200- level and above as approved by faculty advisor

In addition, students must take:

CHEM 161 General Chemistry I	3
CHEM 162 General Chemistry I Lab	1
CHEM 163 General Chemistry II	3
CHEM 164 General Chemistry II Lab	1
PHYS 121 General Physics I	4
PHYS 122 General Physics II	4
BIO 121 General Biology I	4
BIO 122 General Biology II	4
EDTE 316 Principles of Learning (Sec/K-12)	4
EDF 415 Educational Foundations	3
SPED 315 Introduction to Educating Learners with Exceptionalities	3
EDSC 425 Principles of Secondary Education	3
EDSC 435 Secondary Education Student Teaching	3-9
RDG 440 Literacy in the Secondary School	3
SCI 416 Educational Technology in Secondary Science	3
SCI 417 Teaching of Science in the Secondary School	3
SCI 419 Student Teaching Seminar	1
SCI 420 History and Nature of Science	3
MATH 152 Calculus I	4
MATH 221 Calculus II	4

Major in English, BS (Certifiable for secondary education, 39 credits)

9 credits as follow :

ENG 203 Survey of World Literature: Ancient to Early Modern 3

or

ENG 204 Survey of World Literature: 17th Century to the Present 3

ENG 205 Survey of British Literature: Middle Ages to the 18th Century 3

ENG 210 Survey of American Literature: Pre-Civil War 3

3 credits from the following:

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

27 credits* as follows :

ENG 298 Introduction to Literary Studies 3

ENG 398 Introduction to Literary Theory and Research * 3

ENG 402 Advanced Composition & Technology in the English Classroom 3

ENG 406 Teaching the Mechanics of Writing 3

ENG 449 Major American Authors 3

ENG 486 World Literature and Film 3

(or another appropriate 300-400 level international media and literature course)

ENG 492 Literature for Young Adults 3

ENG 220 Shakespeare 3

or

ENG 461 Shakespeare: Major Comedies 3

or

ENG 462 Shakespeare: Major Tragedies 3

one 300-400 level British literature course 3

one 300-400 level American literature course 3

LING 200 must be taken to fulfill Study Area III.

Professional education courses: ENG 420 (to be taken concurrently with EDSC 425) and ENG 435 (to be taken concurrently with EDSC 435) counted toward professional education. Also, SPED 315, EDTE 316, EDSC 425, EDF 415, RDG 440, EDSC 435 are required for certification.

All studies courses (ENG 348, 358, 388, 448, 449, 458, and 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.

A minor is required for this major.

*Depending on its topic, ENG 398 may count as one of the 300-400 level required or elective literature courses.

Major in French, BS (Certifiable for secondary teaching, 36 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
FR 305 Introduction to Francophone Literature	3
FR 315 Aspects of French History & Culture	3
FR 316 Contemporary France	3
FR 335 French for Oral Presentation	3
FR 336 French Composition & Translation	3
Directed electives	6

In addition, students in the major in French, German or Italian (certifiable for secondary teaching) must take:

SPED 315 Introduction to Educating Learners with Exceptionalities	3
EDTE 316 Principles of Learning (Sec/K-12)	4
RDG 440 Literacy in Secondary School	3
EDF 415 Educational Foundations	3
EDSC 425 Principles of Secondary Education	3
EDSC 435 Secondary Education Student Teaching	3-9
ML 428 Methods and Materials for Teaching World Languages at Elementary School Level	3
ML 429 Seminar in Modern Language Teaching Methods	4
ML 440 Student Teaching Seminar in Modern Languages	1
ML 490 Teaching World Languages II: Acquisition in Young Children for Teachers of World Languages	3
or	
LING 300 Language Acquisition	3
EDT 315 Educational Technology in the Secondary School Classroom	1

Major in General Science with Specialization in General Science, BS (Certifiable for secondary teaching, 56-59 credits)

Science and Mathematics Core (46 credits)

BIO 121	General Biology I	4
BIO 122	General Biology II	4
CHEM 161	General Chemistry I	3
CHEM 162	General Chemistry I Lab	1
CHEM 163	General Chemistry II	3
CHEM 164	General Chemistry II Lab	1
ESCI 121	Physical Geology	4
ESCI 129	Introduction to Meteorology	4
ESCI 178	Planetary Astronomy	4
or		
ESCI 179	Stellar Astronomy	4
PHYS 121	General Physics I	4
and		
PHYS 122	General Physics II	4
or		
PHYS 125	University Physics I	4
and		
PHYS 126	University Physics II	4
MATH 116	Pre-Calculus Mathematics	3
MATH 152	Calculus I	4
SCI 420	History and Nature of Science	3
and one of the following tracks (10-13 credits):		

Physics Track

One of these physics courses

PHYS 125	University Physics I	4
PHYS 126	University Physics II	4
PHYS 220	Mechanics I	3
PHYS 305	Foundations of Electricity and Magnetism	3
PHYS 320	Heat and Thermodynamics	3
PHYS 325	Optics	4
PHYS 331	Electronics I	3
or		
MATH 221	Calculus II	4
MATH 222	Calculus III	3

Earth Sciences Track

ESCI 122	Historical Geology	4
ESCI 221	Mineralogy	4
or		
ESCI 278	Observational Astronomy	4
ESCI 335	Physical Oceanography	3

Chemistry Track

CHEM 238 Introduction to Research	1-6
or	
CHEM 301 Analytical Chemistry	4
CHEM 210 Organic Chemistry I	3
CHEM 211 Organic Chemistry I Lab	1
CHEM 212 Organic Chemistry II	3
CHEM 213 Organic Chemistry II Lab	1

Biology Track:

BIO 200 General Biology III	3
-----------------------------	---

and 6-8 credits in biology at 300 or 400 level

In addition, all students in the specialization in general science must take:

EDTE 316 Principles of Learning (Sec/K-12)	4
EDF 415 Educational Foundations	3
SPED 315 Introduction to Educating Learners with Exceptionalities	3
EDSC 425 Principles of Secondary Education	3
EDSC 435 Secondary Education Student Teaching	3-9
RDG 440 Literacy in the Secondary School	3
SCI 416 Educational Technology in Secondary Science	3
SCI 417 Teaching of Science in the Secondary School	3
SCI 419 Student Teaching Seminar	1

Major in German, BS (Certifiable for secondary teaching, 36 credits)

GER 125 Intermediate German I	3
GER 126 Intermediate German II	3
GER 225 Intermediate German III	3
GER 226 Intermediate German IV	3
GER 304 Introduction to German Literature I	3
GER 305 Introduction to German Literature II	3
GER 315 German Civilization to 1800	3
GER 316 German Civilization from 1800 to Present	3
GER 335 Advanced German for Oral Expression	3
GER 336 Advanced German Composition	3
Directed electives	6

In addition, students in the major in French, German or Italian (certifiable for secondary teaching) must take:

SPED 315 Introduction to Educating Learners with Exceptionalities	3
EDTE 316 Principles of Learning (Sec/K-12)	4
RDG 440 Literacy in Secondary School	3
EDF 415 Educational Foundations	3
EDSC 425 Principles of Secondary Education	3
EDSC 435 Secondary Education Student Teaching	3-9
ML 428 Methods and Materials for Teaching World Languages at Elementary School Level	3
ML 429 Seminar in Modern Language Teaching Methods	4
ML 440 Student Teaching Seminar in Modern Languages	1
ML 490 Teaching World Languages II: Acquisition in Young Children for Teachers of World Languages	3
or	
LING 300 Language Acquisition	3
EDT 315 Educational Technology in the Secondary School Classroom	1

Major in History, BS (Certifiable for secondary teaching of history and social studies, 57 credits)

History Core (12 credits)

HIST 121 World Civilization I	3
HIST 122 World Civilization II	3
HIST 301 The Historical Imagination	3
HIST 490 Senior Seminar	3

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 at the 300-level)

History Electives (9 credits)

Social Science (12 credits)

PS 104 The World's Political Systems	3
or	
PS 110 American Government & Politics	3
ECON 200 Principles of Economics I	3
ECON 201 Principles of Economics II	3
SOC 110 Introductory Sociology	3

The following courses are also required for teacher certification: SPED 315, EDTE 316, EDT 315, RDG 440, EDF 415, EDSC 425, SSCI 415, EDSC 435 and SSCI 421.

Related Requirements (6 credits)

ANTH 140 Introduction to Anthropology	3
GEOG 110 Introduction to Geography	3
or	
GEOG 120 World Regional Geography	3

Note #1: HIST 121, 122 and 301 must be taken prior to the first 400-level HIST course.

Note #2: HIST 490 may not be taken before taking HIST 301, 6 credits of HIST courses at the 400-level, and a total of at least 24 credits of HIST courses.

Note #3: in satisfying the above requirements, at least 12 credits must be at the 400-level.

Note #4: No minor is required of students in this major.

Major in Italian, BS (Certifiable for secondary teaching, 36 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	3
ITAL 305 Introduction to Italian Literature II	3
ITAL 315 Italian Civilization to 1861	3
ITAL 316 Italian Civilization from 1861 to Present	3
ITAL 335 Advanced Italian for Oral Expression	3
ITAL 336 Advanced Italian Composition	3
Directed electives	6

In addition, students in the major in French, German or Italian (certifiable for secondary teaching) must take:

SPED 315 Introduction to Educating Learners with Exceptionalities	3
EDTE 316 Principles of Learning (Sec/K-12)	4
RDG 440 Literacy in Secondary School	3
EDF 415 Educational Foundations	3
EDSC 425 Principles of Secondary Education	3
EDSC 435 Secondary Education Student Teaching	3-9
ML 428 Methods and Materials for Teaching World Languages at Elementary School Level	3
ML 429 Seminar in Modern Language Teaching Methods	4
ML 440 Student Teaching Seminar in Modern Languages	1
ML 490 Teaching World Languages II: Acquisition in Young Children for Teachers of World Languages	
or	
LING 300 Language Acquisition	3
EDT 315 Educational Technology in the Secondary School Classroom	1

For students with advanced preparation, appropriate substitutions will be made. No minor required.

Major in Mathematics, BS (Certifiable for secondary teaching, 48 credits)

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 View point	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 250 Symbolic Computation	4
MATH 311 Clinical Experience in Mathematics Education II	1
MATH 344 Mathematics in 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 440 Selected Topics in Mathematics	1-3
MATH 465 Introduction to Fractal Geometry and Chaos	3
MATH 468 Symbolic Logic	3
MATH 469 Number Theory	3
MATH 470 Mathematical Methods in Operations Research	3
MATH 477 Numerical Analysis	3
MATH 491 Advanced 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 Fundamentals of SAS	3
STAT 465 Nonparametric Statistics	3
In addition, students are required to take:	
either	
CHEM 161 General Chemistry I	3
CHEM 162 General Chemistry Lab I	1
CHEM 163 General Chemistry II	3
CHEM 164 General Chemistry II Lab	1
or	
PHYS 125 University Physics I	4
PHYS 126 University Physics II	4
and	
either	

CS 151	Computer Science I	3
or		
CS 213	Applications of Computing I	3

Upon acceptance into the professional program in teacher education students are required to complete a 30-credit program consisting of:

SPED 315	Introduction to Educating Learners with Exceptionalities	3
EDTE 316	Principles of Learning (Sec/K-12)	4
RDG 440	Literacy in Secondary School	3
EDF 415	Educational Foundations	3
EDSC 425	Principles of Secondary Education	3
MATH 413	Teaching Mathematics in the Secondary School	4
	(taken concurrently with EDSC 425 and RDG 440)	
EDSC 435	Secondary Education Student Teaching	3-9
MATH 426	Student Teaching Seminar	1
	(taken concurrently with EDSC 435)	

No minor is required for students with this major.

Major in Physics, BS (Certifiable for secondary teaching, 33 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 & 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	1
PHYS 470 Quantum Mechanics	3

In addition, students must take:

BIO 121 General Biology I	4
CHEM 161 General Chemistry I	3
CHEM 162 General Chemistry I Lab	1
CHEM 163 General Chemistry II	3
CHEM 164 General Chemistry II Lab	1
EDTE 315 Principles of Learning: Elementary	4
EDF 415 Educational Foundations	3
SPED 315 Introduction to Educating Learners with Exceptionalities	3
EDSC 425 Principles of Secondary Education	3
EDSC 435 Secondary Education Student Teaching	3-9
RDG 440 Literacy in the Secondary School	3
SCI 416 Educational Technology in Secondary Science	3
SCI 417 Teaching of Science in the Secondary School	3
SCI 419 Student Teaching Seminar	1
SCI 420 History and Nature of Science	3
MATH 152 Calculus I	4
MATH 221 Calculus II	4
MATH 222 Calculus III	3

Major in Social Sciences, BS (Certifiable for secondary teaching, 54 credits)

18 credits in history

HIST 121	World Civilization I	3
HIST 122	World Civilization II	3
HIST 301	The Historical Imagination	3
300-level U.S. surveys		6

and 3 elective credits in non-western history

18 credits in one social science discipline (anthropology, economics, geography, political science, or sociology) as required by that department for a minor for secondary certificate students

18 credits from the following:

PS 104	The World's Political Systems	3
PS 110	American Government & Politics	3
ECON 200	Macroeconomics	3
and		
ECON 201	Microeconomics	3
GEOG 110	Introduction to Geography	3
GEOG 120	World Regional Geography	3
ANTH 140	Introduction to Anthropology	3
SOC 110	Introductory Sociology	3

Courses taken for the 18 credits in one social science discipline above cannot be counted toward the 18 credits in social science in the last bulleted item.

All majors in social sciences must take ECON 200 and 201.

All majors in social sciences must take at least one class in the following disciplines: history, geography, economics, anthropology, sociology, and political science.

In addition, students must complete the following:

SSCI 415	Social Studies Methods at the Secondary Level	4
SSCI 421	Social Studies Student Teaching Seminar	1
SPED 315	Introduction to Educating Learners with Exceptionalities	3
EDTE 316	Principles of Learning (Sec/K-12)	4
EDT 315	Educational Technology in the Secondary School Classroom	1
RDG 440	Literacy in Secondary School	3
EDF 415	Educational Foundations	3
EDSC 425	Principles of Secondary Education	4
EDSC 435	Secondary Education Student Teaching	3-9
PSY 236	Life-Span Development	3

No minor is required.

Major in Spanish, BS (Certifiable for secondary teaching, 36 credits)

For non-native 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

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	3

Spanish and Spanish-American Literature and Cultures (24 credits)

SPAN 300 Literary Analysis	3
SPAN 304 Introduction to Spanish Literature I	3
or	
SPAN 305 Literary Masterpieces since 1700: Spain	3
SPAN 315 Spanish Civilization	3
SPAN 316 Latin American Civilization	3
SPAN 335 Advanced Spanish for Oral Expression	3
SPAN 336 Advanced Spanish Composition	3
SPAN 375 Spanish American Literature I	3
or	
SPAN 376 Spanish American Literature II	3
Directed electives	3

Secondary Teaching Requirements (37 credits)

SPED 315 Introduction to Educating Learners with Exceptionalities	3
EDTE 316 Principles of Learning (Sec/K-12)	4
RDG 440 Literacy in Secondary School	3
EDF 415 Educational Foundations	3
EDSC 425 Principles of Secondary Education	3
EDSC 435 Secondary Education Student Teaching	3-9
ML 428 Methods and Materials for Teaching World Languages at Elementary School Level	3
ML 429 Seminar in Modern Language Teaching Methods	4
ML 440 Student Teaching Seminar in Modern Languages	1
ML 490 Teaching World Languages II: Acquisition in Young Children for Teachers of World Languages	3
or	
LING 300 Language Acquisition	3
EDT 315 Educational Technology in the Secondary School Classroom	1

For students with advanced preparation, appropriate substitutions will be made. No minor required.

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.

Major in Social Science with Minor in Geography, BS (Certifiable in social studies, 54 credits)

HIST 121 World Civilization I	3
HIST 122 World Civilization II	3
HIST 301 The Historical Imagination	3

6 credits in 300-level U.S. surveys; and 3 elective credits in non-western history

18 credits in geography, as specified by the requirements for the minor in geography

18 credits in social science from the following:

PS 104 The World's Political Systems	3
PS 110 American Government & Politics	3
ECON 200 Principles of Economics I	3
and	
ECON 201 Principles of Economics II	3
GEOG 110 Introduction to Geography	3
GEOG 120 World Regional Geography	3
ANTH 140 Introduction to Anthropology	3
SOC 110 Introductory Sociology	3

In addition, students must complete the following:

SSCI 415 Social Studies Methods at the Secondary Level	4
SSCI 421 Social Studies Student Teaching Seminar	1
SPED 315 Introduction to Educating Learners with Exceptionalities	3
EDTE 316 Principles of Learning (Sec/K-12)	4
EDT 315 Educational Technology in the Secondary School Classroom	1
RDG 440 Literacy in Secondary School	3
EDF 415 Educational Foundations	3
EDSC 425 Principles of Secondary Education	3
EDSC 435 Secondary Education Student Teaching	3-9
PSY 236 Life-Span Development	3

No minor is required. Courses taken for the required 18 credits in geography above cannot be counted toward the 18 credits in social science above. All majors in social sciences must take ECON 200 and 201. All majors in social sciences must take at least one class in each of the following disciplines: history, geography, economics, anthropology, sociology, and political science.

Note: Please consult with the School of Education and Professional Studies concerning additional requirements.

Note: Geography is not a certifiable subject in Connecticut. Those who wish to teach the subject at the secondary level in the state should complete this major.

For Certification in Elementary Education, Complementary Subject Matter Area in Geography (18 credits)

Complements primary subject matter area in English at the elementary level.

GEOG 120 World Regional Geography	3
GEOG 220 Human Geography	3
GEOG 330 United States and Canada	3

3 credits from the following:

GEOG 272 Physical Geography	3
GEOG 275 Soils and Vegetation	3
GEOG 374 Climatology	3

GEOG 433 Issues in Environmental Protection 3

and 6 credits in geography electives (at least 3 of which must be at 400 level).

All education students selecting geography as a complementary subject matter area will also enroll in GEOG 414; elementary-level (1-6) education students will enroll for 3 credits and may use the course as one of the two geography electives. Please consult with the School of Education and Professional Studies concerning additional requirements for dual subject programs and interdisciplinary majors.

Major in Art Education, BS Ed (Certifiable for K-12 teaching, 45 credits)

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 Applied Learning Theories (K-12 Programs)	3

Professional Education Programs (33 credits)

ART 302 Pre- Practicum in Art Education	1
ART 303 Practicum in Art Education I	2
ART 400 Art Education Theory & Practice II	3
ART 403 Art Education and Technology	3
EDSC 425 Principles of Secondary Education	3
EDF 415 Educational Foundations	3
SPED 315 Intro 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

Studio Specialization Area

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, as necessary to meet program requirements, chosen in consultation with advisor

No minor is required for BS in art education students.

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.

Major in Music Education, BS (Certifiable for PK-12 teaching, 66 credits)

CORE (25 credits):

MUS 114 Introduction to Music Technology	1
MUS 115 Aural Skills I	1
MUS 116 Aural Skills II	1
MUS 121 Music Theory I	2
MUS 122 Music Theory II	2
MUS 211 Ethnomusicology	3
MUS 215 Aural Skills III	1
MUS 216 Aural Skills IV	1
MUS 221 Music Theory III	2
MUS 222 Music Theory IV	2
MUS 235 Music History I	3
MUS 236 Music History II	3
MUS 335 Music History III	3

REQUIRED (32):

MUS 269 Technology in Music Education	1
MUS 367 Choral Conducting	2
MUS 368 Instrumental Conducting	2
MUS 390 Orchestration	2

Six semesters of:

MUS 141 Chorus	1
or	
MUS 142 Band	1
or	
MUS 143 Sinfonietta	2

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 I	2
MUS 278 Applied Music for Majors II	2
MUS 378 Applied Music for Majors III	2
MUS 478 Applied Music for Majors IV	2

Professional Education Requirements (34 credits)

MUS 101 Practicum in Music Education	2
MUS 310 General Music Education , Part I (Grades PK-4)	3

MUS311	General Music Education, Part II (Grades 5-12)	3
MUS 315	Choral Music Methods	4
or		
MUS 316	Instrumental Music Methods	4
MUS 402	Student Teaching Seminar	1
EDF 415	Educational Foundations	3
EDSC 420	Student Teaching - Elementary Music Education	4.5
EDSC 421	Student Teaching - Secondary Music Education	4.5
EDSC 425	Principles & Evaluation of Secondary Education	3
EDTE 314	Applied Learning Theories (K-12 Programs)	3
SPED 315	Introduction to Educating Learners with Exceptionalities	3

General Education Requirements

Students in this program must take the following as part of their 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
PHYS 113	The Sound of Music	3
ENG 110	Freshman Composition	3

Note: This major does not require a minor.

Note: Students enrolled in MUS 177 must pay an extra fee of \$300 each semester. Students enrolled in MUS 178, 278, 378, or 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, 278, 378, or 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 420/421 or MUS 400.

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.

All music majors (BA and BS candidates) must successfully complete all portions of the sophomore review, which includes a written theory test, sight-singing, and piano proficiency. No student will be allowed to proceed to a 300-level music course until the sophomore review has been successfully completed.

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. Three categories of the exam must be passed before acceptance into the professional program. All of the exam must be passed before beginning student teaching.

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 three intermediate-level pieces from the recommended list, including a chorale and a memorized piece;
- Harmonizing a simple melody;
- Transposing the same melody up or down a major/minor second; and
- Sight-reading a simple piano piece and an accompaniment.

Major in Physical Education, BS Ed

82 credits in physical education skill and lecture courses as follows:

Lecture Courses (46 credits)

PE 111	Orientation to Physical Education	2
EXS 210	Personal and Community Health	2
EXS 213	Anatomy & Physiology in Human Performance I	3
EXS 214	Anatomy & Physiology in Human Performance II	3
EXS 216	Kinesiology	3
PE 299	Psycho-Social Aspects of PE	3
PE 300	Developmental Movement	3
PE 305	Evaluation in Physical Education	3
PE 405*	Elementary Methods in PE	3
PE 406*	Adapted Physical Education	3
PE 408*	The Curriculum Process in K-12 PE	3
EXS 410*	Exercise Physiology	3
PE 416*	Organization & Administration of PE	3
PE 417*	Secondary Methods in Physical Education	3
PE 420*	Lifespan Motor Development	3
PE 422*	Motor Learning	3

Skill Courses (17 credits)

PE 219	Methods of Teaching Golf	1
PE 273	Tumbling and Gymnastics	2
PE 277	Outdoor Adventure Activities	2
PE 278	Methods of Teaching Games	2
PE 279	Methods of Teaching Team Sports	2
PE 280	Methods of Teaching Racquet Sports	2
PE 374	Methods of Teaching Fitness	3
DAN 272	Creative Dance in Education	2
DAN 377	Modern Dance and Theory	1

Professional Education Courses (19 credits)

EDT 315*	Educational Technology in the Secondary School Classroom	1
EDTE 314	Applied Learning Theories, K-12 Programs	3
EDF 415*	Educational Foundations	3
EDSC 417*	Student Teaching, Elementary PE	6
EDSC 419*	Student Teaching, Secondary PE	6

*Require admission to the professional program prior to enrollment.

Required general education courses:

BIO 111 or BIO 121 or BMS 111, CHEM 111 or CHEM 150 or CHEM 161/162, ENG 110, HIST 161, HIST 162, STAT 104, PHYS 111, PSY 236, and COMM 115.

Note: No minor is required with this major.

Note: For information on admission to the professional program see the page linked here.

Major in Technology Education (K-12), BS (130 credits)

General Education Requirements (44-46 credits)

ENG 110	Freshman Composition	3
COMM 115	Fundamentals of Communication	3
or		
COMM 140	Public Speaking	3
PE 144	Fitness/Wellness Ventures	2
or		
CET 113	Introduction to Information Processing	3
HIST 161	American History to 1877	3
or		
HIST 162	American History from 1877 to Present	3
MATH 115	Trigonometry	3
or		
MATH 119	Pre-Calculus with Trigonometry	4
PSY 236	Life-Span Development	3
TE 110	Technological Systems	3
PHYS 111	Introductory Physics I	3
CHEM 111	Introductory Chemistry	3
STAT 104	Elementary Statistics	3

These courses count toward the overall general education requirements.

Note: This major does not require a minor.

Technology Education (K-12) Professional Requirements

TE 399	Teaching Technology & Engineering (K-12) Teaching	3
TE 400	Professional Practices and Responsibilities in Technology and Engineering Education (K-12)	3

Note: Both of 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.

Technology Education (K-12) Technical Requirements

CET 223	Basic Electrical Circuits	3
ENGR 150	Introduction to Engineering	3
ET 241	Applied Statics and Strength of Materials	3
MFG 121	Technical Drafting & CAD	3
TE 115	Electronic Portfolio Assessment	3
TE 155	Integrating Engineering Concepts for K-8 Students	3
TE 215	Materials Processing	3
TE 217	STEM Laboratory Practices	3
TE 221	Innovation & Invention	3
TE 245	Building Design & Construction	3
TE 299	Technology & Engineering Education Practicum	
TE 310	Communication Systems	3
TE 330	Transportation Design	3
TE 417	Robot Design & Construction	3
TE 498	Technology & Engineering Education Senior Design Project	3

Students may take additional technical courses approved by their Technology Education advisor to fulfill their General Education requirements.

Professional Education Requirements

SPED 315 Introduction to Educating Learners with Exceptionalities	3<3
EDF 415 Educational Foundations	3
EDTE 314 Applied Learning Theories (K-12 Programs)	4
EDSC 414 Preliminary Student Teaching (Technology Education)	6
EDSC 415 Student Teaching (Technology Education)	6
EDSC 425 Principles of Secondary Education	3
RDG 440 Literacy in the Secondary School	3

Admission to the Professional Program

Students must make formal application for admission to the Professional Program of Technology Education after completion of 45 credits in course work. At least 15 of these credits must be in TE courses. Applications are available from the Dean of Education and Professional Studies, Barnard Hall, and must be filed prior to September 21 or February 21. Acceptance is prerequisite to taking TE 400, EDSC 414, 415 and 425, EDF 415, RDG 440, and SPED 315. Students must maintain a minimum 2.50 grade point average in all technology courses. See School of Education and Professional Studies, Admission to Professional Program for additional information.

Major in Geography with Specialization in Environmental Geography, BA

GEOG 110 Introduction to Geography 3
GEOG 130 Introduction to Geography Information Science 3

9 credits from the following:

GEOG 270 Geography of Hazards 3
GEOG 272 Physical Geography 3
GEOG 275 Soils and Vegetation 3
GEOG 374 Climatology 3

9 credits from the following with three of the credits at the 300 or 400 level:

GEOG 256 Maps & Map Reading 3
GEOG 266 Air Photo Interpretation 3
GEOG 276 Elementary Cartography 3
GEOG 378 Geographic Information Systems 3
GEOG 466 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

12 credits from the following:

GEOG 430 Internship in Geography 3
GEOG 433 Issues in Environment Protection 3
GEOG 445 Environmental Planning 3
GEOG 472 Topics in Physical Geography 3
GEOG 473 Geography of Natural Resources 3
GEOG 475 Geography of Energy Resources & Climate Change 3
Geography electives 3

Major in Geography with Specialization in General/Regional Geography, BA

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.

GEOG 110 Introduction to Geography	3
or	
GEOG 120 World Regional Geography	3
GEOG 130 Introduction to Geography 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 Soils and Vegetation	3
GEOG 374 Climatology	3
GEOG 433 Issues in Environmental Protection	3
GEOG 472 Topics in Physical Geography	3
GEOG 473 Geography of Natural Resources	3
GEOG 475 Energy Resources & Climate Change	3

3 credits from the following:

GEOG 220 Human Geography	3
GEOG 223 Geography of the Popular Music Industry	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 440 Rural Land Planning	3
GEOG 441 Community and 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 256 Maps & Map Reading	3
GEOG 266 Air Photo Interpretation	3
GEOG 276 Elementary Cartography	3
GEOG 378 Geographic Information Systems	3
GEOG 442 Field Methods in Geography	3

6 credits from the following:

GEOG 330 United States and Canada	3
GEOG 434 Mexico, Central America, and the Caribbean	3
GEOG 435 Japan and Korea	3
GEOG 436 South America	3
GEOG 437 China	3
GEOG 446 Sub-Saharan Africa	3
GEOG 448 Russia and Neighboring Regions	3
GEOG 452 European Union	3
GEOG 459 Field Studies in Regional Geography	3-6
GEOG 481 Topics in Regional Geography	3

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.

Major in Geography with Specialization in Geographic Information Science, BA

GEOG 110 Introduction to Geography	3
or	
GEOG 120 World Regional Geography	3
GEOG 130 Introduction to Geography Information Science	3
GEOG 378 Geographic Information Systems	3
GEOG 430 Internship in Geography	3
6 credits from the following:	
GEOG 256 Maps & Map Reading	3
GEOG 266 Air Photo Interpretation	3
GEOG 276 Elementary Cartography	3
9 credits from the following:	
GEOG 442 Field Methods in Geography	3
GEOG 466 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
ETC 458 GPS Mapping for GIS	3

and 12 credits of geography electives, of which at least 6 must be at the 300 or 400 level

Major in Geography with Specialization in Planning, BA (39 credits)

GEOG 110 Introduction to Geography	3
GEOG 130 Introduction to Geography Information Science	3
GEOG 241 Introduction to Planning	3
GEOG 244 Economic Geography	3
GEOG 420 Internship in Planning	3
GEOG 439 Urban Geography	3
GEOG 441 Community & Regional Planning	3

12 credits from the following:

GEOG 433 Issues in Environmental Protection	3
GEOG 440 Rural Land Planning	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
and	
STAT 104 Elementary Statistics	3
or	
STAT 215 Statistics for Behavioral Sciences I	3

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.

Major in Geography with Specialization in Tourism, BA

GEOG 110 Introduction to Geography	3
GEOG 120 World Regional Geography	3
GEOG 130 Introduction to Geography Information Science	3
GEOG 430 Internship in Geography	3
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
3 credits from the following:	
GEOG 330 United States and Canada	3
GEOG 434 Mexico, Central America, and the Caribbean	3
GEOG 435 Japan and Korea	3
GEOG 436 South America	3
GEOG 437 China	3
GEOG 446 Sub-Saharan Africa	3
GEOG 448 Russia and Neighboring Regions	3
GEOG 452 European Union	3
GEOG 459 Field Studies in Regional Geography	3-6
3 credits from the following:	
GEOG 270 Geography of Hazards	3
GEOG 272 Physical Geography	3
GEOG 275 Soils and Vegetation	3
GEOG 374 Climatology	3
GEOG 472 Topics in Physical Geography	3
GEOG 473 Geography of Natural Resources	3
GEOG 475 Energy Resources & Climate Change	3

and 3 credits of geography electives and 3 credits of THS electives

Major in German, BA (30 credits)

GER 125 Intermediate German I	3
GER 126 Intermediate German II	3
GER 225 Intermediate German III	3
GER 226 Intermediate German IV	3
GER 304 Introduction to German Literature I	3
GER 305 Introduction to German Literature II	3
GER 315 German Civilization to 1800	3
GER 316 German Civilization from 1800 to Present	3
Directed electives	6

Major in Graphic/Information Design, BA (36 credits)

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	Three-Dimensional Imaging 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
CS 495	Legal, Social, Ethical, and Economic Issues in Computing	3

Additionally Required

ART 110	Introduction to Art History	3
ART 130	Drawing I	3
ART 224	Illustration I	3
COMM 230	Introduction to Mass Media	3
MKT 295	Fundamentals of Marketing	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.

Major in History, BA (39 credits)

12 credits must include: 6 credits at the 100 or 200 level; 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). Of the remaining 27 credits, 6 credits must be in a non-western history course above the 100-level, 6 credits must be in European history above the 100-level, and 6 credits must be in American history above the 100-level. Finally, of the major's 39 credits, 12 credits must be completed in 400-level history courses.

Major in Hospitality and Tourism, BS

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 (21 credits):

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	Legal 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

Tourism/Hospitality Core (15 credits):

GEOG 450	Tourism Planning	3
GEOG 454	Geography of Tourism Marketing	3
THS 300	The Hospitality Industry	3
THS 410	Tourism & Hospitality Operations	3

and 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:

ENG 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 & Hospitality	3
THS 435	Independent Study in Tourism and Hospitality	3
THS 450	Hotel and Lodging Practicum	3
THS 455	Conventions and Meeting Planning Practicum	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 434	Mexico, Central America, and the Caribbean	3
GEOG 435	Japan and Korea	3
GEOG 436	South America	3
GEOG 437	China	3
GEOG 439	Urban Geography	3
GEOG 446	Sub-Saharan Africa	3
GEOG 448	Russia and Neighboring Regions	3
GEOG 452	European Union	3

Hospitality Studies/Transfer Track

18 credits of courses, approved by a faculty advisor, taken at another institution.

No minor is required for this major.

Major in Industrial Technology, BS (63 credits)

Accredited by ATMAE

Major Requirements

Industrial technology majors, regardless of the program selected, are required to complete a common core of 24 credits in technical and management courses as part of their 122-credit program. Courses included within these common requirements are as follows:

Core Requirements (24 credits):

TM 190	Introduction to Quality Assurance	3
TM 310	Industrial Safety	3
TM 362	Leadership Skills for Supervisors	3
TM 401	Industrial Internship	3
MGT 295	Fundamentals of Management and Organizational Behavior	3
ENG 403	Technical Writing	3
AC 210	Principles of Industrial Accounting	3
MKT 295	Fundamentals of Marketing	3

General Education Requirements (44-46 credits)

ENG 110	Freshman Composition	3
COMM 140	Public Speaking	3
STAT 104	Elementary Statistics	3
MATH 115	Trigonometry	3
ECON 201	Principles of Economics II	3
CHEM 111	Introductory Chemistry	3
PHYS 111	Introductory Physics I	3

Industrial Technology Specialization Programs

Each student should identify a program based on individual interests and goals. Six undergraduate programs are available; each is shown with its course requirements.

Specialization in Manufacturing

Advisors: E. D. Kirby (860-832-1691), H. Wang (860-832-1824)

This specialization is designed to prepare students primarily for management and supervisory positions that are production oriented. Areas of study include production control, computer-based manufacturing technology, lean manufacturing, supply chain strategy, cost estimating, production supervision, and quality control. Related job titles include industrial engineer, production supervisor, and quality control supervisor.

Specialization Requirements (39 credits)

MFG 118	Introduction to Materials	3
MFG 121	Technical Drafting & CAD	3
MFG 216	Manufacturing Processes	3
MFG 226	Principles of CNC	3
MFG 236	Tool Design	3
MFG 496	Lean Manufacturing	3
CET 113	Introduction to Information Processing	3
EMEC 114	Introduction to Energy Processing	3
ETM 340	Geometric Dimensioning & Tolerancing	3
TM 360	Production Systems	3
TM 464	Six Sigma Quality	3
	Technical & Management electives	6

Specialization in Environmental and Occupational Safety

Advisor: E.D. Kirby (860-832-1691), P. J. Resetarits (860-832-1834)

The Occupational Safety and Health Act of 1970, by requiring employers to provide safe and healthful working conditions, has increased the need for trained safety personnel. This specialization in environmental and occupational safety will prepare students for management positions as safety professionals in private industry and federal, state, and local government.

Specialization Requirements (39 credits)

CET 113	Introduction to Information Processing	3
EMEC 114	Introduction to Energy Processing	3
MFG 118	Introduction to Materials	3
MFG 121	Technical Drafting and CAD	3
CM 335	Construction Safety	3
TM 411	Industrial Hygiene	3
TM 414	Accident Investigation & Loss Control	3
TM 415	Fire Protection & Prevention	3
TM 456	HAZWHOPPER & Hazardous Material Management	3
	Technical & Management electives	12

Specialization in Electro-Mechanical Technology

Advisor: R. Thamma (860-832-3516)

The mission of this program is to educate students in technical management as it applies to electro-mechanical technology. Students develop their technical skills in the laboratory. Course work is provided in the areas of hydraulics, pneumatics, mechanical motion control, programmable logic controllers, servo and no-servo robotics, engines, electrical motors and generators, and industrial electricity. Emphasis is placed on data acquisition and feedback mechanisms and the use of various control devices, including personal computers, programmable logic controllers, and sequence controllers. Culminating experiences in management provide graduates with the skills to become supervisors, project managers, production automation technicians, and technical salespeople in the field.

Specialization Requirements (36 credits)

CET 113	Introduction to Information Processing	3
EMEC 114	Introduction to Energy Processing	3
MFG 118	Introduction to Materials	3
MFG 121	Technical Drafting and CAD	3
CET 223	Basic Electrical Circuits	3
EMEC 303	Electro-Mechanical Converters	3
EMEC 323	Mechatronics	3
EMEC 324	Fluid Power Systems	3
EMEC 333	Data Acquisition and Control	3
EMEC 334	Mechanisms for Automation	3
EMEC 463	Programmable Logic Controllers	3
TM 480	Robotics	3

Note: A minor is not required for this major.

Specialization in Technology Management

Advisors: M. L. Emiliani (860-832-3229), P. J. Resetarits (860-832-1834)

This specialization 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 specialization. The technology management specialization requires the student to complete the 24 credits in the industrial technology core courses plus 39 credits of technical and management electives.

Specialization Requirements (39 credits)

Technical and Management elective courses selected in consultation with, and approved by, advisor. At least one half of the elective credits

must be at the 300 or 400 level.

Note: A minor is not required for this major.

Major in Industrial Technology, BS (122 credits)

Accredited by NAIT

Technology majors, regardless of the program selected, are required to complete a common core of 24 credits in technical and management courses as part of their program. The core courses and general education requirements for this degree are the same as those listed in the electronics technology major on this page. There is a graduation requirement of a capstone assessment during a student's final year of study.

Specialization in Graphics Technology

Advisors: O. Odesina (860-832-1833) and K. Tracey (860-832-1842)

The graphics technology program prepares students for the field of graphic arts and printing technology, which transfers ink to paper and other substrates to make catalogs, brochures, broadsides, packaging, labels, magazines, signage, newspapers, and many other printed items. Students learn to work with as a design team on communications to be printed or manipulated digitally. The program offers a broad background of experiences and knowledge. Techniques covered include: flexography, photography, direct-to-press, digital imaging, offset lithography, sign making, color manipulation, typography, die-cutting, package design, electronic file manipulation, repurposing for web-page applications including virtual reality, 2D and 3D animation.

Specialization Requirements (31 credits)

CS 110	Introduction to Internet Programming & Applications	3
ART 120	Design I	3
CEGT 200	Seminar	1
CET 113	Introduction to Information Processing	3
GRT 112	Digital Imaging for Graphics Technology	3
GRT 212	Graphic Arts Processes	3
GRT 242	Introduction to Graphic Design and Color	3
GRT 342	Screen Printing and Post-Press Operation	3
GRT 362	Estimating and Scheduling for Graphics Technology	3
GRT 442	Print Production	3
GRT 462	Advanced Graphic Arts Techniques	3

Directed Electives (9 credits)

Selected in consultation with advisor

Specialization in Networking Technology

Advisor: K. Tracey (860-832-1842)

The networking technology specialization prepares individuals to enter into the evolving world of information technology, dealing with computer hardware and software, as well as the peripheral devices closely associated with computer-based systems. The curriculum focuses on local and wide area network design, administration, and internet technologies. Analytically based mathematics, computer science, electronics, and business courses round out the program.

Specialization Requirements (28 credits)

CEGT 200	Seminar	1
CET 113	Introduction to Information Processing	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	Networking Devices	3
CET 363	Digital Circuits	3
CET 449	Advanced Networking	3
CET 479	Internet Technologies	3

Directed Electives (11 credits)

3/11/2014

Central Connecticut State University (CCSU): Industrial Technology, BS (CE&CE Dept)

Selected in consultation with advisor

Note: A minor is not required for this major.

Major in International and Studies, BA (57 credits)

International and Area 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.

A BA or MS degree in International and Area Studies prepares students for a range of career possibilities in government, in foundations and NGOs, and in the wide range of institutions offering services transnationally or otherwise working in global environments.

Core Curriculum (15 credits)

IS 225 The World as a Total System 3

IS 475 Senior Project 3

one research course of:

ANTH 374 Anthropology Field Methods 3

HIST 301 Research Methods 3

and two of:

GEOG 120 World Regional Geography 3

HIST 122 World Civilization II 3

PS 104 The World's Political Systems 3

Regional Specialization (15 credits)

Courses in the language, literature, and social or behavioral science of a particular world region selected in consultation with a faculty advisor. Regions include:

- African Studies
- East Asian Studies
- European Union/West European Studies
- Latin American Studies
- Middle Eastern Studies
- Major in Russian Studies
- Slavic/East European Studies

Modern Language (18 credits)

Courses in a single modern language or demonstration of competency in reading, writing, speaking, and understanding of a single modern language equal to completion of the 226 level, as determined by a CCSU instructor of the language and/or the chair of the Department of Modern Languages.

Directed Electives (9 credits)

Courses in either the regional specialization or a related area, or those designated international, or those labeled international studies; selected in consultation with a faculty advisor.

Structured International or Multicultural Experience

At least one semester of faculty-supervised, in-depth exposure to another way of life.

Note: Students will be encouraged to select a regional specialization coinciding with existing CCSU area studies programs, although a specialization from other world regions may be selected if desired and courses are available.

The modern language selected must be related to the regional specialization.

Students who complete the modern language component with fewer than 18 credits must take additional courses, in either the regional specialization and/or directed electives, selected in consultation with a faculty advisor.

Ideally, international studies majors will spend one academic year abroad. As an alternative, international studies faculty will assist students to develop a local multicultural experience related to the student's academic track or regional specialization.

A minor is not required for this major.

Major in Italian, BA (30 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	3
ITAL 305 Introduction to Italian Literature II	3
ITAL 315 Italian Civilization to 1861	3
ITAL 316 Italian Civilization from 1861 to Present	3
Directed electives	6

Major in Journalism, BA (40 credits)

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 two tracks, print or broadcast, but all students receive training in multimedia reporting. All students must declare a minor in Arts and Sciences, excluding Communication. 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. For more information, contact Dr. Vivian B. Martin, program coordinator, 832-2776, martinv@ccsu.edu.

Plan of Study

Journalism (JRN) courses: 200, 235, 237, 336, 370, 371, 380, 381, 383, 384, 385, 400, 410, 412, 416, 418, 420, 490, 491, 495

Communication (COMM): 230, 231, 255, 330, 335, 420, 427, 428, 480, 495

English (ENG): 382

1. Common Core (22 credits)

Students must take JRN 200, 235, 236, 237, 383, 384, 412, and three credits from the following: JRN 370, 400, 410, 420. JRN 200: Introduction to Journalism (Prereq. ENG 110) 3 credits JRN 235: News Writing and Reporting I 3 credits JRN 237: Introduction to the Profession 1 credit (preferably taken concurrently with JRN 235 or 236) JRN 336: Journalism II 3 credits JRN 383: Responsibilities of Journalism 3 credits JRN 384: Journalism History 3 credits JRN 412: Editing 3 credits

One of the following: JRN 370: Today's News in Context JRN 400: Journalism Theory JRN 410: Public Opinion JRN 420: Political Economy and Media

2. Two Sequences: Print and Broadcast, 18 credits each.

Print sequence: 18 credits a. Required: JRN 385: Web Journalism, and two courses from the following: JRN 371: Reporting Cultural Diversity JRN 380: Feature Writing JRN 381: Editorial Writing JRN 416: Magazine Writing ENG 382: Travel Writing JRN 418: Studies in Journalism (students may take 418 twice provided the courses are on different topics)

b. Nine credits of directed electives chosen in consultation with a faculty advisor. These electives may include courses in Journalism not used to fulfill other requirements, including JRN 491 (Campus Newspaper Critique) and JRN 495 (Internship), or courses in other departments and schools at CCSU. Three of the nine credits must be in a visual medium in or related to journalism (video, photojournalism, design). Students are encouraged to choose courses that will allow them to build an area of expertise that will help their future work in journalism and related media fields.

Broadcast sequence: 18 credits

a. Required:

JRN 340: Introduction to Broadcast News COMM 330: Digital Film and Television Production I COMM 427: Digital Film and Television Production II COMM 230: Introduction to Mass Media Or COMM 255: Visual Communication

b. Nine credits of directed electives chosen in consultant with a faculty advisor. Students may choose three courses from those listed below or, with approval of an advisor, select other courses from Journalism, Communication, or other CCSU departments. COMM 231: Communication Technologies COMM 335: Communication Management COMM 420: Principles of Digital Photography for Convergent Media COMM 428: Digital Film and Television Production III COMM 480: Television Documentary Production COMM 495: Special Topics in Communication JRN 495: Internship

Journalism Major- General Education Requirements

All majors:

1. HIST 161: American History to 1877

Or

HIST 162: American History 1877 -

2. STAT 104: Elementary Statistics

Or

STAT 215: Statistics for Behavioral Sciences I

3. PS 110: American Government

Or

PS 230 : State and Local Government

All Majors:

4. Diversity requirement. Students can meet this requirement in one of a few ways.

a. Select one of the following:

ANTH 200 Dimensions of Diversity and Inequality

Or

SOC 212: Race, Class, and Gender

Or

HIST 319: Race, Ethnicity and Migration in the US

Or

HIST 369: African American History

Or

IS 226 Intercultural Sensitivity.

b. Choose a more advanced course in consultation with an adviser

c. Take JRN 371: Reporting Cultural Diversity.

5. COMM 230 is a recommended Gen Ed elective for all JRN majors (also counts towards broadcast sequence)

Broadcast Sequence

COMM 140: Public Speaking

Major in Management Information Systems, BS

Admission Requirements

Students must complete the 27-credit common business core requirements plus the following 30 credits:

Management Information Systems Core (27 credits)

MIS 220 Contemporary Business Applications Development I	3
MIS 300 Project Management for Business	3
MIS 305 E-Business	3
MIS 315 Database Management Systems	3
MIS 361 Systems Analysis and Design for Business	3
MIS 400 Business Analytics and Decision Support	3
MIS 410 Business-Driven Infrastructure Design	3
MIS 450 Enterprise Strategies and Transformations	3
MIS 462 IT Project Management and System Implementation	3

Directed Management Information Systems Electives (3 credits)

MIS 210 Application Program Development I	3
MIS 312 Contemporary Business Applications Development II	3
MIS 460 Emerging Technologies for Business	3
MIS 494 Independent Study in MIS	3
MIS 496 Practicum in Management Information Systems	3
MIS 498 Information and Decision Sciences Seminar	3

Consultation with an advisor is recommended if the student wishes to pursue a specific specialization and career goal.

No minor is required for this major.

Major in Management, BS

Admission Requirements

Students in the management major must complete the 27-credit common business core requirements and 30 credits of general management major requirements:

The management major includes three options:

- General management major
- Management major with a specialization in human resource management
- Management major with a specialization in entrepreneurship
- Management major with a specialization in international business

Management majors select one of the four aforementioned options and complete requirements specified for the selected option.

Management Requirements (30 credits)

MGT 326 Business Organizational Behavior	3
MGT 345 Organizational Theory	3
MGT 348 Management Systems	3
MGT 448 Managing Strategy and Operations	3
Management specialization courses	9
Business electives	9

General Management Specialization Courses (9 credits)

Students choose three courses after meeting with a Department of Management faculty advisor and adopting a planned program. Courses are selected from the following list to fashion a management curriculum that will satisfy career interests, such as international management, healthcare management, non-profit management, or advanced study in the discipline.

ENT 301 Entrepreneurship and New Venture Creation	3
MGT 305 Human Resource Management	3
MGT 321 International Management	3
MGT 390 Management Topics	3
MGT 403 Ethical and Social Issues for the Manager	3
MGT 425 Labor/Management Relations	3
MGT 431 Compensation and Benefits	3
MGT 460 Staffing	3
MGT 462 International Human Resource Management	3
MGT 470 Organizing and Managing for Quality	3
MGT 471 Managing Knowledge for Business Performance	3
MGT 473 Organizing and Managing for Innovation	3
MGT 481 Management of Not-for-Profit Organizations	3

Note: MGT 295 must be completed with a C- or better before students can take upper-level management courses.

Business Electives (9 credits)

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 Specialization 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 specialization may take courses only after meeting with a Department of Management faculty advisor and adopting a planned program.

Human Resource Management Core (9 credits)

MGT 305 Human Resource Management	3
MGT 326 Business Organizational Behavior	3
MGT 348 Management Systems	3
or	
MGT 345 Organizational Theory	3

Human Resource Specialization Courses (12 credits)

MGT 425 Labor/Management Relations	3
MGT 431 Compensation and Benefits	3
MGT 460 Staffing	3
MGT 462 International Human Resource Management	3

Business Electives (9 credits)

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 AC, ENT, FIN, LAW, MGT, MIS, and MKT courses. Courses are completed after satisfying all course prerequisites for each course.

Management Major with a Specialization in Entrepreneurship (30 credits)

Prepares students for entrepreneurial careers in new venture creation or managing family-owned or other small business enterprises. This specialization 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. However, they may not take courses in the entrepreneurship specialization beyond ENT 301 unless they have first met with a Department of Management faculty advisor and developed a planned program.

ENT 301 Entrepreneurship and New Venture Creation	3
ENT 305 Financing Entrepreneurial Ventures	3
ENT 320 Managing a Growing Business	3
ENT 499 Field Study in Entrepreneurship	3
Directed entrepreneurship electives	9
Business electives	9

Directed Entrepreneurship Electives (9 credits)

Select three courses from the following:

AC 301 Cost Management Systems	3
AC 420 Managerial Analysis and Cost Control	3
FIN 301 Intermediate Managerial Finance	3
FIN 310 Principles of Investments	3
MGT 305 Human Resource Management	3
MGT 326 Business Organizational Behavior	3
MKT 305 Consumer Behavior	3
MKT 373 Marketing Research	3
MKT 390 Product Development and Management	3
MKT 481 Consultative Selling Techniques	3

Business Electives (9 credits)

Students must complete 9 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 (30 credits)

The International Business program 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 specializations 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 (15 credits)

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
or		
MGT 395	Field Studies in International Business	3

Functional Specialization (9 credits)

Three courses from one of five specialization areas:

Accounting

AC 300	Foundations of Accounting	3
AC 301	Cost Management Systems	3
AC 312	Financial Reporting I	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 Decision Analysis Using Knowledge Bases	3

Marketing

MKT 305	Consumer Behavior	3
MKT 373	Marketing Research	3

and any other MKT electives

Management/Entrepreneurship

(From recommended. not required, lists)

Business electives (6 credits)

Two courses from among upper-division Business School courses, or, with Management Department advisor's approval, I-designated courses.

Major in Manufacturing Engineering Technology, BS (130 credits minimum)

Accredited by TAC of ABET

Advisors: Z. Prusak (860-832-1826), E. Maydock (860-832-1818), and M. Gadalla (860-832-1859)

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.

Core Requirements (46 credits)

ENGR 150	Introduction to Engineering	3
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	3
ETM 340	Geometric Dimensioning and Tolerancing	3
ETM 356	Material 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 Electives (5-6 credits)

The following courses, selected in consultation with an academic advisor, satisfy the directed technical electives requirement:

ET 300	Ergonomics	3
ET 495	Topics in Engineering Technology	3
ETM 358	Applied Thermodynamics	3
ETM 367	Machine Design	3
ETM 454	Applied Heat Transfer	3
ETM 460	Computer Aided Design and Manufacturing (CAD/CAM)	3
ETM 463	Plastics and Composite Tool Design	3
ETM 467	CAE Applied Finite Element Analysis	3
ENGR 490	Fundamentals of Engineering (FE)	3

Additional Requirements (44 credits)

CET 236	Circuit Analysis	3
CHEM 161	General Chemistry I	3
CHEM 162	General Chemistry I Laboratory	1
EMEC 324	Fluid Power Systems	3
ET 240 or CS 213	Spreadsheet and Engineering Problem Solving Tools Applications of Computing I	3 3
MFG 121	Technical Drafting and CAD	3
MFG 216	Manufacturing Processes	3
MFG 226	Principles of Computer Numerical Control	3
MFG 236	Tool Design	3
MATH 119 or MATH 116	Pre-calculus with Trigonometry Pre-calculus Mathematics	4 3

TM 464	Six Sigma Quality	3
TM 480	Robotics	3
STAT 104	Elementary Statistics	3

Electives (3 credits, unrestricted)

General Education Requirements for Engineering Technology (ET) Majors (40-49 credits)

Study Area I: Arts & Humanities	9
3 credits of literature and 6 credits of literature, philosophy, or fine arts. No more than 6 credits from any one discipline.	
Study Area II: Social Sciences	6
3 credits of history and 3 credits of economics, geography, history, or political science or ET 399 (Engineering Economy)	
Study Area III: Behavioral Sciences	3
3 credits of anthropology, psychology, or sociology	
Study Area IV: Natural Sciences	8
PHYS 121 or 125**; PHYS 122 or 126**	
Skill Area I: Communication Skills	6
ENG 110* and ENGR 290	
Skill Area II: Mathematics	6-8
MATH 135 or MATH 152**; MATH 136 or MATH 221**	
Skill Area III: Foreign Language Proficiency	0-6
Skill Area IV: University Requirement	2-3
PE 144 (or ENGR 150 for transfer students)	

* Placement exam may be required before enrolling in English or Mathematics courses.

** Recommended

Major in Marketing, BS

Admission Requirements

Marketing Core (12 credits)

MKT 305 Consumer Behavior	3
MKT 373 Marketing Research	3
MKT 380 Market Data Analysis	3
MKT 450 Marketing Strategy and Planning	3

Directed Marketing Electives (12 credits)

The directed electives are selected with and approved by an advisor.

MKT 306 Advertising and Promotion	3
MKT 307 Sales Administration	3
MKT 311 Retailing	3
MKT 321 International Marketing	3
MKT 350 Internet Marketing and Channels	3
MKT 358 Relationship Marketing	3
MKT 359 Special Events Marketing	3
MKT 375 Services Marketing	3
MKT 390 Product Development and Management	3
MKT 413 Business-to-Business Marketing	3
MKT 415 Marketing Touristic Startups	3
MKT 439 Direct Marketing	3
MKT 480 Marketing for Non-Profit Organizations	3
MKT 481 Consultative Selling Techniques	3
MKT 494 Independent Study in Marketing	3
MKT 496 Practicum in Marketing	6
MKT 497 Marketing Internship	3
MKT 498 Marketing Seminar	3

Business Electives (9 credits)

Students must complete 9 credits of 300- or 400-level courses offered by the School of Business, including marketing courses. No minor is required for this major.

Major in Mathematics, BA (38 credits)

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	Seminar in Proof	4
and 6 credits selected from:		
MATH 250	Symbolic Computation	4
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 421	History of Mathematics	3
MATH 440	Selected Topics in Mathematics	1-3
MATH 455	Introductions to Partial Differential Equations with Applications	4
MATH 468	Symbolic Logic	3
MATH 469	Number Theory	3
MATH 470	Mathematical Methods in Operations Research	3
MATH 477	Numerical Analysis	3
MATH 491	Advanced 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	Fundamentals of SAS	3
STAT 465	Nonparametric Statistics	3
STAT 476	Topics in Statistics	3
ACTL 335	Theory of Interest	3
ACTL 465	Actuarial Models I	4
ACTL 480	Topics in Actuarial Science	1-3
ACTL 481	Review -SOA/CAS Course I	3
ACTL 482	Review -SOA/CAS Course II	3

In addition, two laboratory science courses are required.

Note: CS 151 is strongly recommended.

Major in Mathematics with Specialization in Actuarial Science, BA (58 credits)

Core (40 credits)

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 Theory of Interest	3
ACTL 465 Actuarial Models I	4
ACTL 466 Actuarial Models II	4

Directed Electives (18 credits, as approved by advisor)

ACTL 480 Topics in Actuarial Science	1-3
ACTL 481 Review -SOA/CAS Course I	3
ACTL 482 Review -SOA/CAS Course 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 Financial Accounting	3
AC 212 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 Legal Environment of Business	3
MGT 295 Fundamentals of Management and Organizational Behavior	3

Note: ECON 200 and 201 are strongly recommended.

Note: No minor is required for students selecting this major.

Major in Mathematics with Specialization in Statistics, BA (58 credits)

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
or	
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	3
or	
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 Fundamentals of SAS	3
STAT 465 Nonparametric Statistics	3
STAT 476 Topics in Statistics	3
ACTL 335 Theory of Interest	3
ACTL 465 Actuarial Models I	4
ACTL 466 Actuarial Models II	4
ACTL 481 Review -SOA/CAS Course I	3
MATH 470 Mathematical Methods in Operations Research	3

16 credits selected from the courses listed above or from the following:

MATH 300 Mathematics Internship	3
MATH 491 Advanced Calculus	3
CS 151 Computer Science I (strongly recommended)	3
CS 152 Computer Science II	3
CS 253 Data and File Structures	3
CS 473 Simulation Techniques	3
BIO 405 Ecology	4
ECON 460 Economic Forecasting	3
ECON 485 Econometrics	3
GEOG 476 Advanced Cartography	3
PSY 222 Research Methods in Psychology II	4
PSY 451 Psychological Evaluation	3

Note: No minor is required for students choosing this major.

Note: CS 151 is strongly recommended.

Major in Mechanical Engineering Technology, BS (130 credits minimum)

Accredited by TAC of ABET

Advisors: N. Al-Masoud (860-832-1825), P. Baumann (860-832-0086), A. Gates, P.E. (860-832-1823), and T. Vasko (860-832-1896)

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.

Core Requirements (58 credits)

ENGR 150	Introduction to Engineering	3
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	3
ETM 340	Geometric Dimensioning and Tolerancing	3
ETM 356	Material 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	CAE Applied Finite Element Analysis	3
ETM 497	Engineering Technology Senior Project Research	2
ETM 498	Engineering Technology Senior Project (Capstone)	2

Directed Electives (5-9 credits)

The following courses, selected in consultation with an academic advisor, satisfy the directed technical electives requirement:

ET 495	Topics in Engineering Technology	3
ETM 360	Computer Aided Planning (CAP)	3
ETM 423	Applied Feedback Control Systems	3
ETM 460	Computer Aided Design and Manufacturing (CAD/CAM)	3
ETM 461	Composites and Plastics Manufacturing Process	3
ETM 463	Plastics and Composite Tool Design	3
ETM 468	Composite Design and Analysis	3
MFG 226	Principles of Computer Numerical Control	3
EMEC 334	Mechanisms for Automation	3
CET 113	Introduction to Information Processing	3
ETC 454	Introduction to Transportation Engineering	3
ENGR 490	Fundamentals of Engineering (FE)	3

Additional Requirements (32 credits)

CET 236	Circuit Analysis	3
CHEM 161	General Chemistry I	3
CHEM 162	General Chemistry I Laboratory	1
EMEC 324	Fluid Power Systems	3

ENGR 240 Spreadsheet and Engineering Problem Solving Tools	
or	3
CS 213 Applications of Computing I	
MFG 121 Technical Drafting and CAD	3
MFG 216 Manufacturing Processes	3
MATH 119 Pre-calculus with Trigonometry	4
or	
MATH 116 Pre-Calculus Mathematics	3
STAT 104 Elementary Statistics	3

Electives (3 credits, unrestricted)

General Education Requirements for Mechanical Engineering (ME) Majors (42-49 credits)

Study Area I: Arts & Humanities	9
3 credits of literature and 6 credits of literature, philosophy, or fine arts. No more than 6 credits from any one discipline.	
Study Area II: Social Sciences	6
3 credits of history and 3 credits of economics, geography, history, or political science or ET 399 (Engineering Economy)	
Study Area III: Behavioral Sciences	3
3 credits of anthropology, psychology, or sociology	
Study Area IV: Natural Sciences	8
PHYS 125 and PHYS 126	
Skill Area I: Communication Skills	6
ENG 110* and ENGR 290	
Skill Area II: Mathematics*	8
MATH 152; and MATH 221	
Skill Area III: Foreign Language Proficiency	0-6
Skill Area IV: University Requirement	2-3
PE 144 (or ENGR 150 for transfer students)	

* Placement exam may be required before enrolling in English or mathematics courses.

Major in Mechanical Engineering, BS

Mechanical Engineering Program Educational Objectives

The Mechanical Engineering program seeks to prepare graduates who, after the first few years of their career, have:

- 1) Established themselves as valued practicing mechanical engineers working primarily in the region.
- 2) Become supportive members of the community and active professionally, seeking continuous improvement of skills and professional growth.

The Bachelor of Science in Mechanical Engineering is a program of study requiring 127-135 credits of undergraduate work, including a two-term senior project capstone requirement completed through oral and written reports. If desired, the candidate may also choose an appropriate sequence of elective courses for concentration in Manufacturing, or Aerospace.

Required coursework can be grouped in four categories: General Education, Major Requirements, Electives or Concentration Requirements, and Additional Requirements.

I. General Education (42-49 total credits)

NOTE: Distribution requirements are similar to the existing Engineering Technology General Education requirements.

Study Area I: Arts & Humanities

Literature	3
Philosophy or Fine Arts	3
literature, philosophy or fine arts	3

Study Area II: Social Sciences

history electives	6
-------------------	---

Study Area III: Behavioral Sciences

Elective	3
----------	---

Study Area IV: Natural Sciences

PHYS 125 University Physics I	4
PHYS 126 University Physics II	4

Skill Area I: Communication Skills

ENG 110 Freshman Composition	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	2-3
---------------------------------------	-----

PE 144 Fitness/Wellness Ventures

or

ENGR 150 Introduction to Engineering

II. Major Requirements (40-43 credits)

ENGR 150 Introduction to Engineering	3
ENGR 251 Engineering Mechanics I - Statics	3
ENGR 252 Engineering Mechanics II - Dynamics	3
ENGR 257 Mechanics of Materials	3
ME 216 Manufacturing Engineering Processes	0-3
ME 258 Engineering Thermodynamics	3
ME 345 Engineering Statistical Analysis of Operations	3
ME 352 Modeling of Dynamic Systems	3
ME 354 Fluid Mechanics	3
ME 367 Machine Design	3
ME 370 Instrumentation	0-3
ME 403 Control of Dynamic Systems	3

ME 454	Heat Transfer	3
ME 497	Senior Project I: Project Research	2
ME 498	Senior Project II: Design Project	2

III. Electives or Concentration Requirements (9 credits)

General Electives:

ME 458	Heating, Ventilating and Air Conditioning Systems Design	3
or		
ME 459	Energy Conversion Systems	3
ME Elective		3
Tech Elective		3

Manufacturing:

ME 360	Manufacturing Operations Analysis and Simulation	3
ME 460	Manufacturing System Design	3
ME 466	Inventive Engineering Design	3

Aerospace:

ME 480	Propulsion Systems	3
ME 483	Aerodynamics	3
ME 486	Aerospace Structures and Materials	3

IV. Additional Requirements (35 credits)

CET 236	Circuit Analysis	3
CHEM 161	General Chemistry I	3
CHEM 162	General Chemistry I Laboratory	1
CHEM 163	General Chemistry II	3
CHEM 164	General Chemistry II Laboratory	1
ENGR 240	Spreadsheet and Engineering Problem Solving Tools	3
ETM 260	Computer Aided Design and Integrated Manufacturing CAD/CAM/CIM	3
ETM 356	Materials Analysis	3
ETM 467	Applied Finite Element 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

Proof of 400 hours professional experience.

Major in Music, BA (60 credits)

Core (25 credits)

MUS 114 Introduction to Music Technology	1
MUS 115 Aural Skills I	1
MUS 116 Aural Skills II	1
MUS 121 Music Theory I	2
MUS 122 Music Theory II	2
MUS 211 Ethnomusicology	3
MUS 215 Aural Skills III	1
MUS 216 Aural Skills IV	1
MUS 221 Music Theory III	2
MUS 222 Music Theory IV	2
MUS 235 Music History I	3
MUS 236 Music History II	3
MUS 335 Music History III	3

Specializations (35 credits)

Specialization in Performance

Seven semesters of:

MUS 178 Applied Music for Majors	2
MUS 278 Applied Music for Majors II	2
MUS 378 Applied Music for Majors III	2
MUS 478 Applied Music for Majors IV	2

10 credits from the following:

MUS 140 Ensemble	1
or	
MUS 141 Chorus	1
or	
MUS 142 Band	1
or	
MUS 143 Sinfonietta	1
MUS 367 Choral Conducting	2
MUS 380 Advanced Notation, Sequencing, and Sound Synthesis	2
or	
MUS 401 Topics in Music	3
MUS 400 Project in Music	4
MUS 404 Topics in Performance	3

Specialization in Theory and Composition

Seven semesters of:

MUS 178 Applied Music for Majors	2
MUS 278 Applied Music for Majors II	2
MUS 378 Applied Music for Majors III	2
MUS 478 Applied Music for Majors IV	2

Two to six semesters of:

MUS 141 Chorus	1
----------------	---

or	
MUS 142 Band	1
or	
MUS 143 Sinfonietta	1
Up to 4 semesters of:	
MUS 147 Jazz Ensembles	1
MUS 295 Beginning Composition	2
MUS 367 Choral Conducting	2
MUS 380 Advanced Notation, Sequencing, and Sound Synthesis	2
MUS 390 Orchestration	2
MUS 395 Composition	3
or	
MUS 405 Topics in Composers	3
MUS 400 Project in Music	4

Specialization in Jazz Studies

Seven semesters of:

MUS 178 Applied Music for Majors	2
MUS 278 Applied Music for Majors II	2
MUS 378 Applied Music for Majors III	2
MUS 478 Applied Music for Majors IV	2

Eight semesters of:

MUS 147 Jazz Ensembles	8
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	4

Specialization in General Studies

MUS 250 Piano Class I	2
and	
MUS 251 Piano Class II	2
MUS 350 Piano Class III	2
MUS 351 Piano Class IV	2

or pass piano proficiency exam

Six semesters of:

MUS 178 Applied Music for Majors I	2
MUS 278 Applied Music for Majors II	2
MUS 378 Applied Music for Majors III	2
MUS 478 Applied Music for Majors IV	2
MUS 367 Choral Conducting	2

Eight semesters of:

MUS 141 Chorus	1
or	
MUS 142 Band	1
or	
MUS 143 Sinfonietta	1
or	
MUS 147 Jazz Ensembles	1

or

MUS 148 University Singers 1

or

MUS 149 University Chamber Players 1

Music electives 5-13

Note: This major does not require a minor.

Note: Students enrolled in MUS 177 must pay an extra fee of \$300 each semester. Students enrolled in MUS 178, 278, 378, or 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, 278, 378, or 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 420/421 or MUS 400.

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.

All music majors (BA and BS candidates) must successfully complete all portions of the sophomore review, which includes a written theory test, sight-singing, and piano proficiency. No student will be allowed to proceed to a 300-level music course until the sophomore review has been successfully completed.

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. Three categories of the exam must be passed before acceptance into the professional program. All of the exam must be passed before beginning student teaching.

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 three intermediate-level pieces from the recommended list, including a chorale and a memorized piece;

Harmonizing a simple melody;

Transposing the same melody up or down a major/minor second; and

Sight-reading a simple piano piece and an accompaniment.

Nursing, B.S.N. (130 credits)

Admission to the Major Admission to the Major in Nursing BSN program is highly competitive. Meeting the following minimum criteria does not guarantee admission to the major.

- Submission of all application materials to the nursing program by March 1;
- Matriculation at CCSU;
- Completion of a minimum of 14 credits;
- A minimum cumulative GPA of 2.70 at CCSU and a minimum cumulative GPA of 2.70 for all undergraduate coursework taken at all institutions (including CCSU);
- A grade of C or better in CHEM 150: Chemistry of Allied Health I; and
- A grade of B- or better in NRSE 110: Introduction to Nursing Theories.

Admission to CCSU as a pre-nursing major requires:

- Eligibility to enroll in CHEM 150: Chemistry of Allied Health I, or
- AP credit for CHEM 161 and 162.

Requirements for the BSN program (130 credits) General education requirements as follows: PS 110, SOC 110, PSY 112, ENG 110, STAT 215 or 104.

Nursing Core (60 credits)

NRSE 110	Introduction to Nursing Theories	3
NRSE 150	Nutrition	3
NRSE 210	Health Assessment	4
NRSE 246	Health Care Ethics	3
NRSE 250	Nursing Care of Well Populations	4
NRSE 303	Introduction to Nursing Research	3
NRSE 310	Altered Health Concepts and Therapeutic Interventions	4
NRSE 320	Holistic Care of Adults with Health Alterations	5
NRSE 350	Nursing Care of Families in Transition	5
NRSE 375	Seminar in Family Nursing Concepts	2
NRSE 420	Social Justice and Community Health Issues	3
NRSE 430	Psychiatric/Mental Health Nursing	4
NRSE 440	Gerontological Nursing	3
NRSE 460	Seminar & Practicum in Community Health Nursing	4
NRSE 470	Holistic Nursing Care of the Critically Ill	5
NRSE 480	Professional Issues	2
NRSE 490	Leadership & Management in Nursing	3

Related Requirements (27 credits)

PSY 236	Life Span Development	3
BIO 111	Introductory Biology	3
or		
BMS 111	Cells and the Human Body	3
or		
BMS 102	Introduction to Biomolecular Science	3
BMS 206	Genetics for Nursing	3
BMS 216	Microbiology for Nursing	3
EXS 207	Anatomy & Physiology in Human Performance I	4
EXS 208	Anatomy and Physiology in Human Performance II	4
or		
BIO/BMS 318	Anatomy and Physiology I	4
and		
BIO/BMS 319	Anatomy and Physiology II	4
CHEM 150	Chemistry of Allied Health I	3

CHEM 152 Chemistry of Allied Health II

4

RN to BSN Program

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.

RN to BSN Core

Requirements:

122 credits including:

NRSE 246	Health Care Ethics	3
NRSE 300	Nursing Assessment	4
NRSE 301	Theoretical Foundations of Nursing	3
NRSE 303	Introduction to Nursing Research	3
NRSE 413	Population- and Community-Based Nursing Care	5
NRSE 414	Professional Nursing Role	4
NRSE 490	Leadership and Management in Nursing	3
BIO/BMS 318	Anatomy and Physiology I	3
BIO/BMS 319	Anatomy and Physiology II	1
BMS 216	Microbiology for Nursing	3
or		
BMS 316	Microbiology	
PSY 236	Life-Span Development	3

and up to 35 additional articulation credits in Nursing.

No minor is required for this major.

Transfer Students, Change of Major, or Re-entry Policy Transfer students must meet the same course requirements and application procedures as CCSU students. Acceptance as a pre-nursing major is done for fall semester only and requires:

- A cumulative GPA of 2.70 or better;
- A grade of C or better in any required science courses, if completed; and
- A grade of B or better in any nursing course, if completed.

Major in Philosophy, BA (39 credits)

Core (21 credits)

PHIL 112 Introduction to Philosophy	3
or	
PHIL 121 Introduction to Philosophy through Literature	3
or	
PHIL 125 Introduction to Philosophy through Popular Culture	3
PHIL 220 Introduction to Logic	3
PHIL 230 Ancient Greek Philosophy	3
PHIL 290 Philosophical Methods	3
PHIL 310 Intermediate Seminar	3
PHIL 330 Early Modern Philosophy	3
PHIL 400 Seminar in Philosophy	3

Specializations(18 credits; 9 credits in each of two areas with at least 3 credits at 300-level or higher in each)

Specialization in History of Philosophy

PHIL 230 Ancient Greek Philosophy	3
PHIL 232 Medieval and Renaissance Philosophy	3
PHIL 330 Early Modern Philosophy	3
PHIL 332 The Age of Ideology	3
PHIL 368 Contemporary Epistemology and Metaphysics	3

Specialization in African, African-American, and Asian Philosophy

AFAM 110 Introduction to African American Studies	3
PHIL 250 Introduction to Asian Philosophy	3
PHIL 260 African Philosophy	3
PHIL 275 Chinese Philosophy	3
PHIL 360 African-American Philosophy	
PHIL 376 Buddhist Philosophy	3

Specialization in Logic and Philosophy of Science

PHIL 135 Nature, Mind, and Science	3
PHIL 235 Philosophy of Social Science	3
PHIL 241 Environmental Ethics	3
PHIL 242 Ethical Problems in Technology	3
PHIL 245 Computer Ethics	3
PHIL 320 Modern Logic	3
PHIL 335 Philosophy of Science	3
PHIL 368 Contemporary Epistemology and Metaphysics	3

Specialization in Continental Philosophy

PHIL 222 Philosophy of Gender	3
PHIL 248 Philosophy of the Arts	3
PHIL 332 The Age of Ideology	3
PHIL 366 Existentialism	3
PHIL 368 Contemporary Epistemology and Metaphysics	3

Specialization in Theoretical and Applied Ethics

PHIL 240	Ethical Problems in Business	3
PHIL 241	Environmental Ethics	3
PHIL 242	Ethical Problems in Technology	3
PHIL 244	Introduction to the Philosophy of Social Justice	3
PHIL 344	Topic in Philosophical & Social Justice	3
PHIL 346	Ethical Theory	3
PHIL 349	Philosophy of Law	3
PHIL 311	Global Justice	3
NRSE 246	Health Care Ethics	3

Specialization in Philosophy of Religion and Religious Studies

REL 105	Development of Christian Thought	3
	or	
REL 110	World Religions	3
REL 256	Philosophy, Religion & Culture	3
REL 257	Special Topics in Religion	3
REL 361	African-American Religion	3
PHIL 232	Medieval and Renaissance Philosophy	3
PHIL 250	Introduction to Asian Philosophy	3
PHIL 255	Philosophy of Religion	3
PHIL 376	Buddhist Philosophy	3

and courses listed under the minor in religious studies

Note: If PHIL 400 is taken more than once, the additional credit will be counted in a specialization.

Note: Any specialization course(s) taken to fulfill the core curriculum will be replaced by directed elective(s) selected in consultation with advisor.

Note: PHIL 382 or 492 may be included in a specialization if approved by the faculty advisor.

Major in Physical Education: Exercise Science and Health Promotion, BS (not certifiable for teaching)

67 credits as follows:

Lecture Courses (61 credits)

EXS 110	Concepts in Health & Fitness	3
EXS 113	Introduction to Exercise Science	3
EXS 207	Anatomy and Physiology in Exercise Science I	4
EXS 208	Anatomy and Physiology in Exercise Science II	4
EXS 215	Physiological Aspects of the Human Performance of the Aging	3
EXS 216	Kinesiology	3
EXS 217	Care and Treatment of Athletic Injuries	3
EXS 307	Human Nutrition	3
EXS 311	Stress Management	3
EXS 331	Measurement and Evaluation in Exercise Science	3
EXS 376	Theories of Strength Training and Conditioning	2
EXS 408*	Physiology of Sport and Exercise	3
EXS 409*	Clinical Exercise Physiology	3
EXS 415*	Fitness Assessment and Exercise Prescription	3
EXS 416*	Graded Exercise Testing	3
EXS 421*	Pharmacology in Sports Medicine	3
EXS 425*	Implementation and Evaluation of Health Promotion Programs	3
EXS 450*	Practicum in Exercise Science	3
EXS 470*	Internship in Exercise and Health Promotion	6

Skill Courses (6 credits)

EXS 275	Training for Sport Performance	3
EXS 280	Leadership in Exercise and Wellness	3

* Require admission to the professional program prior to enrollment

Required General Education Courses: BIO 111 or BIO 121 or BMS 102 or BMS 111; CHEM 111 or CHEM 150 or CHEM 161/162; ENG 110; HIST 161 or HIST 162; STAT 104, CS 115, PHYS 111, PSY 112, 236, and COMM 140

Note: No minor is required with this major.

Applying for Admission into the Exercise Science and Health Promotion Program Undergraduate applicants seeking admission to the exercise science and health promotion 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 21 for fall candidates and February 21 (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 and health promotion program:

- Completion of application to the professional program for exercise science and health promotion;
- Completion of 45 credits of academic work;
- Successful completion of EXS 207 or 208 or equivalent and EXS 113 or equivalent with a grade of C- or better. Courses must be completed before full admission will be granted.
- Successful completion of 3 credits of required skills courses including EXS 275 or equivalent or EXS 280 or equivalent with a grade of C- or better. Courses must be completed before full admission will be granted.
- University GPA of 2.50;
- Departmental GPA of 2.70;
- Two letters of recommendation (from persons who can best assess the candidate's potential);
- The presentation of an essay demonstrating command of the English language, setting out the reasons for wanting to enroll in the program; and emphasizing experiences related to exercise science (500-700 words); and
- 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."

Major in Physics, BS (Non-teaching, 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 & 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	1
PHYS 460 Seminar in Physics	1
PHYS 470 Quantum Mechanics	3
PHYS 471 Quantum Mechanics II	3

In addition, students must take:

CHEM 161 General Chemistry I	3
CHEM 162 General Chemistry I Lab	1
CHEM 163 General Chemistry II	3
CHEM 164 General Chemistry II Lab	1
MATH 152 Calculus I	4
MATH 221 Calculus II	4
MATH 222 Calculus III	3

Completion of a minor is required, and for students planning graduate work a year of French, German, or Russian should be taken.

Major in Political Science with Specialization in Public Administration, BA (36 credits)

PS 110 American Government & Politics	3
PS 230 American State and Local Government	3
PS 260 Public Administration	3
PS 344 Interpretation of Political Data	3
PS 446 The Budgetary Process	3
PS 450 Ethics, Corruption, and Virtue in Public Service	3

6 credits from the following:

PS 480 Government Intern Experience	4
and	
PS 481 Intern Seminars and Research	4
PS 482 Government Intern Experience	6-8
and	
PS 483 Intern Seminars and Research	6-8
PS 490 Directed Readings in Political Science	1-6
and	
PS 491 Advanced Studies in Political Science	1-6

or approved 400-level courses in political science or other fields

12 credits of electives from political science, or from fields directly related to public administration, with prior approval of the department advisor. Particularly appropriate electives are PS 315, 330, 331 or 332, 335, 430, and 431. Students must also complete a minor in an area relevant to public administration.

Major in Political Science, BA (39 credits)

Core (6 credits)

PS 104 The World's Political Systems 3

or

PS 110 American Government & Politics 3

PS 250 Approaches to Political Science 3

Five Core Areas (3 credits in each, 15 credits total):

U.S. and state government and politics (230, 231, 315, 330, 430, 431);

Political theory (232,334,335,433);

Comparative government (336, 380,420,421,425,434);

International relations and organization (235, 338, 345, 380, 439);

Public policy and law (241, 260, 270, 331, 332, 339, 445, 446, 448, 450).

Specialization (6 credits in one of the following specializations, at least 3 credits at the 300-400 level):

U.S. and state government, administration, and policy (230, 231, 260, 270, 331, 332, 430, 431, 439, 445, 446, 448);

Comparative and international politics (235, 336, 339, 345, 380, 420,421,425,434);

Leadership, organizations, political behavior and methods (280, 315, 330, 338, 343, 415, 450, 460);

Political Theory (232, 334, 335, 433)

Electives (12 credits in Political Science)

At least 18 of the 39 credits for the Major must be taken at the 300-400 level.

Credits from internships may be used to meet up to 6 credits of the appropriate specialization requirement.

3 credits from History, Sociology, Psychology, Economics, Geography, Mathematics, or statistics may count towards the Major if approved in advance by the Chair of Political Science.

Major in Psychology, BA (42 credits)

PSY 112 General Psychology I	3
PSY 113 Exploring Psychology	1
PSY 221 Research Methods in Psychology I	4
PSY 222 Research Methods in Psychology II	4
PSY 236 Life-Span Development	3
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 372 Social Psychology	3
PSY 470 Personality Psychology: Theories and Research	3

Biological:

PSY 342 Sensation & Perception	3
PSY 450 Biopsychology	3

Experimental:

PSY 200 Learning & Memory	3
PSY 281 Cognitive Psychology	3
PSY 440 Motivation	3

Diversity:

PSY 350 Cross-Cultural Psychology	3
PSY 430 Psychology of Diversity	3

and 9 credits of psychology electives

In addition, in order to graduate, students must take the Psychology Assessment test. The test will be administered by the department every semester; students may take the test only once.

A minor is required for this major.

Note: PSY 112 (C- or higher) and STAT 215 (C- or higher) are prerequisites for PSY 221.

Major in Robotics and Mechatronics Engineering Technology, BS (81 credits)

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 mechatronic 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.

Major Requirements (39 credits)

ROBO 110 Introduction to Robotics and Mechatronics	3
ROBO 220 Parametric Modeling and Simulation	3
ROBO 240 Electro-Mechanical Converters and Drivers	3
ROBO 310 Data Acquisition & Processing	3
ROBO 330 Fluid Power Systems	3
ROBO 350 Applied Control Systems I	3
ROBO 370 Mechanisms for Automation	3
ROBO 380 Mechatronics	3
ROBO 460 Applied Control Systems II	3
ROBO 470 Robotics Systems Engineering and Analysis	3
ROBO 480 Industrial Robotics	3
ROBO 496 Industrial Internship	3
ROBO 497 Capstone Senior Project	3

Additional Requirements (42 credits)

CET 236 Circuit Analysis	3
CET 323 Electronic Circuits	3
CET 363 Digital Circuits	3
CET 453 Microcomputers	3
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
ETM 358 Applied Thermodynamics	3
MFG 216 Manufacturing Processes	3
MATH 221 Calculus II	4
MATH 226 Linear Algebra and Probability for Engineers	4
MATH 355 Introduction to Differential Equations with Applications	4

Electives (1-7 credits, unrestricted)

Requirements in General Education (42-48 credits)

Study Area I: Arts & Humanities (9 credits)

Literature 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)

Including PHYS 125, CHEM 161, and CHEM 162

Skill Area I: Communication Skills (6 credits)

Including ENG 110 and COMM 140

Skill Area II: Mathematics (8 credits)

Including MATH 119 and MATH 152

Skill Area III: Foreign Language (0-6 credits)

Foreign Language and Internation requirement

Skill Area IV: University Requirement (2 credits)

PE 144

Major in Social Work, BA

54 credits as follows:

Social Work Core (45 credits)

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

Related courses (9 credits)

SOC 110	Introductory Sociology	3
	or	
ANTH 140	Introduction to Anthropology	3
SW 100	Exploration in Social Work	3
	or	
SOC 111	Social Problems	3
SOC 233	The Family	3

Required General Education Courses:

BIO 111; PS 110 or 230; ECON 200; and STAT 215

No minor is required for this major.

Major in Sociology, BA (38 credits)

The seven required core courses enable students to acquire fundamental analytical research skills and theoretical perspectives of the discipline.

Core (11 credits):

SOC 110	Introductory Sociology	3
SOC 300	Sociological Theory	4
SOC 310	Research Methods	4

Advanced Methods (4 credits):

SOC 410	Quantitative Analysis	4
or		
SOC 411	Oral History for the Social Sciences	4
or		
SOC 412	Qualitative Analysis	4
or		
SOC 413	Community Research	4

Capstone (4 credits):

SOC 499 Senior Seminar in Sociology 4

and 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). Students are also required to successfully complete STAT 215.

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.

Major in Spanish, BA (30 credits)

Spanish Language (12 credits)

For non-native 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

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	3

Spanish and Spanish-American Literature and Cultures (15 credits)

15 credits from:

SPAN 300 Literary Analysis	3
SPAN 304 Literary Masterpieces to 1700: Spain	3

or

SPAN 305 Literary Masterpieces since 1700: Spain	3
SPAN 315 Spanish Civilization	3
SPAN 316 Latin American Civilization	3
SPAN 375 Spanish American Literature I	3

or

SPAN 376 Spanish American Literature II	3
---	---

and three credits of directed electives (selected in consultation with advisor).

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.

Special Studies Major

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 122 credits.

Download application (Word) [here](#).

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 Arts and Sciences, Business, Education and Professional Studies, and Engineering and Technology subcommittees; and the dean of the Carol A. Ammon School of Arts and 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 Department of Arts and 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 School of Arts & Sciences, by this date.

Major in Theatre with Specialization in Costume Design, BFA (65 credits)

Core (48 credits)

TH 111	Stagecraft	3
TH 115	Play Production	1
TH 117	Lighting	3
TH 121	Costuming	3
TH 126	Makeup I	2
TH 211	Rendering and Drawing for the Stage	3
TH 222	History of Fashion	3
TH 253	Script Analysis for Theatre	3
TH 327	Makeup II	3
TH 332	Costume Design	3
TH 333	Period Styles	3
TH 334	Costume Construction	3
TH 375	History of Theatre I	3
TH 376	History of Theatre II	3
TH 482	Projects: Costuming	3
ART 130	Drawing I	3
ART 110	Introduction to Art History	3

and 17 credits of directed electives, either other theatre courses or courses in related fields, in consultation with advisor

A minor is not required with this major.

Major in Theatre with Specialization in Design and Technical Theatre, BFA (65 credits):

Core (52 credits)

TH 111	Stagecraft	3
TH 117	Lighting	3
TH 121	Costuming	3
TH 126	Makeup I	2
TH 211	Rendering and Drawing for the Stage	3
TH 213	Scene Painting I	3
TH 217	Sceno-Graphic Techniques	3
TH 251	Stage Management	2
TH 253	Script Analysis for Theatre	3
TH 316	Scene Design	3
TH 318	Lighting Design	3
TH 333	Period Styles	3
TH 375	History of Theatre I	3
TH 376	History of Theatre II	3
ART 130	Drawing I	3
ART 110	Introduction to Art History	3

and 6 credits from the following:

TH 481	Projects: Scenery	1-3
TH 485	Projects: Lighting	3
TH 486	Projects: Sound	3
TH 488	Projects: Directing	1-3
TH 491	Projects: Technical Direction	3
TH 492	Projects: Stage Management	3
TH 493	Theatre Internship	3-6

Directed Electives (13 credits)

Chosen from other theatre courses or from courses in related fields in consultation with advisor

A minor is not required with this major.

Major in Theatre with Specialization in General Theatre, BFA (60 credits)

TH 101	Performance Practicum (repeated 3 times)	3
TH 111	Stagecraft	3
TH 117	Lighting	3
TH 121	Costuming	3
TH 126	Makeup I	2
TH 145	Acting I	3
TH 253	Script Analysis for the Theatre	3
TH 375	History of Theatre I	3
TH 376	History of Theatre II	3
TH 489	Studies in Theatre/Drama	3

and

17 credits of theatre electives and 14 credits of theatre or related fields courses approved by the student's advisor. A minor is not required with this major.

Major in Theatre with Specialization in General Theatre/Educational Theatre, BFA (non-certification program, 50-62 credits)

Core (29 credits)

TH 101	Performance Practicum (repeated three times)	3
TH 111	Stagecraft	3
TH 117	Lighting	3
TH 121	Costuming	3
TH 126	Makeup I	2
TH 143	Theatre Games and Improvisation	3
TH 145	Acting I	3
TH 376	History of Theatre II	3
ENG 377	Play Writing	3
TH 489	Studies in Theatre/Drama	3

General Theatre Specialization (21 credits)

TH 110	Introduction to Theatre	3
--------	-------------------------	---

and 18 credits of theatre electives

Educational Theatre Specialization (30 credits)

TH 146	Intro to High Impact Theatre	3
TH 165	Improvisation for the Classroom	3
TH 246	Acting II	3
TH 253	Script Analysis for the Theatre	3
TH 352	Directing for the Stage	3
TH 375	History of Theatre I	3
TH 465	Creative Dramatics for Children	3
TH 495	Theatre Internship	3

and 6 credits of theatre electives, chosen in consultation with advisor.

A minor is not required with this major.

Major in Theatre with Specialization in Performance, BFA (50-61 credits):

Core (41 credits)

TH 101	Performance Practicum (repeated 6 times)	6
TH 115	Play Production	2
TH 111	Stagecraft	3
or		
TH 121	Costuming	3
TH 126	Makeup I	2
TH 135	Speaking-Voice Development	3
TH 145	Acting I	3
TH 148	Studio Performance I	2
TH 235	Movement for Performers	3
TH 246	Acting II	3
TH 253	Script Analysis for the Theater	3
TH 347	Acting III	3
TH 348	Performance Studio II	2
TH 375	History of Theater I	3
or		
TH 376	History of Theater II	3
TH 477	Contemporary U.S. Theatre	3

Emphasis (20 credits - choose one of the following four emphases)

Acting Emphasis (20 credits)

TH 146	Introduction to High Impact Theatre	3
TH 338	Advanced Voice Development	3
TH 447	Acting IV	3
TH 456	Shakespearean Production	3
TH 472	Studies in Acting	6
TH 483	Projects: Acting A	1
TH 484	Projects: Acting B	1

Directing Emphasis (9 credits)

TH 352	Directing for the Stage	3
TH 447	Acting IV	3
or		
TH 456	Shakespearean Production	3
TH 488	Projects: Directing	3

Interdisciplinary Emphasis (20 credits)

11 credits from acting or directing emphasis, plus 9 guided theatre electives.

Dance Emphasis (15-17 credits)

DAN 151	Beginning Modern Dance	2
DAN 152	Beginning Ballet	1
DAN 157	Beginning Jazz Dance	1

DAN 235	Movement for Performers	2
DAN 236	Principles of Choreography	2
DAN 252	Intermediate Ballet	1
DAN 157	Intermediate Jazz Dance	1
DAN 377	Modern Dance & Theory	1
DAN 480	Project: Dance	1-3
MUS 109	Fundamentals of Music	3

A minor is not required with this major.

Major in Theatre, BA (40 credits)

the Major in Theatre, B.A. is composed of Theatre Core (22 credits) and one Emphasis (18 credits).

Core (22 credits)

12 credits as follows:

TH 147 Theatre Workshop	3
TH 253 Script Analysis for the Stage	3
TH 375 History of Theatre I	3
TH 376 History of Theatre II	3

4 credits from the following (at least 1 credit in each):

TH 101 Performance Practicum	1 (may be taken 6 times):
TH 115 Play Production	1 (may be taken 6 times)

3 credits from the following:

TH 111 Stagecraft	3
TH 117 Lighting	3
TH 121 Costuming	3

and 3 credits from the following:

TH 145 Acting I	3
TH 146 High Impact	3
TH 148 Improvisation for the Classroom	3

Performance Emphasis (18 credits)

12 credits from the following:

TH 135 Voice I	3
TH 146 High Impact	3
TH 235 Movement I	3
TH 246 Acting II	3

and 6 credits from the following:

TH 347 Acting III	3
TH 275 American Theatre Today	3
TH 338 Voice II	3
TH 352 Directing	3
TH 447 Acting IV	3
TH 456 Shakespeare in Performance	3
TH 489 Studies in Theatre/Drama	3
DAN 235 Movement for Performers	2
DAN 236 Principles of Choreography	2

DAN 151 Beginning Modern Dance	2
DAN 152 Beginning Ballet	1
DAN 157 Beginning Jazz Dance	1
DAN 252 Intermediate Ballet	1
DAN 257 Intermediate Jazz Dance	1

Design Tech Emphasis (18 credits)

18 credits from the following:

TH 111 Stagecraft	3
TH 117 Lighting	3
TH 121 Costuming	3
TH 222 History of Fashion	3
TH 217 Sceno-graphics	3
TH 211 Rendering and Drawing	3
TH 213 Scene Painting I	3
TH 251 Stage Management	3
TH 333 Period Styles	3
TH 316 Scene Design	3
TH 318 Lighting Design	3
TH 332 Costume Design	3
TH 334 Costume Construction	3
Th 489 Studies in Theatre	3

Minor in African Studies (18 credits)

HIST 375	History of Africa to 1800	3
HIST 376	History of Africa since 1800	3
PS 421	Government & Politics of Africa	3
PS 434	Government and Politics of the Middle East and North Africa	3

and 6 credits of electives as approved by the program coordinator

Minor in African-American Studies (21 credits)

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.

The African-American studies director is located in Marcus White 101. 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.

AFAM 110	Introduction to African-American Studies	3
HIST 369	African-American History	3
HIST 469	African-Americans in the 20 th Century	3
PHIL 360	African-American Philosophy	3

and 9 credits from any of the following:

HIST 497	African History Through Film	3
HIST 497	African-American Women's History	3
HUM 490	African Civilization: A Voyage into the Past and Present	3
REL 361	African-American Religion	3
ART 100	Search in Art	3
ENG 212	African-American Literature	3
ENG 345	Modern African-American Literature	3
CRM 478	Gender, Race, and Crime	3
SOC 322	Race and Ethnic Relations	3
ANTH 200	Dimensions of Diversity and Inequality	3
ANTH 352	Ethnicity and Ethnic Identity	3
ANTH 401	City Life & Culture	3
ANTH 420	African Diaspora Archaeology	3
ANTH 424	Peoples and Cultures of Africa	3
PHIL 100	Search in Philosophy	3
HIST 100	Search in History	3
HIST 395	Topics in History	3
PSY 430	Psychology of Diversity	3
COMM 320	History of African-American Speakers	3

Minor in American Studies (18 credits)

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 an American studies advisor, students are encouraged to shape an individualized course of study to meet their own academic goals.

The certificate in American studies is primarily for international students who come to the United States for an introductory program in American studies or who wish to take such a program at a CCSU extension college abroad

Section 1

AMS 110 Introduction to American Studies 3

Section 2

3 credits from the following:

ENG 210	Survey of American Literature: Pre-Civil War	3
ENG 212*	African-American Literature	3
ENG 341	The American Renaissance	3
ENG 343	Modern American Literature	3
ENG 344	Contemporary American Literature	3
ENG 345*	Modern African-American Literature	3
ENG 448	Studies in American Literature	3

Section 3

3 credits from the following:

HIST 161	American History to 1877	3
HIST 330	History of Women in the United States, 1620-1865	3
HIST 331	History of Women in the United States, 1865-Present	3
HIST 369*	African-American History	3
HIST 465	Economic History of the United States	3
HIST 469*	African Americans in the 20 th Century	3

Section 4

3 credits from the following:

PS110	American Government & Politics	3
PS 331	American Constitutional Law	3
PS 332	Civil Liberties	3
PS 430	The American Presidency	3
PS 431	The Legislative Process	3

Section 5

3 credits from the following:

ENG 210	Survey of American Literature: Pre-Civil War	3
ENG 212*	African-American Literature	3
ENG 341	The American Renaissance	3
ENG 343	Modern American Literature	3
ENG 344	Contemporary American Literature	3

ENG 345*	Modern African-American Literature	3
ENG 448	Studies in American Literature	3
HIST 161	American History to 1877	3
HIST 330	History of Women in the United States, 1620-1865	3
HIST 331	History of Women in the United States, 1865-Present	3
HIST 369*	African-American History	3
HIST 465	Economic History of the United States	3
HIST 469*	African Americans in the 20 th Century	3
PS 110	American Government & Politics	3
PS 331	American Constitutional Law	3
PS 332	Civil Liberties	3
PS 430	The American Presidency	3
PS 431	The Legislative Process	3

Section 6

3 credits from the following:

ANTH 352*	Ethnicity and Ethnic Identity	3
ANTH 422	Native Americans	3
ART 215* ¹	The African Diaspora	3
ART 414	American Art	3
CRM 110	Introduction to the Criminal Justice System	3
GEOG 241	Introduction to Planning	3
GEOG 330*	United States and Canada	3
MUS 401 ²	Topics in Music	1-3
PHIL 382 ²	Special Topics in Philosophy	3
PHIL 400 ²	Seminar in Philosophy	3
PS 331	American Constitutional Law	3
PS 332	Civil Liberties	3
PS 430	The American Presidency	3
PS 431	The Legislative Process	3
REL 257 ²	Special Topics in Religion	3
SOC 322* ¹	Race and Ethnic Relations	3
SOC 455	Men, Masculinity, & Manhood in American Society	3
SOC 485	Ads, Fads, and Consumer Culture	3

Students may take AMS 490: Internship in American Studies as a substitute for one of the courses listed in sections 5 or 6.

Other course options may be available if they focus specifically on some aspect of American culture; consult the American Studies coordinator for current options.

Note: At least 3 credits must represent diversity in American society. Courses that satisfy this requirement are indicated by an asterisk (*).

Note: At least 6 credits must be at the 300/400 level.

¹ Note prerequisites

² Under section or topic approved by the American Studies Committee

Minor in Anthropology (18 credits)

ANTH 140 Introduction to Anthropology 3

and 15 credits in anthropology.

Individual programs will differ according to the particular needs of the student and must be developed jointly with the student's advisor.

Minor in Archaeology (24 credits)

ANTH 150 Introduction to Archaeology 3
ANTH 215 Before History 3
ANTH 324 Archaeology of the State 3
ANTH 450 Archaeological Field School 3-6

and 12 credits from the following:

ANTH 210 The Ancient World 3
ANTH 230 North American Prehistory 3
ANTH 322 Historical Archaeology 3
ANTH 323 Urban Archaeology 3
ANTH 329 Experimental Archaeology 3
ANTH 416 Archaeology of Africa 3
ANTH 418 New England Prehistory 3
ANTH 420 African Diaspora Archaeology 3

For students majoring in anthropology, 6 credits of this minor may be applied to the major.

Minor in Art (18 credits)

in art, including:

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

and 9 credits selected in consultation with the Department of Art advisor. To fulfill the residency requirement, transfer students must complete 9 credits at CCSU.

Minor in Astronomy (18 credits)

18 credits in Astronomy and related fields, including:

ESCI 178 Planetary Astronomy 4

ESCI 179 Stellar Astronomy 4

The remaining course will be selected from ESCI 278, 330, 378, 478, or other electives after consultation with an earth sciences department advisor.

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

Minor in Biological Anthropology (18 credits)

ANTH 160 Introduction to Biological Anthropology	3
ANTH 245 Laboratory in Biological Anthropology	3
ANTH 335 Theories of Human Evolution and Behavior	3
ANTH 365 The Anthropology of Human Differences	3
ANTH 425 Human Ecology	3
Minor-related elective	3

For students majoring in anthropology, 3 credits of this minor may be applied to the major.

Minor in Biology (Non-teaching, 20 credits)

BIO 121	General Biology I	4
BIO 122	General Biology II	4
BIO 200	Integrative Biology	4
and 8 credits in BIO at the 200 level or higher (not including BIO 211)		8

Minor in Biology (Certifiable for secondary teaching)

20 credits in biology (for those with a major in chemistry, physics, or earth sciences):

BIO 121	General Biology I	4
BIO 122	General Biology II	4
BIO 200	General Biology III	4

and 8 credits in BIO at the 200 level or higher (not including BIO 211)

Required Courses

SCI 416	Educational Technology in Secondary Science	1
SCI 417	Teaching of Science in the Secondary School	3
SCI 419	Student Teaching Seminar	1
MATH 125	Applied Calculus	3
CHEM 161	General Chemistry I	3
CHEM 162	General Chemistry I Lab	1

Students interested in the biology minor should consult with the Department of Biology chair about the specific requirements for the minor.

Minor in Biomolecular Sciences (Non-teaching, 20 credits)

BMS 102 Introduction to Biomolecular Science	3
BMS 103 Introduction to Biomolecular Science Laboratory	1
BMS 190 Introduction to Research I	0.5
BMS 201 Principles of Cell and Molecular Biology	4
BMS 290 Introduction to Research II	0.5

and 11 additional credits of BMS courses, as approved by the biomolecular sciences advisor. BIO 121 may be substituted for BMS 102/103.

Minor in Business (for non-business majors)

18 credits as follows:

Lower-division common business core (9 credits)

Three courses *identified by the student's School of Business faculty advisor and approved before taking these classes.* Possible courses include AC 211, AC 212, FIN 295, LAW 250, MGT 295, MIS 201, or MKT 295.

Upper-division functional area (9 credits)

Three courses, taken in residence, from a specific functional area: i.e., accounting, finance, international business, management, MIS, or marketing. "Capstone" courses and certain special project courses, such as independent study, may be excluded. (Specific course prerequisites, as shown in course listings given elsewhere in this catalog, must also be taken.) *These courses must be approved by a School of Business faculty advisor before the courses are taken.*

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. Some business minor functional areas may have higher minimum grade and cumulative grade point average requirements. Please check the specific requirements for each functional business minor area.

Minor in Caribbean Studies(18 credits)

IS 240	Caribbean Culture Patterns	3
IS 245	Puerto Rico	3
GEOG 434	Mexico, Central America, and the Caribbean	3
and 9 credits from the following:		
ANTH 428	Cultures of Latin America	3
ECON 435	Economic Development	3
GEOG 459	Field Studies in Regional Geography	3-6
PS 420	Government and Politics of Latin America	3
SPAN 316	Latin American Civilization	3

Note prerequisites where applicable. Students selecting this minor must register with the program coordinator.

Minor in Chemistry (Non-teaching, 21 credits)

CHEM 161 General Chemistry I	3
CHEM 162 General Chemistry I Lab	1
CHEM 163 General Chemistry II	3
CHEM 164 General Chemistry II Lab	1
CHEM 210 Organic Chemistry I	3
CHEM 211 Organic Chemistry I Lab	1
CHEM 212 Organic Chemistry II	3
CHEM 213 Organic Chemistry II Lab	1
CHEM 301 Analytical Chemistry	4

and one chemistry elective selected from courses numbered 300 or above.

Minor in Chemistry (Certifiable for secondary teaching)

20 credits in chemistry if the student majors in biology, biomolecular sciences, physics, or earth science

CHEM 161	General Chemistry I	3
CHEM 162	General Chemistry I Lab	1
CHEM 163	General Chemistry II	3
CHEM 164	General Chemistry II Lab	1
CHEM 210	Organic Chemistry I	3
CHEM 211	Organic Chemistry I Lab	1
CHEM 212	Organic Chemistry II	3
CHEM 213	Organic Chemistry II Lab	1
CHEM 301	Analytical Chemistry	4

Related Requirements

PHYS 121	General Physics I	4
PHYS 122	General Physics II	4
BIO 121	General Biology I	4
or		
BMS 102	Introduction to Biomolecular Science	3
and		
BMS 190	Introduction to Research I	0.5
SCI 417	Teaching of Science in the Secondary School	3
MATH 121	Pre-Calculus Mathematics	3
or		
MATH 119	Pre-Calculus with Trigonometry	4

For other majors, a certifiable minor in chemistry requires 30 credits planned with the approval of the chair of the Department of Chemistry and Biochemistry.

Minor in Cinema Studies

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.

Program

Minor in Cinema Studies (18 credits)

Cinema Studies Requirements

COMM 330 Basic Video Production 3
and

CINE 201 The Language of Film 3

or

COMM 220 Introduction to History of Film 3

Production Electives

COMM 427 Television Programming and Production 3

COMM 428 Advanced TV Production 3

COMM 480 Television Documentary Production 3

COMM 495 Special Topics: Scriptwriting 3

Electives in Critical Studies

CINE 201 The Language of Film 3

CINE/COMM 220 Introduction to History of Film 3

CINE/HUM 270 Studies of World Culture Through Cinema 3

CINE/COMM 319 Filmic Narrative 3

CINE 350 Laughter, Blood, and Tears: Studies in Film Genre 3

CINE 365 Nonfiction & Documentary Film 3

CINE/COMM 380 Women and Film 3

CINE/COMM 382 American Cinema 3

CINE/ENG 460 Shakespeare and Film 3

CINE/ENG 465 Global Cinema 3

CINE/ENG 466 American Cinema in the 60s and 70s 3

CINE/ENG 467 Hitchcock 3

CINE 480 Topics in Cinema Studies 3

CINE/ENG 489 Studies in Film Adaptation 3

CINE 490 Cinema Studies: Independent Study 3

COMM 495 Special Topics: Popular Film & Politics 3

HIST 476 African History through Film 3

PES 111 War & Peace through Film 3

HUM 290 German Culture through Film 3

Minor in Communication (21 credits)

COMM 115 Fundamentals of Communication 3

or

COMM 140 Public Speaking 3

COMM 215 Introduction to Interpersonal Communication 3

COMM 230 Introduction to Mass Media 3

and 12 credits in communication courses, 6 of which must be numbered 300 or 400

Students may not count both COMM 115 and COMM 140 towards the minor.

Minor in Community Engagement (17-18 credits)

Community Engagement Requirements:

17-18 credits, with at least 9 credits on the 300-400 level, distributed as follows:

CEN 200 Introduction to Community and Civic Engagement 3

6-9 credits from any of the following:

ANTH 170	Introduction to Cultural Anthropology	3
COMM 454	Communication and Social Change	3
ECON 250	Contemporary Economic Issues	3
ECON 420	Urban Economics	3
EDTE 210	Education & Teacher Leadership in Diverse Learning Communities	4
ESCI 278	Observational Astronomy	4
ENT 301	Entrepreneurship and New Venture Creation	3
HIST 302	Introduction to Public History	3
HIST 403	Public History Project	3
HIST 405	Local History and Community Development	3
MGT 295	Fundamentals of Management and Organizational Behavior	3
MGT 403	Ethical and Social Issues for the Manager	3
PHIL 144	Moral Issues	3
PHIL 346	Ethical Theory	3
PS 230	American State and Local Government	3
PS 343	Political Leadership	3
PSY 250	The Psychology of Community Service	3
SOC 111	Social Problems	3

3-6 credits of 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.

Minor in Computer Science (18 credits)

CS 151 Computer Science I 3

CS 152 Computer Science II 3

CS 153 Computer Science III 3

CS 253 Data and File Structures 3

and 6 credits of computer science courses numbered CS 210 or higher.

Minor in Creative Writing (18 credits)

Poetry (9 credits)

ENG 373 Creative Writing: Poetry I	3
ENG 374 Creative Writing: Poetry II	3
ENG 485 Advanced Poetry Workshop	3

or

Fiction (9 credits)

ENG 371 Creative Writing: Fiction I	3
ENG 372 Creative Writing: Fiction II	3
ENG 484 Advanced Fiction Workshop	3

or

Nonfiction (9 credits)

ENG 370 Creative Writing: Creative Nonfiction I	3
ENG 375 Creative Nonfiction II	3
ENG 483 Advanced Creative Nonfiction	3

Directed Electives (9 credits)*

ENG 370 Creative Writing: Creative Nonfiction I	3
ENG 371 Creative Writing: Fiction I	3
ENG 372 Creative Writing: Fiction II	3
ENG 373 Creative Writing: Poetry I	3
ENG 374 Creative Writing: Poetry II	3
ENG 375 Creative Writing: Creative Nonfiction II	3
ENG 376 Creative Writing: Essay	3
ENG 377 Creative Writing: Playwriting	3
ENG 378 Creative Writing: Special Topics	3
ENG 382 Travel Writing	3
ENG 483 Advanced Creative Nonfiction	3
ENG 484 Advanced Fiction Workshop	3
ENG 485 Advanced Poetry Workshop	3
ENG 494 Creative Writing: Independent Study	3

*A minimum of one course is required in a genre other than the selected sequence.

Note: No repetition of courses is allowed, with the exception of ENG 378 (Special Topics). Consultation with a creative writing faculty member is required for the program and selection of all courses.

Minor in Criminal Justice (18 credits)

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
and one elective	3

Minor in Cross-Cultural Analysis (18 credits)

ANTH 170 Introduction to Cultural Anthropology 3
ANTH 200 Dimensions of Diversity and Inequality 3
ANTH 340 Theories of Culture 3

and 6 credits from the following:

ANTH 352 Ethnicity and Ethnic Identity 3
ANTH 422 Native Americans 3
ANTH 424 Peoples and Cultures of Africa 3
ANTH 426 People and Cultures of Eastern Europe 3
ANTH 428 Cultures of Latin America 3
ANTH 475 Topics in Anthropology 3

and, if devoted to a specific world area, one additional course approved by an advisor

For students also majoring in anthropology, 3 credits of this minor may be applied to the major.

Minor in Dance (18 credits)

DAN 151	Beginning Modern Dance	2
DAN 152	Beginning Ballet	1
DAN 157	Beginning Jazz Dance	1
DAN 252	Intermediate Ballet	1
DAN 257	Intermediate Jazz Dance	1
DAN 377	Modern Dance & Theory	1
DAN 480	Project Dance	1-3
TH 117	Lighting	3
TH 121	Costuming	3
MUS 109	Fundamentals of Music	3

Not open to theatre majors.

Minor in Descriptive Linguistics (21 credits)

LING 200 Introduction to Linguistics 3

LING 230 The Study of Language 3

LING 300 Language Acquisition 3

LING 400 Linguistics Analysis 3

Directed Electives (9 credits)

LING 312 Introduction to Syntax 3

LING 313 Introduction to Phonetics & Phonology 3

LING 430 Studies in Linguistics & the English Language 3

LING 431 The History of the English Language 3

LING 497 Second Language Acquisition 3

Minor in Earth Sciences (18 credits)

ESCI 121 Physical Geology 4

ESCI 129 Introduction to Meteorology 4

ESCI 178 Planetary Astronomy 4

or

ESCI 179 Stellar Astronomy 4

The remaining credits will be chosen after consultation with an Earth Sciences advisor.

Minor in Earth Sciences (Certifiable for secondary teaching, 20 credits)

ESCI 121 Physical Geology 4

ESCI 122 Historical Geology 4

ESCI 129 Introduction to Meteorology 4

ESCI 178 Planetary Astronomy 4

or

ESCI 179 Stellar Astronomy 4

and other electives as approved by faculty advisor

In addition, students must take:

SCI 416 Educational Technology in Secondary Science 3

SCI 417 Teaching of Science in the 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

Minor in East Asian Studies

18 credits of electives in East Asian courses, subject to approval of the coordinator. Courses used for a major may not be used to fulfill the requirements of the minor.

Minor in Economics (18 credits)

ECON 200 Principles of Economics I 3

ECON 201 Principles of Economics II 3

Economics electives 12

Note: GEOG 244 may be credited toward the minor for students completing elementary and secondary certificates.

Minor in English (18 credits)

ENG 205 Survey of British Literature: Middle Ages to the 18 th Century	3
ENG 210 Survey of American Literature: Pre-Civil War	3
ENG 298 Introduction to Literary Studies	3

and 9 credits of literature electives at the 200 level or higher, with at least 6 credits on the 300-400 level.

Minor in Environmental Geography (18 credits)

GEOG 110 Introduction to Geography 3

3 credits from the following:

GEOG 256 Maps & Map Reading	3
GEOG 266 Air Photo Interpretation	3
GEOG 276 Elementary Cartography	3
GEOG 378 Geographic Information Systems	3
GEOG 442 Field Methods in Geography	3

6 credits from the following:

GEOG 270 Geography of Hazards	3
GEOG 272 Physical Geography	3
GEOG 275 Soils and Vegetation	3
GEOG 374 Climatology	3

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 Energy Resources & Climate Change	3

Minor in European Union/West European Studies (18 credits)

The minor in European Union/West European Studies includes GEOG 452, PS 336, competency at the intermediate level (126) in a West European language other than English, and 6 additional credits of language, culture, or other suitable regional courses, in consultation with an advisor. Students achieving the language competency with fewer than 6 credits will be required to take additional directed electives, in consultation with an advisor, to bring the total number of credits taken for the minor to 18.

Minor in General Science (Certifiable for secondary teaching, 43 credits)

Restricted to students with a major in biology, chemistry, earth science, or physics.

32 credits in science as follows:

BIO 121	General Biology I	4
BIO 122	General Biology II	4
CHEM 161	General Chemistry I	3
CHEM 162	General Chemistry I Lab	1
CHEM 163	General Chemistry II	3
CHEM 164	General Chemistry II Lab	1
PHYS 121	General Physics I	4
PHYS 122	General Physics II	4
ESCI 121	Physical Geology	4

and 4 credits from the following:

BIO 318	Anatomy & Physiology I	4
CHEM 210	Organic Chemistry I	3

and

CHEM 211	Organic Chemistry I Lab	1
PHYS 325	Optics	4

In addition, students must complete the following:

SCI 416	Educational Technology in Secondary Science	3
SCI 417	Teaching of Science in the Secondary School	3
SCI 419	Student Teaching Seminar	1

Minor in Geographic Information Sciences (18 credits)

GEOG 130 Introduction to Geography Information Science 3

GEOG 378 Geographic Information Systems 3

and 12 credits (at least 6 at the 300 or 400 level) from the following:

GEOG 256 Maps & Map Reading 3

GEOG 266 Air Photo Interpretation 3

GEOG 276 Elementary Cartography 3

GEOG 466 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

ETC 458 GPS Mapping for GIS 3

Note: For geography majors, 3 additional credits of electives are required. Geography majors in the geographic information sciences track may not choose this minor.

Minor in Geography (18 credits)

(May be taken online):

GEOG 110 Introduction to Geography 3

or

GEOG 120 World Regional Geography 3

and 15 credits of geography electives (at least 6 credits must be in courses at the 300 or 400 level)

Minor in Geography with Specialization in Planning (18 credits)

GEOG 110 Introduction to Geography 3

GEOG 241 Introduction to Planning 3

GEOG 441 Community & Regional Planning 3

6 credits from GEOG 272 and/or any geographic techniques course and 3 credits from any 400-level planning course

Minor in Geology (18 credits)

ESCI 121 Physical Geology 4

ESCI 122 Historical Geology 4

ESCI 221 Mineralogy 4

ESCI 321 Structural Geology 4

and one course from the following:

ESCI 223 Stratigraphy and Sedimentology 4

ESCI 424 Geomorphology 3

ESCI 450 Environmental Geology 3

Minor in Gerontology

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 Arts and Sciences, Education and Professional Studies, 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.

PSY 364 Adult Development & Aging	3
PSY 458 Human Neuropsychology	3
NRSE 342 Ethical Issues Confronting the Geriatric Patient	3
One three-hour practicum chosen from:	
NRSE 498 Special Studies in Nursing	3
PSY 496 Internship in Psychological Applications	3
EXS 450 Practicum in Exercise Science	3
EXS 470 Internship in Exercise and Health Promotion	6
BIO 391 Internship in Biology	3
BMS 391 Internship in Biomolecular Science	3
Six credits of electives chosen from:	
NRSE 490 Leadership in Management in Nursing	3
EXS 215 Physiological Aspects of the Human Performance of the Aging	3
PSY 380 Psychology of Dying and Death	3
SOC 340 Aging in American Society	3
SOC 440 Death and Dying: Sociological Implications	3
BIO 401 Human Nutrition & Metabolism	3

Minor in History (18 credits)

18 credits of History, including HIST 301 and 6 additional credits at the 300-level and above.

Minor in Journalism (21 credits)

JRN 200 Introduction to Journalism	3
JRN 235 News Writing and Reporting I	3
JRN 336 Journalism II	3
JRN 383 Responsibilities of Journalism	3
or	
JRN 384 Journalism History	3

Directed Electives (9 credits)

JRN 237 Introduction to the Profession	1
JRN 370 Today's News in Context	3
JRN 371 Reporting Cultural Diversity	3
JRN 380 Feature Writing	3
JRN 381 Opinion Writing	3
JRN 383 Responsibilities of Journalism	3
or	
JRN 384 Journalism History	3
JRN 385 Web Journalism	3
JRN 400 Journalism Theory	3
JRN 410 Public Opinion	3
JRN 412 Editing	3
JRN 416 Magazine Writing	3
JRN 418 Studies in Journalism	3
JRN 491 Campus Newspaper Critique	1
JRN 495 Internship	3
ENG 382 Travel Writing	3
COMM 231 Communication Technologies	3
COMM 330 Basic Video Production	3
COMM 335 Communication Management	3
COMM 420 Principles of Digital Photography for Journalism	3
COMM 427 TV Programming and Production	3
COMM 428 Advanced TV Production	3
COMM 480 TV Documentary Production	3
COMM 495 Special Topics	3

Minor in Latino Studies

Program Overview

A minor program in Latino 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.

LTN 110 Introduction to Latino Studies 3

LTN 410 Individual Study Project in Latino Studies 3

and 12 credits from the following electives, 6 of which must be at the 300 level or above. Note: Students without intermediate competence in Spanish (SPAN 125/190 or equivalent) must complete SPAN 125 or 190 in lieu of one of their elective courses.

ANTH 200	Dimensions of Diversity and Inequality	3
ANTH 352	Ethnicity and Ethnic Identity	3
ANTH 428	Cultures of Latin America	3
CRM 245	Diversity and Criminal Justice	3
ENG 347	Latino/a Literature	3
HIST 316	History of the American West to 1890	3
HIST 317	History of the American West, 1890 to Present	3
HIST 319	Race, Ethnicity, and Migration in the U.S.	3
IS 240	Caribbean Cultural Patterns	3
IS 245	Puerto Rico	3
LTN 470	Topics in Latino Studies	3
SOC 322	Race and Ethnic Relations	3
SOC 422	Sociology of Immigration	3
SOC 460	Social Movements and Collective Action	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
SPAN 316	Latin American Civilization	3

Minor in Language and Computation (24 credits)

LING 200	Introduction to Linguistics	3
LING 312	Introduction to Syntax	3
LING 313	Introduction to Phonetics & Phonology	3
LING 433	Introduction to Computational Linguistics	3
LING 434	Speech & Natural Languages Processing	3

Directed Electives (9 credits)

LING 300	Language Acquisition	3
LING 400	Linguistics Analysis	3
LING 430	Studies in Linguistics & the English Language	3
PSY 281	Cognitive Psychology	3
CS 290	Topics in Computer Science	1-3
CS 407	Advanced Topics in Computer Science	1-3
CS 462	Artificial Intelligence	3
CS 464	Programming Languages	3
PHIL 220	Introduction to Logic	3
PHIL 320	Modern Logic	3
MATH 218	Discrete Mathematics	4
STAT 104	Elementary Statistics	3
STAT 315	Mathematical Statistics I	3
STAT 476	Topics in Statistics	3

or a course related to the content of the minor and with the consent of an advisor.

Minor in Latin American Studies (18 credits)

GEOG 434	Mexico, Central America, and the Caribbean	3
GEOG 436	South America	3
HIST 281	History of Latin America to 1823	3
HIST 282	History of Latin America Since 1823	3

and 6 credits from the following:

ANTH 428	Cultures of Latin America	3
ECON 435	Economic Development	3
GEOG 459*	Field Studies in Regional Geography	3-6
HIST 493*	Directed Readings in History	3
HUM 490*	The Culture and Civilization of Other Lands	3
IS 240	Caribbean Culture Patterns	3
IS 245	Puerto Rico	3
IS 490*	Field Studies Abroad	3-6
PS 235	International Relations	3
PS 420	Government and Politics of Latin America	3
SPAN 261	Business Spanish	3
SPAN 316	Latin American Civilization	3
SPAN 376	Spanish American Literature II	3

In addition, students will use 6 credits from the following to satisfy their general education requirements, except when exempted:

SPAN 125 Intermediate Spanish I 3

and

SPAN 126 Intermediate Spanish II 3

or

SPAN 225 Intermediate Spanish III 3

and

SPAN 226 Intermediate Spanish IV 3

**Courses can be used to satisfy program requirements with the approval of the program coordinator. Courses taken as a part of this minor may not also be used to fulfill requirements of the student's major. Note prerequisites where applicable.*

Note prerequisites where applicable. Students selecting this minor must register with the program coordinator.

Minor in Management Information Systems (for business majors and non-business majors)

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. The following courses can be applied toward the Minor: MIS201, MIS220, MIS305, MIS312, MIS315, MIS361, MIS400, MIS410, MIS450, MIS460 and MIS 462. In consultation with an MIS faculty advisor, students must complete 18 credits chosen to further 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.

Minor in Mathematics (Non-teaching, 20 credits)

MATH 152 Calculus I	4
MATH 221 Calculus II	4
MATH 222 Calculus III	4
and two courses selected from:	
MATH 218 Discrete Mathematics	4
MATH 226 Linear Algebra and Probability for Engineers	4
MATH 228 Introduction to Linear Algebra	4
MATH 250 Symbolic Computation	4
MATH 355 Introduction to Differential Equations with Applications	4
MATH 366 Introduction to Abstract Algebra	4
MATH 377 Introduction to Real Analysis	4

Minor in Mathematics (For students completing secondary certificates, 19 credits)

MATH 152 Calculus I	4
MATH 218 Discrete Mathematics	4
MATH 221 Calculus II	4
MATH 228 Introduction to Linear Algebra	4
or	
MATH 366 Introduction to Abstract Algebra	4
STAT 314 Introductory Statistics for Secondary Teachers	3

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.

Minor in Meteorology (21 credits)

ESCI 129 Introduction to Meteorology 4

ESCI 431 Introduction to Hydrogeology 4

ESCI 461 Physical Meteorology 3

ESCI 462 Dynamic Meteorology 3

7 credits from the following:

ESCI 335 Physical Oceanography 3

ESCI 442 Weather Analysis and Forecasting 3

GEOG 374 Climatology 3

In addition, students must take:

MATH 152 Calculus I 4

MATH 221 Calculus II 4

Minor in Middle Eastern Studies (18 credits)

HIST 291	Modern Middle East	3
PS 434	Government and Politics of the Middle East and North Africa	3
PS 439	U.S. Middle East Policy	3

and 12 credits from the following:

HIST 292	History of Judaism	3
HIST 474	History of the Arab-Israeli Conflict	3
PS 339	International Law	3
PS 439	U.S. Middle East Policy	3
PS 491	Advanced Studies in Political Science	1-6

Minor in Modern Language (18 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
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		
For non-native 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		
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	3
In Chinese, the required courses are:		
CHIN 111	Elementary Chinese I	3
CHIN 112	Elementary Chinese II	3
CHIN 125	Intermediate Chinese I	3
CHIN 126	Intermediate Chinese II	3
	Directed Electives	6
In Japanese, students must take:		
JAPN 125	Intermediate Japanese I	3
JAPN 126	Intermediate Japanese II	3
JAPN 225	Intermediate Japanese III	3
JAPN 226	Intermediate Japanese IV	3
and 6 credits from the following:		
JAPN 335	Advanced Composition and Diction	3
JAPN 336	Advanced Structure and Idiom	3
HIST 354	History of Modern Japan	3
GEOG 435	Japan and Korea	3
PES 210	Topics in Peace Studies*	3

*as appropriate to minor and upon approval of student's advisor.

All students in the minor must also take 6 credits of directed electives.

Minor in Music (18 credits)

Students planning to minor in music must consult the department chair for advisement.

Required: Three (3) credits as follows:

MUS 109	Fundamentals of Music	3
or		
MUS 121/115	Music Theory I Aural Skills I	3

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 116/122	Music Theory and Aural Skills II	3
MUS 214	Electro-acoustic Music and Sonic Art	3

Nine (9) credits required from at least two of the following categories (B, C, or D):

B. Two-four (2-4) credits from:

MUS 250	Piano Class I	2
MUS 251	Piano Class II	2
MUS 264	Voice Class	2
MUS 273	Jazz Improvisation I	2
MUS 274	Jazz Improvisation II	2
MUS 350	Piano Class III	2
MUS 351	Piano Class IV	2

C. Three-five (3-5) credits from: (the same course may be repeated for credit)

MUS 140	Ensemble	1
MUS 141	Chorus	1
MUS 142	Band	1
MUS 143	Sinfonietta	1
MUS 144	Marching Band	1
MUS 147	Jazz Bands	1
MUS 148	University Singers	1
MUS 149	University Chamber Players	1
MUS 177	Applied Music	1

Note: Students enrolled in MUS 177 must pay an extra fee of \$200 each semester.

D. Three to Five (3-5) 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

Minor in Networking Technology (18 credits)

CET 223 Basic Electrical Circuits	3
CET 229 Computer Hardware Architecture	3
CET 249 Introduction to Networking Technology	3
CET 349 Networking Devices	3
CET 363 Digital Circuits	3
CET 449 Advanced Networking	3

Minor in Peace Studies (18 credits)

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.

PES 110 Introduction to the Study of Peace & War 3
 PES 410 Research in Peace Studies 3

and 12 credits from any of the following:

ART 270 Mural Painting	3
HIST 291 Modern Middle East	3
HIST 474 History of the Arab-Israeli Conflict	3
PES 111 War & Peace through Films	3
PES 210 Topics in Peace Studies	1-3
PES 310 Internship in Peace Studies	1-6
PHIL 345 Philosophy of War and Peace	3
PS 235 International Relations	3
PS 345 International Terrorism	3
PS 380 International Conflict and Security	3
PSY 202 Peace Psychology	3

Minor in Philosophy (18 credits)

PHIL 112 Introduction to Philosophy 3

PHIL 220 Introduction to Logic 3

PHIL 290 Philosophical Methods 3

PHIL 230 Ancient Greek Philosophy 3

or

PHIL 330 Early Modern Philosophy 3

and 6 credits of PHIL or REL electives listed in one of the specializations for philosophy majors (at least 3 credits at 300 level or higher).

Minor in Physics (18 credits)

18 credits in Physics, including Physics 125, 126 and 220. 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, 221 and 222.

Minor in Physics (Certifiable for secondary teaching, 18 credits)

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

In addition, students must take:

CHEM 161 General Chemistry I	3
CHEM 162 General Chemistry I Lab	1
CHEM 163 General Chemistry II	3
CHEM 164 General Chemistry II Lab	1
MATH 152 Calculus I	4
MATH 221 Calculus II	4
MATH 222 Calculus III	3
SCI 417 Teaching of Science in the Secondary School	3

Minor in Polish Studies (18 credits)

18 credits including 6 credits of Polish language, unless waived by the Modern Language Department. The remaining credits from the following:

Philosophical Reasoning - 6 credits

ANTH 426	People and Cultures of Eastern Europe	3
HIST 319	Race, Ethnicity, Migration in the United States	3
HIST 356	History of East Central Europe	3
HIST 379	History of Poland before 1795	3
HIST 380	Modern Poland	3
HIST 481	The Jews of Poland	3
HIST 482/ SOC 480	The Polish-American Immigrant and Ethnic Community	3
SOC 478	Current Topics in Sociology (as approved by Coordinator)	3

Or electives approved by the Coordinator

Minor in Political Science (18 credits)

At least 15 credits must be in political science; the remaining credits may be earned in a discipline relevant to political science.

Credit for not more than 6 credits towards a political science minor may be granted, with approval of the department chair, from those areas listed as options under the major.

Minor in Political Science (For students completing secondary certification, 18 credits)

Requirements

PS 104 The World's Political Systems 3

or

PS 110 American Government & Politics 3

Credit for not more than 6 credits towards a political science minor may be granted, with approval of the department chair, from those areas listed as options under the major.

Minor in Practicing Anthropology (18 credits)

ANTH 170 Introduction to Cultural Anthropology	3
ANTH 200 Dimensions of Diversity and Inequality	3
ANTH 270 Applying Anthropology	3
ANTH 374 Field Research Methods	3
ANTH 401 City Life and Culture	3
ANTH 437 Internship in Anthropology	3

For students majoring in anthropology, 3 credits of this minor may be applied to the major.

Minor in Psychology (18 credits)

PSY 112 General Psychology 3

Psychology electives 15

Minor in Public History (18 credits)

Core (9 credits)

HIST 301	The Historical Imagination	3
(History majors must substitute a course approved by the Public History Coordinator for HIST 301)		
HIST 302	Introduction to Public History	3
and		
HIST 403	Public History Project	3
or		
HIST 492	Public History Intern Experience	4

Directed Electives (9 credits)

HIST 395	Topics in History	3
HIST 403	Public History Project	3
HIST 404	American Material Culture	3
HIST 405	Local History and Community Development	3
HIST 455	Historical Representation in Latin America	3
HIST 492	Public History Intern Experience	3
ANTH 150	Introduction to Archaeology	3
ANTH 210	The Ancient World	3
ANTH 322	Historical Archaeology	3
ANTH 450	Archaeological Field School	3
SOC 411	Oral History for the Social Sciences	3
ART 490	Curatorship	3
ENG 370	Creative Nonfiction I	3
GEOG 241	Introduction to Planning	3
GEOG 256	Maps & Map Reading	3
GEOG 290	Geography of Tourism	3
GEOG 291	National Parks and World Heritage Sites	3

No more than 6 credits may be taken from any one discipline. Other courses may be available if they address some specific aspect of public history. Consult the Public History Coordinator for current options.

Minor in Religious Studies

18 credits of approved courses, including one 3-credit course from each of the four specified course areas.

Comparative Religion

REL 110 World Religions 3

Religious Texts

ENG 360 The Bible as Literature: Old Testament 3

ENG 361 The Bible as Literature: New Testament 3

Historical/Social Science

HIST 277 History of Christianity I 3

HIST 278 History of Christianity II 3

HIST 292 History of Judaism 3

HIST 435 History of Early Medieval Europe 3

HIST 436 History of Later Medieval Europe 3

HIST 441 Renaissance & Reformation 3

HIST 469 African Americans in the 20th Century 3

ANTH 240 The Supernatural 3

Philosophical/Religious Thought

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 376 Buddhist Philosophy 3

PHIL 492 Independent Study 1-3

REL 105 Development of Christian Thought 3

REL 250 Japanese Religion 3

REL 256 Philosophy, Religion, and Culture 3

REL 257 Special Topics in Religion 3

REL 361 African-American Religion 3

REL 492 Independent Study 1-3

Minor in Science (24 credits)

12 credits as follow s:

BIO 121 General Biology I 4

or

BMS 102 Introduction to Biomolecular Science 3

BMS 103 Introduction to Biomolecular Science Lab 1

CHEM 161 General Chemistry I 3

CHEM 162 General Chemistry I Lab 1

ESCI 121 Physical Geology 4

or

PHYS 121 General Physics I 4

or

PHYS 125 University Physics I 4

and 12 credits from the follow ing:

BIO 122 General Biology II 4

or

BMS 201 Principles of Cell and Molecular Biology 4

CHEM 163 General Chemistry II 3

and

CHEM 164 General Chemistry II Lab 1

ESCI 178 Planetary Astronomy 4

or

ESCI 179 Stellar Astronomy 4

PHYS 122 General Physics II 4

or

PHYS 126 University Physics II 4

Students must take at least one course in each discipline (biology or biomolecular sciences, chemistry, physics, and earth sciences), and the 8 credits in the minor may be credited toward a major as well.

Minor in Slavic/East European Studies (18 credits)

At least 9 selected from the following:

ANTH 426 People and Cultures of Eastern Europe	3
GEOG 448 Russia and Neighboring Regions	3
HIST 348 History of Russia II	3
HIST 356 History of East Central Europe since 1919	3
HIST 379 History of Poland: From the Piasts to Partition, 966-1795	3
PS 435 Russian and Eastern Europe	3

Study of an East European language at an equivalent level is strongly recommended. Courses in Polish studies may be applied to a Slavic/East European minor (see Polish Studies Center)

Minor in Social Justice (18 credits)

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).

Philosophical Reasoning - 6 credits

PHIL 221 Introduction to Modern Logic 3

PHIL 290 Philosophical Methods 3

Social Justice Core - 12 credits

PHIL 244 Introduction to the Philosophy of Social Justice 3

PHIL 344 Topics in Philosophy & Social Justice 3

6 credits from the following (other courses may be substituted with the approval of the Department Chair).

PHIL 144 Moral Issues 3

PHIL 211 Global Justice 3

PHIL 222 Philosophy of Gender 3

PHIL 360 African-American Philosophy 3

SOC 212 Gender, Race & Class 3

SOC 240 Sociology of Gender 3

Minor in Social Studies (18 credits)

12 credits from the following list:

ANTH 140	Introduction to Anthropology	3
ECON 200	Principles of Economics I	3
ECON 201	Principles of Economics II	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

and 6 credits at the 300- or 400-level in a social or behavioral science department as approved by the Department of History Department chair.

Minor in Sociology (18 credits)

SOC 110 Introductory Sociology 3

SOC 212 Race, Class, and Gender 3

and 12 credits of electives, 6 of which must be at the 300 or 400 level

Minor in Statistics (21 credits)

STAT 215	Statistics for Behavioral Sciences I	3
STAT 216	Statistics for Behavioral Sciences II	3
CS 151	Computer Science I	3
and 9 credits from the following:		
MATH 110	Finite Mathematics	3
MATH 470	Mathematical Methods in Operations Research	3
STAT 455	Experimental Design	3
STAT 456	Fundamentals of SAS	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 405	Ecology	4
ECON 460	Economic Forecasting	3
ECON 485	Econometrics	3
GEOG 476	Advanced Cartography	3
PSY 222	Research Methods in Psychology II	4
PSY 451	Psychological Evaluation	3

Note: No more than one course may be used in both the student's major program and the minor in statistics.

Minor in TESOL (For students completing elementary or secondary certificates, 21 credits)

LING 200 Introduction to Linguistics	3
LING 230 The Study of Language	3
LING 496 TESOL Methods	3
LING 497 Second Language Acquisition	3

Directed Electives (9 credits)

LING 312 Introduction to Syntax	3
LING 313 Introduction to Phonetics & Phonology	3
LING 400 Linguistics Analysis	3
LING 430 Studies in Linguistics & the English Language	3
LING 431 The History of the English Language	3
SOC 322 Race and Ethnic Relations	3
ANTH 170 Introduction to Cultural Anthropology	3
ANTH 352 Ethnicity and Ethnic Identity	3

Minor in Theatre (21 credits)

TH 111 Stagecraft	3
TH 117 Lighting	3
TH 121 Costuming	3
TH 135 Speaking-Voice Development	3
TH 143 Theater Games and Improvisation	3
TH 253 Script Analysis for Theatre	3
and 3 credits from the following:	
TH 375 History of Theatre I	3
TH 376 History of Theatre II	3
TH 489 Studies in Theatre/Drama	3

Minor in Theatre (Performance) (21 credits)

TH 101 Performance Practicum 3
(repeated 3 times)

TH 143 Theatre Games and Improvisations 3

TH 145 Acting I 3

TH 246 Acting II 3

TH 347 Acting III 3

and 6 credits from the following:

TH 115 Play Production 1

TH 126 Makeup I 2

TH 135 Speaking-Voice Development 3

TH 447 Acting IV 3

TH 456 Shakespeare Production 3

TH 489 Studies in Theatre/Drama 3

DAN 235 Movement for Performers 2

Minor in Tourism (18 credits)

GEOG 110 Introduction to Geography 3

or

GEOG 120 World Regional Geography 3

GEOG 290 Geography of Tourism 3

3 credits from any regional geography course

and 9 credits selected 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

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.

Women, Gender, and Sexuality Studies

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.

18 credits with at least nine credits on the 300-400 level. Students whose needs are not met by available courses may take up to three credits of independent study (WGSS 469), three credits of internship (WGSS 430), and three credits of WGSS 390 Topics in Women, Gender, and Sexuality Studies, pending approval of the appropriate department chair and the Women, Gender, and Sexuality Studies coordinator. At least one course (three credits) must be taken from three of the four areas listed, which may also have WGSS designators, as well as WGSS 200, and 15 credits from:

Theoretical

PHIL 222 Philosophy of Gender 3
WGSS 400 Feminist Theory 3

Historical

ISCI 118 Women's Contributions to Science 3
HIST 330 History of Women in the United States, 1620-1865 3
HIST 331 History of Women in the United States, 1865-Present 3
HIST 335 Women, Marriage, and Family in Early Modern Europe 3

Cultural

ANTH 350 Men and Women in Different Cultures 3
COMM 380 Women and Film 3
COMM 435 Images of Gender in the Media 3
ENG 215 Introduction to Women Writers 3

Social

PS 241 Women and American Law 3
PSY 448 Psychology of Women 3
PSY 390 Human Sexuality 3
SOC 240 The Sociology of Gender 3
SOC 350 Gay & Lesbian Communities 3
SOC 445 Social Construction of Sexuality 3

The following courses will apply as approved by the women, gender, and sexuality studies advisory committee:

Theoretical

PHIL 100 Search in Philosophy 3
PHIL 382 Special Topics in Philosophy 3

Cultural

ART 490 Curatorship 3
ENG 214 Studies in International Literature 3
ENG 448 Studies in American Literature 3
ENG 458 Studies in British Literature 3
ENG 488 Studies in World Literature 3
HUM 250 Topics in European Literature 3

Social

COMM 495 Special Topics in Communication	3
PSY 498 Topics in Psychology	3
and	
WGSS 390 by topic	3

Minor in Writing (18 credits)

ENG 401 Advanced Composition 3

LING 230 The Study of Language 3

Directed Electives (12 credits)

JRN 200 Introduction to Journalism 3

JRN 235 News Writing and Reporting I 3

JRN 236 News Writing and Reporting II 3

ENG 370 Creative Nonfiction I 3

ENG 371 Creative Writing: Fiction I 3

ENG 372 Creative Writing: Fiction II 3

ENG 373 Creative Writing: Poetry I 3

ENG 374 Creative Writing: Poetry II 3

ENG 375 Creative Nonfiction II 3

ENG 376 Creative Writing: Essay 3

ENG 377 Creative Writing: Playwriting 3

ENG 378 Creative Writing: Special Topics 3

JRN 380 Feature Writing 3

JRN 381 Writing Opinion 3

ENG 382 Travel Writing 3

ENG 403 Technical Writing 3

MC 207 Managerial Communications 3

Minor in Writing for Teachers (for secondary education English majors only, 18 credits)

ENG 404 Fiction for Teachers	3
ENG 405 Poetry for Teachers	3
ENG 406 Teaching the Mechanics of Writing	3

Directed Electives (9 credits)

JRN 200 Introduction to Journalism	3
JRN 235 News Writing and Reporting I	3
ENG 236 News Writing and Reporting II	3
ENG 370 Creative Nonfiction I	3
ENG 371 Creative Writing: Fiction I	3
ENG 372 Creative Writing: Fiction II	3
ENG 373 Creative Writing: Poetry I	3
ENG 374 Creative Writing: Poetry II	3
ENG 375 Creative Nonfiction II	3
ENG 376 Creative Writing: Essay	3
ENG 377 Creative Writing: Playwriting	3
ENG 378 Creative Writing: Special Topics	3
JRN 380 Feature Writing	3
JRN 381 Opinion Writing	3
ENG 382 Travel Writing	3
JRN 412 Editing	3
JRN 416 Magazine Writing	3
JRN 418 Studies in Journalism	3
ENG 484 Advanced Fiction Workshop	3
ENG 485 Advanced Poetry Workshop	3
ENG 494 Creative Writing: Independent Study	3
JRN 495 Internship	1-6

Note: All creative writing and journalism courses must be taken in the prescribed sequences of those programs.

Undergraduate Academic Policies and Requirements

Student Status (Definitions and Policies)

- Full Time Matriculation (FT) Course Load and Credits
- Part-time Matriculation (PT)
 - Part Time Course Load and Credits
- Change of Status from Full-time to Part-time
- Non-Matriculation
- Classification of Students

Time Expectations for Student Course Equivalent Work

Major and Degree Policies

- Declaration of Major
- Change of Major, Minor, or Degree
- Declaring a Second Undergraduate Major
- Second Undergraduate Major and Second Degree Policy

Registration Related Policies

- Alternate Pins for Registration
- Course Numbering System
- Odd and Even Year Course Offerings
- "Bridge" Course
- "Link" Course
- Placement Testing and Remedial Courses: Mathematics, Writing and Foreign Language Requirements and Placement Exams
 - CCSU Math Requirement and Placement Testing
 - CCSU Writing Requirement and Placement Testing
- Prerequisites
- Adding a Course
- Dropping a Course
- Withdrawing from a Courses
- Pass-Fail Option
- Auditing a Course
- Maximum Course Load
- Eligibility for Extra Credits or Course Overloads
- Exceeding the 18 Credit Limit Enrollment
- Taking Summer and Winter Courses
- Maximum Credits for Summer/Winter Sessions
- 500 Level Graduate Courses Taken by Undergraduates
- Repeating Courses/Course Repeat Policy
- ENG 099 and MATH 099
- Refund Policy
- Waiver for Students Over Age 62

Leaving the University and Reenrolling

- Medical Leaves of Absence

Withdrawing from the University
Undergraduate Student Leave of Absence Policy
Fresh Start Policy

Financial Aid Policies

Satisfactory Academic Progress for Financial Aid Recipients
Degree Objective-Specific Minimum CCSU GPA
Completion of 67.5% of Attempted Units with Passing Grades
Eligibility Limit - Unit Cap
Financial Aid Probation
Financial Aid Disqualification
Financial Aid Appeal
Regaining Eligibility

Grades and Grading Policies

The Grading System
Grade-Point Calculation
Dean's List
Graduation Honors for Baccalaureate Degree
Course Repeat Grading Policy
Continuing Education Non-Credit Courses
Grade Appeals Policy
Good Academic Standing Policy
Academic Probation/Academic Dismissal

Graduation Policies and Requirements

Graduation Requirements
Residence Requirements for Degree
Application for Graduation
Participation in Commencement Ceremonies
Course Substitutions to Fulfill Graduation Requirements

Transfer Credit Approval from Other Academic Institutions

Transfer Credit Policy
Transfer Credit Procedures
State University Student Interchange
Hartford Consortium Cross Registration
Attending Other Institutions
Credits Earned During Study Abroad at CCSU Partner and Affiliate Institutions of Higher Education
Acceptance of Non-Traditional Credit

Student Records

Emergency Contact Name and Address
Privacy of Student Records
Family Educational Rights and Privacy Act (FERPA)
Directory Information
Notice to Reflect Possible Federal and State Data Collection and Use
Student Photos (Permission for Photos of Students)

Change of Address

General University Policies

Academic Advising for Undergraduate Students

Academic Misconduct Policy

Attendance

Cancellation of Courses

Computer Use Policy

Email Policy

Extra-Curricular Activity

Graduation Rate Statistics

Transcript Policy

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 dean of the School of Graduate Studies. 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. The School of Graduate Studies Handbook, available in the Office of the School of Graduate Studies (Barnard Hall 102) and at the graduate website, also details all policies related to graduate students and programs. 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

- English Language Proficiency Requirement for Acceptance

- English Proficiency Score Exemptions

- Admission Appeals with a Cumulative GPA between 2.40-2.69

- Admission Appeals with a Cumulative GPA below 2.40

- Conditional Acceptance Policy

- Graduate Student Fresh Start Policy

Academic Advising

- The Planned Program of Graduate Study

- Changes in the Planned Program

- Transfer Policy for Graduate Credits Earned at Regionally Accredited Institutions of Higher Education in the US and Non-Affiliated International Institutions of Higher Education

- Credits Earned During Study Abroad at CCSU Partner and Affiliate Institutions of Higher Education

- Six-Year Time Limit

- Extensions Requests for the Six-Year Time Limit

Student Status (Definitions and Policies)

- Full Time Matriculation (FT) Course Load and Credits

- Part-time Matriculation (PT) Course Load and Credits

- Changing Status from Full-Time to Part-Time

- Non-Matriculation

Time Expectations for Graduate Student Course Equivalent Work

Major and Degree Policies

- Master's Degree Requirements

- Master's Degree Capstone Requirements (Thesis, Comprehensive Examination, Special Project)

- Thesis (Plan A)

- Comprehensive Examination (Plan B)

- Special Project

- Special Project (Plan C)

- Special Project (Plan E)

Continuing Registration Fee (CREG)
Degree Candidacy for Relevant Programs
Non-Capstone Qualifying Exam

Doctoral Degree Requirements

Ed.D in Educational Leadership
The Sixth-Year Certificate
Graduate Teacher Certification Programs
Official Certificate Programs
Post-Master's Planned Programs
Request to Change a Program
Graduate Student Research

Registration Related Policies

Alternate Pins for Registration
Course Numbering System
Odd and Even Year Course Offerings
400 Level Policy for Graduate Students
Bridge Courses
Link Courses
Adding a Course
Dropping a Course
Withdrawing from a Course
Pass/Fail Option for Graduate Students
Auditing a Course Option for Graduate Students
Maximum Course Load
Eligibility for Extra Credits or Course Overloads
Exceeding the 18 Credit Limit Enrollment
Taking Summer and Winter Courses
Maximum Credits for Summer/Winter Sessions
500 Level Graduate Courses Taken by Undergraduates
Refund Policy
Waiver for Students Over Age 62

Leaving the University and Reenrolling

Medical Leaves of Absence
Withdrawing from the University
Losing Matriculation Status
Re-enrollment into a Graduate Program

Financial Aid Policies

Satisfactory Academic Progress for Financial Aid Recipients
Degree Objective-Specific Minimum CCSU GPA
Completion of 67.5% of Attempted Units with Passing Grades
Eligibility Limit - Unit Cap
Financial Aid Probation
Financial Aid Disqualification
Financial Aid Appeal

Regaining Eligibility

Grades and Grading Policies

The Grading System

Grades of C+/C and C-

Repeating Courses/Course Repeat Policy (Graduate Students)

Incomplete Grades

Grade Appeals Policy

Non-Graded Appeals

Good Academic Standing

Academic Probation/Academic Dismissal Policies

Graduation Policies and Requirements

Application for Graduation

Participation in Commencement Ceremonies

Student Regulations and Conduct

Student Records

Emergency Contact Name and Address

Privacy of Student Records

Family Educational Rights and Privacy Act (FERPA)

Directory Information

Notice to Reflect Possible Federal and State Data Collection and Use

Student Photos (Permission for Photos of Students)

Change of Address

General University Policies

Academic Misconduct Policy

Attendance

Cancellation of Courses

Cancellation of Class or Final Examinations Due to Inclement Weather

Computer Use Policy

Email Policy

Graduation Rate Statistics

Transcript Policy

Master of Science in Art Education

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).

Course and Capstone Requirements:

33 credits, including thesis/Plan A or exhibition or project/Plan C

Professional Education (12 credits):

ART 500 Problems in Art Education	3
ART 598 Research in Art Education	3
Art 597 Exhibition Research (Plan C)	3

or

Art 599 Thesis (Plan A)	3
-------------------------	---

and one of the following:

EDF 500 Contemporary Educational Issues	3
EDF 516 School and Society	3
EDF 524 Foundations of Contemporary Theories of Curriculum	3
EDF 525 History of American Education	3
EDF 538 The Politics of Education	3
EDF 583 Sociological Foundations of Education	3

Art Concentration (21 credits):

Department offerings, as approved by 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.

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.

Master of Arts in Biological Sciences

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.

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 540 in addition to 19-20 credits of directed electives in biology or related fields as approved by advisor.

Plan A			
BIO 599	Thesis and thesis defense	(6 credits)	
or			
BIO 598	Research in Biology	(3 credits)	
and			
599	Thesis and thesis defense	(3 credits)	
Plan B			
BIO 590	Focused Study in Advanced Biology	1-4	
and/or			
BIO 591	Independent Research Project in Advanced Biology	1-4	and BIO 598 Research in Biology (3 credits) and a comprehensive exam.

Master of Science in Biological Sciences: Anesthesia

31-33 credits

Coordinator: Ruth Rollin

Program Rationale:

The MS Biological Sciences: Anesthesia Program is designed for registered nurses who wish to become nurse anesthetists and to expand their background in the areas of biology specific to their disciplines.

Program Learning Outcomes:

Graduate students will:

- demonstrate a thorough understanding of physiology, pathophysiology, pharmacology, immunology, and the anesthesia-specific areas of patient safety, anesthetic management, and professional role;
- describe scientific methodology and conduct experiments;
- be able to read and comprehend primary literature;
- deliver effective oral presentations (poster or PowerPoint); and
- effectively communicate on research in written format.

Course and Capstone Requirements:

Major Field Requirements (21 credits):

BIO 500	Seminar in Biology I	2
BIO 517	Human Anatomy, Physiology and Pathophysiology	6
BIO 518	Pathophysiology and Applied Physiology	3
BIO 519	Advanced Neuroscience	3
BIO 525	Advanced Physical Health Assessment for Nurse Anesthetists	3
BIO 528	Pharmacology	4
BIO 530	Immunology	3
CHEM 550	Basic Organic and Biological Chemistry	3

Clinical Practicum (1000 hours of clinical practicum and is 17 months in length):

ACP 500	Basic Principles of Nurse Anesthesia Practice	
ACP 501	Anesthesia Clinical Practicum	
ACP 502	Anesthesia Clinical Practicum	
ACP 503	Anesthesia Clinical Practicum	
ACP 504	Anesthesia Clinical Practicum	
ACP 505	Anesthesia Clinical Practicum	

Research (4-6 credits):

Plan A: Capstone:

BIO 598	Research in Biology	3
BIO 599	Thesis and thesis defense	3

or

Plan B: Capstone:

BIO 590	Focused Study in Advanced Biology	1-4
BIO 598	Research in Biology	3

Comprehensive exam

Note to prospective anesthesia students: The student must be a licensed registered nurse and satisfactorily complete the program of study in anesthesia at an affiliated hospital-based school of nurse anesthesia which includes 1000 hours of clinical practicum and is 17 months in length. The practicum starts the second summer in the program. To start the clinical practicum you must have a cumulative GPA of at least 3.00 with no grade lower than C in any course and no more than two grades of C/C+ in courses in the Planned Program. Students resigning from or dismissed from the clinical portion of the M.S. Biological Sciences: Anesthesia Program cannot continue in the M.S. Biological Sciences: Anesthesia Program but may be eligible to change to a different master's degree program. Students not requesting the change of major and receiving approval for that change will be dismissed by the Dean of the School of Graduate Studies. Admission to this program is contingent upon admission to one of the following affiliated schools:

3/11/2014

Central Connecticut State University (CCSU): Biological Sciences: Anesthesia MS

New Britain School of Nurse Anesthesia, New Britain, CT: John Satterfield, M.D., medical director, and Joan Dobbins, M.S., CRNA, program director.

Hospital of Saint Raphael, New Haven, CT: Denisa Lujic, M.D. and Rocco Marando, M.D., medical advisors; and Judy Thompson, M.S., DNAP, CRNA, program director.

Memorial Hospital of Rhode Island, Pawtucket, R.I.: Peter Baziotis, M.D., medical director, School of Anesthesia; and Mark Foster, M.A., CRNA, program director.

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.

Masters of Arts in Biological Sciences: Ecology and Environmental Science

30 credits

Biology Course Component (24 credits):

(1)

BIO 500	Seminar in Biology	(1 credit),
BIO 515	Foundations of Ecology	(3 credits),
BIO 540	Topics in Advanced Biology	(3-4 credits),

with a topic focus appropriate to the specialization (may be repeated with different topics).

(2)

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 520	Plant Ecology	3
BIO 540	Topics in Advanced Biology	3-4
BIO 571	Advanced Field Studies in Biology	1-4
BIO 590	Focused Study in Advanced Biology	1-4
BIO 598	Research in Biology	3
BIO 402	Evolutionary and Ecological Genetics	3
BIO 405	Ecology	4
BIO 410	Ecological Physiology	4
BIO 421	Marine Invertebrate Biology	4
BIO 425	Aquatic Plant Biology	4
BIO 434	Ecology of Inland Waters	4
BIO 436	Environmental Resources and Management	3
BIO 438	Aquatic Pollution	4
BIO 440	Evolution	3
BIO 444	Plant Taxonomy	3

Capstone Component (6 credits, students may select Plan A or Plan B).

Plan A:

Option 1,

BIO 599 Thesis and thesis defense (6 credits)

or Option 2,

BIO 599 Thesis and thesis defense (3 credits)

and

BIO 598 Research in Biology (3 credits).

Plan B: Three credits:

BIO 590 Focused Study in Advanced Biology 1-4

and/or

BIO 591 Independent Research Project in Advanced Biology 1-4

BIO 598 Research in Biology 3

and a comprehensive exam.

Master of Science in Biological Sciences: General Program

30 credits

Program Rationale:

The General Program is for biology and science teachers and all others 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. Other courses may be substituted for the professional education component with the advisor's approval.

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.

Course and Capstone Requirements:

Professional Education (6-9 credits):

One of the following:

EDF 500 Contemporary Educational Issues	3
EDF 516 School and Society	3
EDF 524 Foundations of Contemporary Theories of Curriculum	3
EDF 525 History of American Education	3
EDF 538 The Politics of Education	3
EDF 583 Sociological Foundations of Education	3

and

Additional course(s) as approved by advisor 3

Biology Requirements (4-5 credits):

BIO 500 Seminar in Biology	1-2
BIO 540 Topics in Advanced Biology	3-4

Directed Electives (10-17 credits):

In biology or related fields as approved by advisor

Research (3-6 credits):

Plan A:

BIO 599 Thesis (6 credits)

and thesis defense

or

BIO 598 Research in Biology 3

and

BIO 599 Thesis and thesis defense (3 credits)

or

Plan B:

BIO 598 Research in Biology 3

and 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.

Masters of Arts in Biological Sciences: Global Sustainability

30 credits

Sustainability component (9 credits):

SUST 500	Social, Political, and Ethical Dimensions of Global Sustainability	3
SUST 501	Current Challenges in Sustainability	3
SUST 502	Science for Sustainability	3

Biology course component (minimum 15 total credits):

(1) Core 7-8 credits

BIO 500	Seminar in Biology	1
BIO 515	Foundations in Biology	3
BIO 540	Topics in Advanced Biology	3-4

(2) 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 520	Plant Ecology	3
BIO 540	Topics in Advanced Bio	3-4
BIO 571	Advanced Field Studies in Biology	1-4
BIO 590	Focused Study in Advanced Biology	1-4
BIO 598	Research in Biology	3
BIO 402	Evolutionary and Ecological Genetics	3
BIO 405	Ecology	4
BIO 410	Ecological Physiology	4
BIO 421	Marine Invertebrate Biology	4
BIO 425	Aquatic Plant Biology	4
BIO 434	Ecology of Inland Waters	4
BIO 436	Environmental Resources and Management	3
BIO 438	Aquatic Pollution	4
BIO 440	Evolution	3
BIO 444	Plant Taxonomy	3

Capstone Component (6 credits, students may select Plan A or Plan B).

Plan A:

Option 1,

BIO 599 Thesis and thesis defense (6 credits)

or Option 2,

BIO 599 Thesis and thesis defense (3 credits)

and

BIO 598 Research in Biology (3 credits).

Plan B: Three credits:

BIO 590 Focused Study in Advanced Biology 1-4

and/or

BIO 591 Independent Research Project in Advanced Biology 1-4

BIO 598 Research in Biology 3

and a comprehensive exam.

Master of Science in Biological Sciences: Health Sciences Specialization

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.

Course and Capstone Requirements:

Major Field Requirements (24-25 credits):

BIO 412	Human Physiology	3
BIO 413	Human Physiology Laboratory	1
BIO 500	Seminar in Biology	1-2
BIO 518	Pathophysiology and Applied Physiology	3
BIO 528	Pharmacology	4
BMS 506	Biosynthesis, Bioenergetics and Metabolic Regulation	3
or		
CHEM 550	Basic Organic and Biological Chemistry	3

and

BIO or BMS Electives as approved by Health Sciences Advisor or Department Chair.

No more than 10 credits may be taken as BMS courses.

(This 10 credit limit does not include BIO/BMS 412/413).

Research (6 credits):

BIO 599 Thesis and thesis defense 6

or

BIO 598 Research in Biology 3

BIO 599 Thesis and thesis defense 3

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.

Master of Arts in Biomolecular Sciences

Program Rationale:

The Master of Arts 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 furthering their knowledge in molecular and cellular biology.

Program Learning Outcomes:

Graduate students will:

- demonstrate knowledge in biomolecular science, including an understanding of:
 1. the connection between molecular properties and cellular activities,
 2. the connection between cellular activities and biological responses,
 3. cellular structure and function, including chemical composition, physiochemical and functional organization of organelles, and basic cellular metabolism,
 4. major cellular processes, including DNA replication, gene regulation, protein structure and function, cell signaling, and differentiation,
 5. the role of molecular and cellular processes in human health and disease,
 6. 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.

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.

Course Component (24-27 credits)

BMS 500 Seminar in BMS	1
BMS 540 Advanced Topics in BMS	1-4
BMS 572 Laboratory Rotation in Cell and Molecular Biology	1

and biomolecular course electives (18-22 credits in BMS or related fields) from the following courses or others as approved by the advisor:

BMS 412 Human Physiology (413) (with optional lab)	3-4
BMS 415 Advanced Exploration in Cell, Molecular & Physiological Biology	3
BMS 505 Molecular Biology	4
BMS 506 Biosynthesis, Bioenergetics, and Metabolic Regulation (497) (with optional lab)	3-4
BMS 516 Medical Microbiology	3
BMS 519 Physiology of Human Aging	3
BMS 540 Advanced Topics in BMS	1-4
BMS 562 Developmental Biology	3
BMS 570 Advanced Genetics	3
BMS 590 Focused Study in Advanced BMS	1-4
CHEM 456 Toxicology	3
CHEM 458 Advanced Biochemistry	3
BIO 416 Immunology	3
BIO 449 Plant Physiology (450) (with optional lab)	3-4

Capstone Component (3-6 credits)

Plan A:

BMS 599 Thesis	3
----------------	---

3/11/2014

Central Connecticut State University (CCSU): Biomolecular Sciences MA

BMS 591 Independent Research Project in BMS 3

Thesis defense

Or

Plan B:

BMS 591 Independent Research Project in BMS 3

Comprehensive Exam.

Master of Science in Communication

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.

Course and Capstone Requirements

(33 credits):

The program comprises two sections, a 15-credit core of foundational courses and 18 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 (15 credits):

COMM 500	Introduction to Graduate Studies in Communication	3
COMM 501	Theories of Human Communication within an Organizational Context	3
COMM 503	Research Methods in Communication	3
COMM 505	Persuasive Communication	3
COMM 504	Organizational Communication Audits	3
or		
COMM 507	Campaign Planning and Evaluation	3

Directed Electives (12-18 credits):

Students will select from the following courses approved by the faculty advisor. A planned program of study should be completed no later than 6 credits into the student's program. The student may specialize in either track or may select courses from both tracks. To specialize in a particular track, at least 3 courses must be selected from that particular track.

Organizational Communication Track

COMM 450	Communication Skills for Training and Development	3
COMM 504	Organizational Communication Audits	3
COMM 522	Corporate Communication	3
COMM 551	Policy Issues in Organizational Communication	3
COMM 562	Communication and High-Speed Management	3

Public Relations Track

COMM 451	Environmental Communication	3
COMM 454	Communication and Social Change	3
COMM 506	Case Studies in Public Relations	3
COMM 507	Campaign Planning and Evaluation	3
COMM 508	Public Relations Writing Strategies	3

General Electives

COMM 543	Intercultural Communication	3
COMM 544	Strategies in Negotiation and Conflict Resolution	3
COMM 585	Special Topics	3
COMM 590	Independent Study	1-3

Outside Courses

TM 464	Six Sigma Quality	3
TM 500	Product Life Cycle Management	3
TM 502	Human Relations and Behavior in Complex Organizations	3
TM 564	Quality Systems Management	3
STAT 453	Applied Statistical Inference	3
Capstone (0-6 credits):		
Plan A:		
COMM 590	Independent Study	(3 credits)
and COMM 599	Thesis	(3 credits)
or		
Plan B: Comprehensive Examination		
or		
Plan C:		
COMM 597	Special Project	(3 credits)

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.

Master of Science in Computer Information Technology

Program Rationale:

Toward the goal of preparing information technology (IT) practitioners for the 21st century, the MS CIT program integrates multiple disciplines of the IT field, including computer science, management information systems, 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, management information systems, and networking and telecommunications skills required for successful careers in the IT field;
- application-based mastery of a broad base of computer science, management information systems, and 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.

Course and Capstone Requirements (33 credits):

Core Courses (18 credits):

CS 501	Foundations of Computer Science	3
CS 502	Computing and Communications Technology	3
MIS 501	Managing the IT Value Proposition	3
MIS 502	Business Payoff of Information Technology and Systems	3
CET 501	Applied Networking Technology	3
CET 533	Digital Telecommunications	3

Specialization (12 credits):

Students select 12 credits from one of two specializations—Computer Science or Networking and Telecommunications Technology, in consultation with an advisor.

Specialization 1 — Computer Science electives:

CS 407, 410, 423, 460, 462, 463, 464, 473, 481, 490, 530, 550, 570, 580, 590

Specialization 2 — Networking and Telecommunications Technology

Electives (Computer Electronics and Graphics Technology Department):

CET 443, 449, 453, 479, 502, 513, 543, 559; IT 502, 510, 551, 594, 596

Students specializing in either area may take a limited number of Management Information Systems graduate courses, with permission of their advisors, which will count toward their specialization credits: MIS 510, 515, 550, 561, 565, 569.

Capstone (3 credits):

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 CIT

Note: A maximum of 6 credits at the 400-level is allowed with prior permission of advisor.

Master of Science in Construction Management

Program Rationale:

The mission of the master's program in construction management is to provide a program of advanced study designed to serve the technological and managerial needs of individuals pursuing a construction management career. 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 Connecticut's construction workforce at all levels.

Changes in the construction management profession are causing more construction professionals to consider the master's degree, rather than the bachelor's, as the terminal degree. Furthermore, an increasing number of professional organizations across the nation are beginning to view the master's degree as an entry-level professional degree for practicing managers. This is currently the prevalent situation for construction managers. Several construction management professional organizations, including the Construction Management Association of America, the Construction Financial Management Association, and the American Institute of Constructors, are espousing licensure programs that have advanced education requirements.

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.

Course and Capstone Requirements:

The Construction Management Masters program is a 33-credit program consisting of 15 credits of common core (CM 505, CM 515, CM 545, CM 575, and TM 594), 15-18 credits of electives selected jointly by the student and advisor, and a three-credit Plan C (Applied Research) capstone (TM 595) or a zero-credit Plan B (Comprehensive Exam) capstone. Students without a formal construction management education will be required to take CM 500 (Fundamentals of Construction Management) as a prerequisite to admission into the program.

Elective courses are subject to the following constraints:

- not more than 9 credits of non-construction management courses;
- not more than 6 credits of courses at the 400 level unless specifically approved in writing by the departmental graduate studies committee; and
- submission of an individual plan of study requiring faculty approval.

Selected elective courses

9 credits from the following:

CM 435 Construction Superintendency	3
CM 455 Construction Project Management	4
CM 500 Fundamentals of Construction Management	
CM 525 Construction Equipment Operation and Management	3
CM 565 Construction Labor Relations	3
CM 596* Topics in Construction Management	3

*Can use more than once for different topics

6-9 credits from the following:

ETC 405 Applied Structural Systems
ETC 476 Environmental Technology
ETC 550 Global Positioning Systems Application
ETC 556 Architectural and Civil Engineering Technology CAD
ETC 571 Design and Construction of Concrete Structures
ETC 573 Foundation Analysis and Design

- ETC 574 Ground Improvement Techniques
- ETC 575 Earth and Earth-Supported Structures
- ETC 577 Engineering Technology Project Administration
- ETC 578 Value Engineering for AEC
- SET 590 Topics in International Field Studies
- TM 502 Human Relations and Behavior in Complex Organizations
- TM 521 Computer Aided Design and Drafting
- TM 551 Project Management
- TM 572 Innovative Leadership

Master of Science in Counselor Education with Specialization in Professional and Rehabilitation Counseling

Program Rationale:

The Professional and Rehabilitation Counseling specialization prepares students to pursue employment in a variety of rehabilitation and mental health agencies. Students may choose a track in either Rehabilitation Counseling, Rehabilitation Counseling with a drug and alcohol recovery focus, or Mental Health Counseling. The Professional and Rehabilitation Counseling specialization provides the foundational coursework necessary for individuals interested in national certification as Certified Rehabilitation Counselors (CRC) and/or meeting State of Connecticut Department of Public Health requirements for becoming a Licensed Professional Counselor (LPC). The curriculum is also approved by the Connecticut Certification Board for students pursuing credentials as Licensed Alcohol and Drug Counselors (LADC). There are additional post-master's training requirements for both LPC and LADC candidates. The Professional and Rehabilitation Counseling specialization is accredited by the Commission on Rehabilitation Education (CORE).

Program Learning Outcomes:

Students in the program will be expected to:

- exhibit behaviors and attitudes appropriate to the professional and rehabilitation counseling profession;
- demonstrate pertinent and professionally relevant knowledge in the 10 CORE and 9 NBCC curriculum content areas;
- 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.

Course and Capstone Requirements (60 credits):

Core (33 credits):

CNSL 500	The Dynamics of Group Behavior	3
CNSL 501	Theories and Techniques in Counseling	6
CNSL 503	Supervised Counseling Practicum	3
CNSL 504	Professional Studies in Counseling	3
CNSL 505	Counseling and Human Development Across the Lifespan	3
CNSL 507	Methods of Group Facilitation	3
CNSL 521	Career Counseling and Development	3
CNSL 522	Appraisal Procedures in Counseling	3
CNSL 568	Alcohol and Drug Counseling	3
CNSL 598	Research Methods in Counseling	3

Students in the Mental Health track are required to take an additional 24 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 564	Rehabilitation and Disability Case Management	3
or		
MFT 541	Introduction to Theories of Family Systems	3
CNSL 571	Mental Health Counseling	3
CNSL 575	Co-Occurring Disorders and Mental Health Counseling	3
CNSL 580	Special Topics Seminars	1-3

or

CNSL 599	Thesis 3 (see Plan A capstone)	
----------	--------------------------------	--

Students in the Rehabilitation Counseling track are required to take an additional 24 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 564	Rehabilitation and Disability Case Management	3
CNSL 571	Mental Health Counseling	3
CNSL 575	Co-Occuring Disorders and Mental Health Counseling	3
CNSL 580	Special Topics Seminars	1-3

or

CNSL 599 Thesis 3 (see Plan A capstone)

Students in the Drug and Alcohol Recovery Counseling track are required to take an additional 24 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 564	Rehabilitation and Disability Case Management	3
CNSL 571	Mental Health Counseling	3
CNSL 575	Co-Occuring Disorders and Mental Health Counseling	3
CNSL 580	Special Topics Seminars	1-3

or

CNSL 599 Thesis 3 (see Plan A capstone)

In addition, all students are required to take:

Internship (6 credits):

CNSL 594 Supervised Clinical Practice Professional Counseling (two semesters fall & spring for a total of 6 credits) 3

Capstone (0-3 credits):

Plan A:

CNSL 599 Thesis 3

or

Plan B:

Comprehensive Exam 0

(consists of a major case presentation done in conjunction with the student's internship experience)

Note: It is expected that prior to beginning the supervised counseling practicum (CNSL 503) all Professional and Rehabilitation Counseling students will complete CNSL 505. Students in the drug and alcohol recovery program must also complete PSY 454 (Drugs & Behavior) prior to beginning practicum.

Master of Science in Counselor Education with Specialization in School Counseling

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.

Course and Capstone Requirements (51-54 credits):

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 (12 credits):

CNSL 500	The Dynamics of Group Behavior	3
CNSL 501	Theories and Techniques in Counseling	6
CNSL 503	Supervised Counseling Practicum	3
CNSL 505	Counseling and Human Development Across the Lifespan	3

Specialized Courses (33 credits):

CNSL 504	Professional Studies in Counseling	3
CNSL 506	Counseling Children & Adolescents	3
CNSL 520	Guidance Principles, Organization and Administration	3
CNSL 521	Career Counseling and Development	3
CNSL 522	Appraisal Procedures in Counseling	3
CNSL 524	Consulting in the Schools	3
CNSL 525	Multicultural Counseling	3
CNSL 526	Principles of Comprehensive School Counseling	3
CNSL 568	Alcohol and Drug Counseling	3
CNSL 591	Supervised School Guidance Internship (three credits for two semesters)	6

Research (3 credits)

CNSL 598	Research in Counseling	3
----------	------------------------	---

Capstone (0-3 credits):

Plan A: CNSL 599 Thesis 3

or

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):

PSY 512	Life Span Development	3
SPED 501	Exceptional Learner	3
EDF 500	Educational Foundations	3

Fingerprint Based Background Check

Effective July 1, 2010, Connecticut law requires all students in 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 is established by the State Department of Education and the local RESC, and cannot be changed. Students are 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, students need to be fingerprinted. Students who fail to pass the background check may be unable to complete their chosen degree program at Central Connecticut State University. The University is not responsible for a student's inability to complete their

chosen degree or certification 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.

Master of Science in Counselor Education with Specialization in Student Development in Higher Education

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 worldviews 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.

Course and Capstone Requirements (42-45 credits):

Core Courses (12 credits):

CNSL 500	The Dynamics of Group Behavior	3
CNSL 501	Theories and Techniques in Counseling	6
CNSL 503	Supervised Counseling Practicum	3

Directed Electives (30 credits):

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 (two semesters)	6
ED 598*	Research in Education	3
	Additional course as approved by advisor	3

Capstone (0-3 credits):

Plan A:

CNSL 599	Thesis	3
----------	--------	---

or

Plan B:

Comprehensive Exam (consists of a major case presentation done in conjunction with the student's internship experience)

*ED 598 may be waived by advisor based on undergraduate record of statistics and research.

Admission Requirements for School Counseling, Professional and Rehabilitation Counseling, and Student Development in Higher Education

Admissions to the School Counseling, Professional and Rehabilitation 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 April 1 for fall admission of the following academic year to the School Counseling program and the Professional and Rehabilitation Counseling program. Applicants for the Student Development in Higher Education program may apply as either full-time or part-time students. The application deadline for admission as a full time student is March 1. Full-time students take 9 credits during fall and spring semesters, follow a prescribed program schedule, attend during the summer, and complete the program in 19 months as a cohort. The application deadline for part-time students is April 1. Part-time students may take 3 or 6 credits per semester and must complete the program within 6 years. Their program of study is arranged with their

advisor. Candidates for admission will be selected on the basis of the following criteria:

1. Grade point average: Minimum 2.70 grade point average (GPA) for all under-graduate 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:
 1. Reasons for entering the counseling profession.
 2. Personal and professional experiences that influenced you to pursue the counseling profession.
 3. 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.

Additional Admissions Requirements for School Counseling

Documentation that the applicant has successfully passed all three parts of the Praxis I PPST Test or qualifies for a waiver. More information about the PRAXIS I PPST tests may be obtained by calling 1-800-742-9476 or by accessing the PRAXIS website at www.ets.org/praxis. Applications for the PRAXIS I PSST tests and information about the waiver are available in the kiosk outside of the Office of the Dean, School of Education and Professional Studies, in Henry Barnard Hall.

Master of Science in Criminal Justice

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:

Our goal is that upon completion of this program students will have skills and abilities consistent with the following objectives:

- collect and analyze data to evaluate criminal justice policies and programs;
- present research proposals and findings to criminal justice professionals;
- analyze functions and relations between diverse criminal justice systems; and
- apply social and psychological models of crime and intervention to relevant offender populations.

Core courses are designed to help students:

- understand the purpose and function of criminal justice agencies organized under the rubrics of police, courts, and corrections;
- critically analyze the organizational effectiveness of criminal justice agencies;
- understand how society comes to define certain behaviors as criminal and how these definitions can be effected by the race, gender, and socio-economic status of the law maker, as well as the law breaker;
- assess the effectiveness of criminal justice policies and programs through the application of research methods, statistics, and criminological theory; and
- understand the root causes of crime and the effects of social, economic, political, psychological, and biological factors on crime.

Course and Capstone Requirements

(30 credits):

Core Courses:

CJ 501	Proseminar on the Nature of Crime	4
CJ 510	Proseminar on Law and Social Control	3
CJ 520	Proseminar on the Administration of Justice	3
CJ 533	Research Methods in Criminal Justice	4
CJ 534	Quantitative Analysis in Criminal Justice Research	4

Elective Courses (choose three):

CRM 450	Drugs and Society	3
CRM 475	Controlling Anger and Aggression	3
CJ 525	Program Planning and Evaluation	3
CJ 530	Offender Profiles	3
CJ 535	Correctional Counseling	3
CJ 539	Delinquency and Control	3
CJ 560	Sexual Offending	3
CJ 573	Managing Criminal Justice Organizations	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	Public Policy in the Criminal Justice System	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 CRM 450, CRM 475, CJ 530, CJ 535, CJ 539, 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
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.

Master of Science in Data Mining

Program Rationale:

- The Master of Science in Data Mining prepares students to find interesting and useful patterns and trends in large data sets.
- Students are provided with expertise in state-of-the-art data modeling methodologies to prepare them for information-age careers.

Learning Outcomes for Program Graduates:

Students in the program will be expected to:

- approach data mining as a process, by demonstrating competency in the use of CRISP-DM (the Cross-Industry Standard Process for Data Mining), including the business understanding phase, the data understanding phase, the exploratory data analysis phase, the modeling phase, the evaluation phase, and the deployment phase;
- be proficient with leading data mining software, including WEKA, Clementine by SPSS, and the R language;
- understand and apply a wide range of clustering, estimation, prediction, and classification algorithms, including k-means clustering, BIRCH clustering, Kohonen clustering, classification and regression trees, the C4.5 algorithm, logistic Regression, k-nearest neighbor, multiple regression, and neural networks; and
- understand and apply the most current data mining techniques and applications, such as text mining, mining genomics data, and other current issues.

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 is 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, conditioned on a student receiving no grades lower than a B in the first three core courses in the program.

The following materials are required, in addition to the materials required by the School of Graduate Studies.

- A formal application essay of 500-1000 words that focuses on (a) academic and work history, (b) reasons for pursuing the Master of Science in data mining, and (c) future professional aspirations. The essay will also be used to demonstrate a command of the English language.

Students may be admitted on condition that they complete these prerequisite courses with a grade of B or better. First-semester courses in statistics are regularly offered by CCSU both online and in the classroom.

- Two letters of recommendation, one from each the academic and work environment (or two from academia if the candidate has not been employed).

The application and all transcripts should be sent to the Graduate Admissions Office. The deadline for submitting applications for the fall semester is May 1. The other materials, including the formal application essay, the prerequisites letter, and the two letters of recommendation, should be sent to:

Dr. Daniel T. Larose
 Re: MS in Data Mining Admissions Materials
 Department of Mathematical Sciences
 Marcus White 118
 Central Connecticut State University
 New Britain, CT, 06050

Note: Only hard copy materials are acceptable. No attachments to e-mails or other electronically transmitted material will be considered in admissions decisions.

Course and Capstone Requirements (33 credits):

Core Courses (27 credits)

The following courses are required of all students.

STAT 520 Multivariate Analysis for Data Mining (new course)	4
STAT 521 Introduction to Data Mining	4
STAT 522 Clustering and Affinity Analysis	4
STAT 523 Predictive Analytics	4
STAT 526 Data Mining for Genomics and Proteomics	4

STAT 527 Text Mining	4
STAT 599 Thesis	3
Elective Courses (6 credits)	
Choose any two courses from the following list:	
CS 570 Topics in Artificial Intelligence: Machine Learning	3
CS 580 Topics in Database Systems and Applications: Data Mining	3
STAT 455 Experimental Design	3
STAT 456 Fundamentals of SAS	3
STAT 465 Nonparametric Statistics	3
STAT 525 Web Mining	3
STAT 529 Current Issues in Data Mining	3
STAT 551 Applied Stochastic Processes	3
Other appropriate graduate course, with permission of advisor	

Master of Science in Early Childhood Education

Contact: Gail Cueto (860-832-2434)

Program Rationale:

This program is designed for early childhood educators wishing to pursue graduate study which will extend their knowledge of the theory and practice of early childhood education. The program offerings enable professionals working in the field of early childhood to increase knowledge and skills related to the most effective research-based strategies in teaching, learning, and assessment. Students will have opportunities to analyze, extend, and increase the relevance and responsiveness of their current work with children, particularly as it relates to development and diversity issues.

The program consists of a number of courses in the introductory block, curriculum and instruction block, and specialization block. It also provides the opportunity to develop and implement research skills during the final two semesters of the capstone requirement, during which candidates are enrolled in courses that facilitate the planning and conducting of an action research project in the school or early childhood classroom and/or professional teaching setting in which s/he is employed. An undergraduate degree in, or related to, early childhood education is required for admission to the program.

Program Learning Outcomes:

Students are expected to:

- demonstrate how to implement curriculum that includes elements that are developmentally appropriate, multicultural, multimedia, integrated, and suitable for inclusive and diverse settings;
- demonstrate effective management and assessment strategies;
- demonstrate improvement in the quality of their teaching skills by self-reflecting and analyzing teaching practices through data collection and analysis;
- demonstrate best practice teaching as agents of change by designing and conducting action research that is grounded in professional literature and can have a positive impact on early childhood settings and communities;
- assess a variety of early childhood programs in light of their students' developmental stages and cultural and linguistic backgrounds;
- demonstrate knowledge and understanding of the course material in the introductory block courses that incorporate and highlight insights from the study of diversity in schools, socio-cultural and historical issues influencing schools, and research in education;
- demonstrate knowledge of and value for a variety of structures in which young children are reared while demonstrating the ability to build effective reciprocal relationships with parents; and
- identify models for effective school-community partnerships that assist and empower families.

Course and Capstone Requirements

(33 credits):

Core Courses (9 credits)

EDTE 502 Focus on Diversity in Education	3
EDF 516 School and Society	3
EDTE 598 Introduction to Research in Education	3

Professional Courses (9 credits)

EDEC 551 Programs and Curricula in Early Childhood Education	3
EDEC 552 Programs and Curricula in Early Childhood Education II	3
EDEC 554 Observation and Assessment in Early Childhood Education	3

Specializations (9 credits)

Choose from one of the following specializations:

a) Leadership/Directorship:

EDL 513 Supervision	3
EDEC 561 Administration in Early Childhood Education	3
EDEC 553 Family, School and Community Partnerships in Early Childhood Education	3

b) Working with Families:

EDEC 553 Family, School and Community Partnerships in Early Childhood Education	3
RDG 586 Literacy Instruction for Diverse Populations I	3

Related course approved in advance by advisor (SPED 510 recommended)

c) Diversity in Education:

EDF 510 The Social, Political, and Cultural Context of Urban Schools	3
EDEL 509 Education and the Development of Cultural Understanding	3
EDEL 485 Creating Classroom Community (K-8)	3

Capstone Requirement (6 credits)

Special Project, Plan E: EDEL 591 and EDEL 592 (all students are required to enroll in Plan E unless they are exempted for Plan A, the thesis option). Capstone requires the completion of all core and professional courses and at least 6 credits in specialization area. Students are strongly discouraged from taking any other coursework concurrent with EDEL 591. Under no circumstances may students take a course concurrently with EDEL 592.

Program Sequence:

Students should complete the core requirements before enrolling in the professional and specialization courses. Courses in the professional and specialization areas may be taken concurrently with courses from the core with permission of advisor. All core and professional courses, as well as 6 credits in the specialization block, must be completed prior to taking EDEL 591.

In the case of a student who is not employed in a professional setting with children during the capstone semesters, the student may opt to fulfill Plan A, Thesis Capstone (3 credits). In this case the student must take an additional course, with advisor counsel, to complete the 33 credits in the planned program. The student must also find a faculty member in the department to supervise the thesis work.

Note: A maximum of 6 credits at the 400 level may be taken with the approval of the graduate advisor.

Master of Science in Educational Leadership

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. There are two strands from which students may choose. Strand I: Educational Leadership (30 credits) is designed to prepare graduates to assume teacher leadership positions within their schools or organizations. Strand II: Curriculum Leadership (30 credits) is designed to prepare graduates to assume roles involving curriculum renewal and evaluation.

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.

The admission standard for the Educational Leadership M.S. program includes either a 3.00 undergraduate GPA or a 2.70 GPA with a 3.00 upper-level GPA.

Course and Capstone Requirements:

Core Requirements (18 credits):

EDF 500	Contemporary Educational Issues	3
---------	---------------------------------	---

or one of:

EDF 516	School and Society	3
---------	--------------------	---

EDF 524	Foundations of Contemporary Theories of Curriculum	3
---------	--	---

EDF 525	History of American Education	3
---------	-------------------------------	---

EDF 538	The Politics of Education	3
---------	---------------------------	---

EDF 583	Sociological Foundations of Education	3
---------	---------------------------------------	---

and

ED 511	Principles of Curriculum Development	3
--------	--------------------------------------	---

EDL 513	Supervision	3
---------	-------------	---

ED 517	Evaluation	3
--------	------------	---

ED 540	Educational Motivation and the Learning Process	3
--------	---	---

ED 598	Research in Education	3
--------	-----------------------	---

Strand Requirements and Electives

(12 credits)

Strand I - Educational Leadership

Required courses (6 credits):

EDL 514	Administration	3
---------	----------------	---

EDL 555	Leadership for Culturally Diverse Schools	3
---------	---	---

Elective courses (6 credits):

Students select advisor-approved elective courses to complete their graduate programs

Strand II - Curriculum Leadership

Required courses (6 credits):

EDL 551	Curriculum Leadership	3
---------	-----------------------	---

EDL 555	Leadership for Culturally Diverse Schools	3
---------	---	---

Elective courses (6 credits):

Students select advisor-approved elective courses to complete their graduate programs

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.

Master of Science in Educational Studies: Policy and Secondary Education Strands

Contact: Timothy Reagan (860-832-2574)

Strand I: Educational Studies with Discipline Specific Specialization

Strand II: Secondary Education

Program Rationale:

This program is designed to offer educators working in the field of education the opportunity to pursue graduate studies in Educational Studies. There are two strands of study. Strand I: Educational Studies with Discipline Specific Specialization. Strand II: Secondary Education. Strand I, Educational Studies with Discipline Specific Specialization, is designed to increase student knowledge of contemporary education issues, theories, and politics. Strand II, Secondary Education, is designed to increase knowledge and skills related to curriculum and instruction in secondary schools.

The capstone for Strand I, Educational Studies with Discipline Specific Specialization entails the following. Students may choose between two possible capstone experiences: writing a thesis, or completing a Comprehensive Examination. Students who select the thesis also take ED 599 (3 credits). Those who choose the Comprehensive Examination take one additional 500-level EDF course (3 credits).

The capstone for Strand II, Secondary Education is comprised of a capstone block in which the student earns 3 credits for EDSC 586. The capstone prerequisite is completion of all Block 1 courses and at least 12 credits in Blocks 2 and 3.

Program Learning Outcomes for Educational Studies with Discipline Specific Specialization:

Students will:

- use social, cultural, political, and historical perspectives to critically analyze and assess policy and school practices;
- demonstrate growth in professional self-knowledge by engaging in reflective inquiry;
- demonstrate research skills through the collection and interpretation of literature-based studies; and
- demonstrate knowledge of how issues of diversity impact schools.

Program Learning Outcomes for Secondary Education:

Students are expected to:

- use social, cultural, political, and historical perspectives to critically analyze and assess policy and school practices;
- extend knowledge and understanding of the subjects that they teach, the theories, curriculum and instruction, models and procedures for assessment of learning, and environments for diverse learners;
- demonstrate growth in professional self-knowledge through engaging in reflective inquiry;
- demonstrate research skills through the collection and interpretation of literature-based studies; and
- demonstrate knowledge of educational programs that promote learning for a diverse student body.

Course and Capstone Requirements for Educational Studies with Discipline Specific Specialization:

30 credits total

- 15 credits chosen from core EDF courses
- 9 credits of Specialization Area courses
- 3 credits EDTE 598
- 3 credits ED 599 or EDF 500-level course (depending on Capstone choice).

Core courses include:

EDF 500 Contemporary Educational Issues

EDF 516 School and Society

EDF 524 Foundations of Contemporary Theories of Curriculum

EDF 525 History of American Education

EDF 526 Philosophy of Education

EDF 528 Comparative and International Education

EDF 535 Special Topics in Educational Foundations

EDF 538 The Politics of Education

EDF 583 Sociological Foundations of Education

Capstone for Strand I, Educational Studies with Discipline Specific Specialization:

Students may choose between two possible capstone experiences: writing a thesis, or completing a Comprehensive Examination. Students who select the thesis also take ED 599 (3 credits). Those who choose the Comprehensive Examination take one additional 500-level EDF course (3 credits).

Plan A: Thesis and Satisfactory Completion of ED 599

Plan B: Comprehensive Examination and one additional 500-level EDF course

Strand II: Secondary Curriculum, Foundational and Instructional Issues:

30 credits total

Introductory Block 1 (9 credits):

EDTE 502 Focus on Diversity in Education

EDF 516 School and Society

EDTE 598 Research in Educational Settings

Curriculum and Instruction

Block 2 (9 credits):

EDSC 505 Innovations in Secondary Education

EDSC 556 Instructional Theory and Practice

EDF 524 Foundations of Contemporary Theories of Curriculum

Specialization Block 3 (9 credits):

Choose from the following options:

a) Foundations: EDF 583, EDF 528, EDF 525, EDF 538, EDF 500

b) Subject areas: Choose 3 courses in the subject area in which certified or in literacy.

Capstone Block (3 credits):

EDSC 586 (all students are Plan E).

Capstone prerequisite is completion of all Block 1 courses and at least 12 credits in Blocks 2 and 3.

Program Sequence: Students are encouraged to complete the Introductory Block 1 before taking courses in the Curriculum and Instruction and Specialization Blocks 2 and 3. Courses in the Curriculum and Instruction and Specialization Blocks may be taken concurrently with courses from the Introductory Block with permission of advisor.

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.

Master of Science in Educational Technology

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.

Course and Capstone Requirements:

Core Courses (27 credits):

EDT 500 Instructional Design and Evaluation I

EDT 501 Message Design and Production

EDT 510 Design Tools

EDT 512 Computer-based Instruction

EDT 521 Interactive Multimedia for Instruction I

EDT 522 Instructional Design and Evaluation II

EDT 531 Interactive Multimedia for Instruction II

EDT 532 Distance Learning and Networking I

EDT 533 Distance Learning and Networking II

Professional Education (3 credits):

One of the following:

EDF 500 Contemporary Educational Issues

EDF 516 School and Society

EDF 524 Foundations of Contemporary Theories of Curriculum

EDF 525 History of American Education

EDF 538 The Politics of Education

EDF 583 Sociological Foundations of Education

or

EDT 514 Integrating Technology in the Classroom Curriculum (ET majors must choose this course)

Research and Capstone Requirements (6 credits):

Plan A: Thesis

Plan E:

EDT 598 Inquiry in Educational Technology

EDT 597 Final Project

Note: Plan A (Thesis) or Plan E (Special Project) may be selected in consultation with the advisor.

EDT 597 Final Project

The purpose of the Master's Final Project (MFP) is to allow graduate students to complete a comprehensive instructional project. The scope of MFP experience is large and is different from a classroom project. It is meant to act as a synthesis of students' total classroom experiences. It is a culminating experience that allows graduate students to perform their skills in an independent manner. The student must bear the responsibility of the decisions and actions taken at every level of the project. The faculty's role is one of a sounding board and not to influence or provide further training.

Students in the program cannot begin the MFP without submitting a comprehensive proposal. In addition, students must have completed 24 credits of work before enrolling in the summer EDT 597 Final Project course.

Computer prerequisite: A valid CCSU BlueNetID (username) and password. Graduate students must also have a personal computer and e-mail account.

Special Service Course (undergraduate and graduate):

EDT 490 Instructional Computing

Note: Students interested in a School Library Media Specialist cross-endorsement should contact the Connecticut State Department of Education Certification Office.

Master of Science in Elementary Education

Contact: Gail Cueto (860-832-2434)

Program Rationale:

This program is designed for elementary education and K-12 certified teachers wishing to pursue graduate study which extends their knowledge of the theory and practice of elementary education. The program offerings enable working teachers to increase knowledge and skills related to the most effective research-based strategies in teaching, learning, and assessment. Students will have opportunities to analyze, extend, and increase the relevance and responsiveness of their current work in classrooms, particularly as it relates to leadership and diversity issues.

The program consists of a number of courses in the introductory block, curriculum and instruction block, and specialization block. It also provides the opportunity to develop and implement research skills in the final two semesters of the capstone requirement, during which candidates are enrolled in courses that facilitate the planning and conducting of an action research project in the school classroom and/or professional teaching setting in which they are employed. Teacher certification in either elementary, early childhood, middle-level education, or an NK-12 special area is required for admission to the program.

Program Learning Outcomes:

Students are expected to:

- demonstrate and implement varied instructional, assessment, management, and technological strategies that facilitate learning for diverse students;
- demonstrate improvement in the quality of students' teaching skills by self-reflecting and analyzing teaching practices through data collection and analysis;
- demonstrate best practice teaching as agents of change by designing and conducting action research grounded in professional literature to have an impact on schools and their surrounding communities;
- assess a variety of teaching strategies in light of research-based practices around developmental stages and cultural/linguistic backgrounds; and
- demonstrate knowledge and understanding of the course material in the introductory block courses that incorporate and highlight insights from the study of diversity in schools, socio-cultural and historical issues influencing schools, and research in education.

Course and Capstone Requirements

(33 credits):

Core Courses (9 credits)

EDTE 502 Focus on Diversity in Education	3
EDF 516 School and Society	3
EDTE 598 Introduction to Research in Education	3

Professional Courses (9 credits)

EDEL 508 Current Trends in Elementary Education	3
EDEL 512 Assessment of Learning	3
EDEL 529 Analysis of Teaching	3

Specializations (9 credits)

Choose from one of the following specializations:

1. Diversity in Education: Three from

EDEL 509 Education and the Development of Cultural Understandings	3
EDEL 485 Creating Classroom Community (K-8)	3
RDG 586 Literacy Instruction for Diverse Populations I	3
LING 497 Second Language Acquisition 3	

2. Working with Families: Three from

SPED 580 Collaborative Process in Special Education	3
SPED 510 Inclusive Education	3

or other SPED course approved by advisor

EDEC 553 Family, School and Community Partnerships in Early Childhood Education	3
RDG 586 Literacy Instruction for Diverse Populations I	3
EDEL 485 Creating Classroom Community (K-8)	3

3. Subject Area Curriculum: Three from

FA 490	Integrating the Fine Arts for the Young Learner	3
SCI 555	Teaching Biological Sciences in the Elementary School	3
MATH 506	Teaching Number Concepts in the Elementary Grades	3
	or	
MATH 507	Teaching Geometry and Measurement in the Elementary Grades	3
	or	
MATH 508	Teaching Probability and Statistics in the Elementary Grades	3
	or	
MATH 509	Teaching Algebraic Thinking in the Elementary Grades	3
EDEL 537	Social Studies Methods (1-6)	3
	RDG course (500 level)	
EDEL 485	Creating Classroom Community (K-8)	3
4. Literacy: Three from		
500-level RDG courses		
TESOL courses (LING 497 and RDG 586 are recommended.)		

Capstone Requirement (6 credits)

Special Project, Plan E: EDEL 591 and EDEL 592 (all students are required to enroll in Plan E unless they are exempted for Plan A, the thesis option). Capstone requires the completion of all core and professional courses and at least 6 credits in specialization area. Students are strongly discouraged from taking any other coursework concurrent with EDEL 591. Under no circumstances may students take a course concurrently with EDEL 592.

Program Sequence:

Students should complete the core requirements before enrolling in the professional and specialization courses. Courses in the professional and specialization areas may be taken concurrently with courses from the core with permission of advisor. All core and professional courses, as well as 6 credits in the specialization block, must be completed prior to taking EDEL 591.

In the case of a student who is not employed in a professional setting with children during the capstone semesters, the student may opt to fulfill Plan A, Thesis Capstone (3 credits). In this case, the student must take an additional course, with advisor counsel, to complete the 33 credits in the planned program. The student must also find a faculty member in the department to supervise the thesis work.

Note: A maximum of six credits in 400-level courses may be taken, with the approval of the graduate advisor.

Master of Science in Engineering Technology

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.

Course and Capstone Requirements (30 credits):

Foundation Studies (12 credits)

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	3
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

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 (15 credits)

ETC 571	Design and Construction of Concrete Structures	3
ETC 577	Engineering Technology Project Administration	3
ET or ETC	(500-level elective approved by advisor)	3
ET, ETC, or CM	(500-level elective approved by advisor)	3
ET or ETC	(400- or 500-level elective approved by advisor)	3

Specialization-Manufacturing/Mechanical Engineering Technology (15 credits)

ETM 517	Automated Assembly and Manufacturing Cell Design	3
ETM 523	Contemporary Engineering Materials	3
ET elective	(one 500- or 400-level course)	3
ET electives	(two 500-level courses)	6

Capstone Requirement: (3 credits)

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.

Plan A: ET 599 Thesis, 3 credits. The preparation of analytical research and thesis under the supervision of a graduate advisor requires a written and oral defense.

or

Plan C: ET 598 Research in Engineering Technology, 3 credits. 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).

Master of Arts in English

Program Rationale:

The Master of Arts in English program is designed for students who wish to pursue the advanced study of English and American literature. The program offers students the opportunity to refine and expand both their knowledge of literature written in English and their facility with its criticism. The program 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 and American literature from their beginnings to the present day. In this way, the MA program supports students' pursuit of careers in teaching at the elementary, middle, or secondary school 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 the reading, writing, and analysis of texts.

The program offers over 20 courses each year on a broad range of topics reflecting the diverse interests of the English Department's faculty. Typical approaches include in-depth examinations of individual authors, comparative studies of two or more authors, explorations of established or emergent literary forms, historical treatments of particular periods, and investigations of important critical or theoretical methods. Independent studies and guided readings are also available to allow students to pursue interests not addressed in scheduled courses.

With its diverse, engaged faculty and structured but flexible program, the MA in English offers both full-time and part-time students a thorough, rigorous training in British and American literature and literary studies that allows students to tailor their experiences to meet their professional and intellectual needs and interests.

Program Learning Outcomes:

Students in the program are expected to:

- explain accurately the literal meaning of a work or works of literature at an appropriate level of complexity;
- discuss effectively the literary aspects of a prose work or works, such as tone, point of view, characterization, imagery, etc.;
- offer persuasive and technically accurate close readings of poetry, including analysis of prosody and other formal features;
- 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;
- 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;
- construct an effective analysis of a work or works informed by the tenets of a literary theory.

Admission:

To qualify for the Master of Arts degree program in English, an applicant must have a baccalaureate degree in English or American literature or a closely related field from an accredited college or university, or 30 hours of appropriate undergraduate coursework in the discipline (as approved by departmental review). Additional undergraduate credits will be required of students who lack sufficient preparation in literature. Applicants must have a GPA of at least 3.00 on a four-point scale both in overall undergraduate and (if applicable) graduate coursework and in English courses. Conditional admission may be offered to students who do not meet all of these requirements. Applicants must also submit the following:

To the Graduate Recruitment and Admissions Office:

- Graduate Application Form
- Official undergraduate and (if applicable) graduate transcripts from every institution attended except CCSU
- Application fee

To the English Department (Attn. Director of Graduate Studies), 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 English;
- Two academic letters of recommendation, preferably from a former instructor or someone who can otherwise attest to the applicant's preparedness for graduate literary study.
- A writing sample of 10-15 pages showcasing the applicant's strongest analytical or critical writing about literature. Work written for previous courses is acceptable (indeed encouraged), but "creative" pieces (poetry, fiction, or memoir) are not appropriate.

No applications will be considered until all materials have been received. Applications will be evaluated by the department on an ongoing basis.

Students in the MA program will be assigned an English Department advisor upon admission. Before registering for coursework, students should read the program brochure "English Master of Arts Program Student Handbook" (available from the department) and consult with their advisors. Students must file planned programs in consultation with their advisors before completing 16 credits of graduate coursework.

Course and Capstone Requirements:

(30 credits)

Plan A (Thesis)

ENG 598	Research in English*	3
ENG 500	Seminar in American Literature	3
ENG 501	Seminar in British Literature	3
ENG 530	Topics in Literary Periods	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 nine credits at the 400 level, as approved by the faculty advisor

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 530	Topics in Literary Periods	3
ENG 540	Topics in Literature and Theory	3

15 credits of English electives at the 400 and 500 levels, with no more than nine credits at the 400 level, as approved by the faculty advisor

*To be completed during the first year of graduate study.

Master of Science in Geography

Program Rationale:

The master's program in Geography is based on students' interests and faculty expertise. Each graduate student's planned program of study is custom-designed to provide the best possible preparation for the career or future PhD study chosen by the student.

Program Emphases:

Students enrolled in the M.S. in Geography program may emphasize any of the following areas:

- urban and regional planning
- environmental studies
- 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 on completion of their degree 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.

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.

Plan A, which requires 30 credits, includes a thesis (GEOG 599); 12 credits of core courses, including GEOG 500, 514 or 516 or 518, 530 or 542, 598; 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, which also requires 30 credits, includes a special project (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 (12 credits):

GEOG 500 Graduate Studies in Geography
GEOG 530 Graduate Internship in Geography
GEOG 598 Research in Geography
GEOG 595 (Plan C) Special Project in Geography

or

GEOG 599 (Plan A) Thesis;

Plan B not available

Specialization Courses (9 credits):

SUST 500 Social, Political, and Ethical Dimensions of Sustainability
SUST 501 Contemporary Challenges in Environmental Sustainability
SUST 502 Science for Sustainability

Geography Electives:

9 credits of directed electives in geography.

(Up to 9 credit hours total may be at the 400-level courses that are listed in the graduate catalog.)

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.

Master of Arts in History

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.

Course and Capstone Requirements

(30 credits, including a thesis):

Admission criteria: Acceptance into the CCSU Graduate Program and approval of the History Department.

Three 500-level history courses	(9 credits)
Three additional history courses	(9 credits)
including:	
HIST 501 The Professional Historian	
HIST 599 Thesis	(6 credits)
Electives in history or related fields	(6 credits)

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.

[Click here](#) for the MA in "Public History"

Master of Arts in Information Design

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:

1. Master advanced design theory, process and application;
2. Develop analytic and critical skills required to create, direct, and evaluate effective design solutions; and
3. Develop in-depth problem solving and research skills necessary for the creation and presentation of effective design solutions.

Course and Capstone Requirements

(36 credits):

Core Courses (21 credits):

MKT 470	Integrated Marketing Communication	3
BUS 590	Business Topics	3
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

Specialization (9 credits):

DES 503	Graphic/Information Design Practice I	3
DES 504	Graphic/Information Design Practice II	3
DES 537	Advanced Design Internship	3

Directed Elective (3 credits):

DES, MIS, CS, COMM, MGT, MKT, BUS or ART course as approved by advisor

Capstone (3 credits):

DES 597	Research Project (Plan C)	3
---------	---------------------------	---

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, 438, 439, 465, 498, 499, 503, 504, 597, 598. Contact the department for additional information.

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.

Master of Science in International Studies

Program Rationale:

The Master's of Science in the International Studies program educates students in several key areas of the world: Middle East, Africa, Asia, Western Europe and European Union, Eastern Europe, and Latin America. Students are grounded in theories of internationalization, history of diverse countries and regions, cross-cultural communication, and cosmologies of various international cultures and are provided programmatic, analytical, and practical skills to address international issues. The program prepares generalists to work in governmental and non-governmental organizations within and outside of the United States to address issues related to the global human experience.

Program Learning Outcomes:

Students in this program will:

- produce a capstone project on internationalism guided by School of Graduate Studies guidelines based on primary research;
- demonstrate their ability to communicate at the intermediate level in the language of the region of their specializations;
- be able to write well-researched, clearly theorized, and analytical papers that explain issues concerning internationalism; and
- understand, through hands-on experiences, the history, culture, environment, and political and economic structures of the region in which they specialize.

In addition to the regular admission requirements, an applicant for the MS in International Studies program must send a resume and a four-page essay that addresses his/her past experiences, career goals, and the region in which he/she wishes to specialize (select from Africa, East Asia, European Union/Western Europe, Latin America, Slavic/Eastern Europe, and Middle East). Each application must be sent electronically or by mail to the International Studies Director, who will then direct it to the chair of the region in which the student seeks to specialize.

Early applications are encouraged for full consideration. The admission deadline for spring semester is December 1 (priority deadline is November 1); for fall semester the deadline is May 1.

Course and Capstone Requirements

(30 credits in International Studies [Plan A or Plan C])

Common Core (15 credits; take 5 of the following):

- IS 570 Modern World Issues
- IS 571 International Diversity and Integration
- COMM 543 Intercultural Communication
- GEOG 544 The Geography of World Economic Development
- LING 515 An Introduction to Sociolinguistics
- PS 501 Advanced Studies in International Law

Specialization (9 credits):

Approved courses in one of African Studies, East Asian Studies, European Union/West European Studies, Latin American Studies, Middle Eastern Studies, or Slavic/East European Studies; or approved courses to constitute a cohesive specialization with a global, theoretical, or conceptual perspective.

Research and Capstone Requirements (6 credits):

Plan A: IS 598 Research in International Studies and IS 599 Thesis in International Studies

or

Plan C: IS 598 Research in International Studies and IS 595 Special Project in International Studies

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.

Language Requirement

The International Studies program requires that all students have a level of proficiency in the reading, writing, speaking, and understanding of a

single modern language-preferably in their areas of geographical specialization-equal to the completion of the Modern Language Department at the 226 level. Fulfillment of this requirement will be determined three possible ways: by a CCSU instructor of the language, the chair of the Department of Modern Language, or a professor who is a native speaker, when the language is not offered as part of the CCSU curriculum.

Advisors

Initially, on acceptance to the program, students will be assigned advisors appropriate to their regional or thematic specializations. This advisor will normally serve as the faculty member supervising the advisee's IS 598 course and thesis, special project or comprehensive examination.

Note: During the 2010-2011 school year, the curriculum will be revised to allow students more options.

Master of Science in Marriage and Family Therapy

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. The curriculum is designed to meet academic and clinical requirements for Connecticut licensure for marital and family therapists 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).

MFT Educational Outcomes (EO):

1. To develop competent entry-level Marriage and Family Therapists at point of graduation
2. To advance and disseminate the Metaframeworks paradigm as a valued systemic basis for teaching and practicing marriage and family therapy
3. To promote culturally-informed and respectful systemic mental health practice
4. To promote leadership in the MFT field among our students, faculty, and graduates

Student Learning Outcomes (SLO):

As a result of successful completion of the MFT program, students will:

1. Demonstrate knowledge in the major schools of marriage and family therapy;
2. Demonstrate proficiency in practices of systemically-oriented therapy approaches to human problems in a variety of clinical settings;
3. Demonstrate an articulated personal model of therapy upon which they base their intervention, derived from Metaframeworks;
4. Show professional identities as Marriage and Family Therapists through participation in activities that facilitate the process of socialization in the field;
5. Demonstrate knowledge as consumers of MFT relevant research and ongoing professional enrichment through the valuing of continued self study and skill development;
6. Demonstrate awareness, knowledge, and skills in providing culturally informed MFT;
7. Demonstrate ability to apply the standards of ethical professional conduct in the field; and
8. Show a strong and clear sense of self as an intervener in human problems.

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 60 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 500 clinical contact hours with a minimum of 100 hours of supervision of those clinical contact hours under an AAMFT Approved Supervisor.

Course and Capstone Requirements

(51 credits):

Prerequisites (12 credits):

PSY 512 Seminar in Developmental Psychology	3
CNSL 500 The Dynamics of Group Behavior	3

CNSL 501 Theories and Techniques in Counseling	6
Marriage and Family Therapy specialization (51 credits) - thesis optional:	
MFT 541* Introduction to Theories of Family Systems	3
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 (3 credits in each of 3 consecutive semesters)**	9
MFT 598 Research Methods in Marriage and Family Therapy	3
Elective required***	3

* This course is taken during the pre-candidacy period along with the three prerequisite courses as a condition for degree candidacy.

** See Capstone requirement (below).

*** 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.

During the third semester of MFT 585 (Internship), on completion of a minimum of 300 of the 500 clinical hours required for graduation, all students must complete a capstone project consisting of a comprehensive written examination of a clinical case seen by the student, 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. During the third semester of MFT 585 (Internship), on completion of a minimum of 300 of the 500 clinical hours required for graduation, all students must complete a capstone project consisting of a comprehensive written examination of a clinical case seen by the student, 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.

Master of Arts in Mathematics with Specialization in Actuarial Science

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.

Course and Capstone Requirements

(30 credits):

(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:

Actuarial Core (8 credits): Actl 565 and 566

Additional courses as approved by the advisor, including:

1. 9 credits chosen from ACTL 480, 481, 482, 580,
2. 9 credits designated STAT or MATH at the 400 or 500 level, and
3. 1-4 additional credits in actuarial science, mathematics, or statistics.

No more than nine credits in the program may be earned in 400-level courses.

Capstone:

Plan A: Thesis (Math 599, 6 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 30 credits of course work

Master of Arts in Mathematics with Specialization in Computer Science

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.

Course and Capstone Requirements

(30 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.

Requirements:

Basic Mathematics Courses (12 credits) - Three (3) of the following courses:

MATH 515	Abstract Algebra I	3
MATH 516	Abstract Algebra II	3
MATH 519	Principles of Real Analysis I	3
MATH 520	Principles of Real Analysis II	3

and one (1) of the following:

MATH 523	General Topology 3	
MATH 526	Complex Variables	3
STAT 551	Applied Stochastic Processes	3

Electives appropriate to the area of specialization as approved by the faculty advisor (18 credits); no more than nine of these credits may be earned in 400-level courses.

Comprehensive Examination

Master of Arts in Mathematics-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.

Course and Capstone Requirements

(30 credits):

Requirements (18 credits):

MATH 515 Abstract Algebra I 3

MATH 516 Abstract Algebra II 3

MATH 519 Principles of Real Analysis I 3

MATH 520 Principles of Real Analysis II 3

MATH 523 General Topology 3

MATH 526 Complex Variables 3

Electives as approved by faculty advisor (12 credits). These may include 3 credits for the thesis for a student electing Plan A. No more than 9 credits may be earned from 400-level courses.

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.

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 under Graduate Forms (Degree Candidacy/Non Capstone Qualifying Form).

Note: Applicants to the program are expected to have completed the equivalent of MATH 152, 221, 222, 228, 366, and 377 in addition to any necessary prerequisites for courses required in the planned program of graduate study.

Master of Arts in Mathematics 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.

Course and Capstone Requirements

(30 credits):

(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 (6 credits): STAT 567 and 575

Three courses chosen from ACTL 565, 566; MATH 470, 477, 519, 520; STAT 551 (9-11 credits)

Electives appropriate to the area of specialization (10-15 credits): No more than nine credits in the program may be earned in 400-level courses.

Capstone:

Plan A: Thesis (Math 599) (6 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 30 credits of course work

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.

Master of Science in Mathematics for Certified Elementary and Middle School Teachers

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.

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.)

Professional Education (3 credits):

One of the following:

EDF 500	Contemporary Educational Issues	3
EDF 516	School and Society	3
EDF 524	Foundations of Contemporary Theories of Curriculum	3
EDF 525	History of American Education	3
EDF 538	The Politics of Education	3
EDF 583	Sociological Foundations of Education	3

Elementary/ Middle School Mathematics Education Core (12 credits):

Elementary school track:

MATH 506	Teaching Number Concepts in the Elementary Grades	3
MATH 507	Teaching Geometry and Measurement in the Elementary Grades	3
MATH 508	Teaching Probability and 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 and Measurement in the Middle Grades	3
MATH 538	Teaching Probability and Statistics in the Middle Grades	3
MATH 539	Teaching Algebraic Thinking in the Middle Grades	3

Mathematics Electives (6 credits):

Choose two courses from

MATH 449	Mathematics Laboratory for Elementary School	3
MATH 504	Topics in Mathematics	1-3
MATH 534	Techniques in Diagnosis and Remediation for the Teaching of Mathematics K-12	3
MATH 580	Directed Study in Mathematics	1-3
STAT 453	Applied Statistical Inference	3

General Electives (6 credits):

Courses chosen from the electives listed above, graduate education courses and MATH 531, as approved by faculty advisor.

Research (3 credits):

MATH 598 Research in Mathematics Education

Capstone:

Plan A: 33 credits consisting of 30 credits from the above listings plus MATH 599 (3 credit Thesis).

Plan C: 33 credits consisting of 30 credits from the listings above plus MATH 590 Special Project in Mathematics (3 credits).

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.

Master of Science in Mathematics for Certified Secondary Teachers

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.

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 (3 credits):

As approved by faculty advisor

Educational Foundations (3 credits):

Chosen from:

EDF 500	Contemporary Educational Issues	3
EDF 516	School and Society	3
EDF 524	Foundations of Contemporary Theories	3
EDF 525	History of American Education	3
EDF 538	The politics of Education	
EDF 583	Sociological Foundations of Education	3

Secondary Mathematics Education (9 credits):

MATH 547 Reflective Practice in Teaching Mathematics

plus 6 credits chosen from:

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 View point	3
MATH 544	Secondary School Geometry with Technology from an Advanced View point	3
MATH 580	Directed Study in Mathematics	1-3

Mathematics and Statistics Content

Courses (12 credits):

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, 440, 468, 469, 470, 477, 491, 515, 516, 519, 520, 523, 525, 526, STAT 453, 455, 567

Research in Mathematics Education (3 credits): MATH 598

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.

=====

Master of Arts in Mathematics-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.

Course and Capstone Requirements

(30 credits):

Requirements (18 credits):

MATH 515 Abstract Algebra I 3

MATH 516 Abstract Algebra II 3

MATH 519 Principles of Real Analysis I 3

MATH 520 Principles of Real Analysis II 3

MATH 523 General Topology 3

MATH 526 Complex Variables 3

Electives as approved by faculty advisor (12 credits). These may include 3 credits for the thesis for a student electing Plan A. No more than 9 credits may be earned from 400-level courses.

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.

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 under Graduate Forms (Degree Candidacy/Non Capstone Qualifying Form).

Note: Applicants to the program are expected to have completed the equivalent of MATH 152, 221, 222, 228, 366, and 377 in addition to any necessary prerequisites for courses required in the planned program of graduate study.

Master of Arts in Modern Language

30 credits

Program Rationale:

The Master of Arts in Modern Language 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:

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.

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:

1. Specialization in Spanish

30 credits (Plan A or Plan B)

Core (6 credits):

SPAN 560 Structure of Spanish Language 3

ML 598 Research in Modern Languages 3

Directed Electives (15 credits):

Literature: Choose 12 credits from SPAN 515, 520, 525, 526, 530, 535, 545, 551, 553, 571, 572, 576, ML 500

Culture and Civilization: SPAN 534 or 588, or ML 550

Electives (6-9 credits):

Selected in consultation with advisor

Capstone (0-3 credits):

SPAN 599 (Plan A) or Comprehensive Examination (Plan B)

2. Specialization in Italian:

30 credits (Plan A or Plan B)

Core (6 credits):

ML 598 Research in Modern Languages

ITAL 560 Advanced Written Italian

Directed Electives (15 credits). Select Option 1 or Option 2:

Option 1

Four literature courses as approved by advisor.

Select from:

ITAL 470 14th-Century Italian Literature

ITAL 476 16th-Century Italian Literature

ITAL 561 Topics in Italian Literature (may be repeated up to 3 times with different topics)

ITAL 571 20th-Century Italian Literature

ML 500 Studies in Modern Languages

and

one culture and civilization course:

ITAL 588 Topics in Italian Cultural Studies (may be repeated up to 3 times with different topics)

Option 2

ML 550 Intensive Studies in Modern Languages (may be repeated up to 3 times with different topics)

6 or 9

and 6 or 9 credits selected from Option 1

Electives (6-9 credits):

Courses as approved by advisor, including

but not restricted to: ITAL 588, ITAL 488, ITAL 561, ITAL 588, IS 590, IS 596

Capstone (0-3 credits):

Plan A (3 credits): Thesis (ITAL 599)

or

Plan B: Comprehensive Examination

3. Specialization in Hispano-North American Inter-University Master's Degree in Spanish Language and Hispanic Cultures:

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 (6 credits):

SPAN 560 Structure of Spanish Language 3

ML 598 Research in Modern Languages 3

Directed Electives (15 credits):

Literature: Choose 12 credits from SPAN 515, 520, 525, 526, 530, 535, 545, 551, 553 571, 572, 576, ML 500

Culture and Civilization: Choose 3 credits from SPAN 534, 588, ML 550

Electives (6-9 credits):

Selected in consultation with advisor.

Capstone (0-3 credits):

SPAN 599 (Plan A) or Comprehensive

Examination (Plan B).

Note: Nine credits will be transferred as substitutes from the University of Salamanca as electives.

4. Specialization in Italian or Spanish for Certified Teachers.

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.

Program 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.

Courses and Capstone Requirements: 30 credits (Plan C):

Professional Education (6-9 credits):

ML 490 Teaching World Languages II: Acquisition in Young Children for Teachers of World Languages (3 credits)

ML 492 Topics in Language Teaching (3 credits)

Additional course as approved by advisor.

Core (6 credits):

ITAL 560 Advanced Written Italian or SPAN 560, Structure of Spanish Language (3 credits)

ML 598 Research in Modern Languages (must be completed within the first fifteen credits of planned program (3 credits)

Directed Electives (9 credits):

One culture/civilization course and two literature courses.

Electives (3-6 credits):

As approved by advisor.

Capstone (3 credits):

ML 595 (Plan C)

Master of Science in Music Education

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.

Course and Capstone Requirements (minimum of 33 credits):

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 (3 credits):

One of the following:

EDF 500	Contemporary Educational Issues	3
EDF 516	School and Society	3
EDF 524	Foundations of Contemporary Theories of Curriculum	3
EDF 525	History of American Education	3
EDF 538	The Politics of Education	3
EDF 583	Sociological Foundations of Education	3

Music (21-27 credits):

Students must:

Take the following core courses (15 credits):

MUS 470	Musical Structure and Style	3
MUS 509	Comparative Musical 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 (2 credits):

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-Schwerk Teacher Training Course Level 1	3
MUS 56	Orff-Schwerk Teacher Training Course Level 2	3
MUS 557	Topics in General Music Education	2
MUS 559	Topics in High School Music Curriculum	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 Digital Synthesizer Techniques	2

MUS 540	Chamber Ensemble	1
MUS 578	Advanced Applied Music or Conducting	2
MUS 579	Topics in Improvisation	2
MUS 590	Sinfonietta	1
MUS 591	Chrous	1
MUS 592	A Wind Symphony	1

Up to 6 credits in music education, music, or advisor-approved electives outside the discipline.

Culminating Project (3 credits):

Plan B: Comprehensive Exam*

and one of the following:

Plan A: MUS 599 Thesis

Plan C: MUS 597A Capstone Project in Music

Plan C: MUS 597B Performance or Conducting Recital

*All students must take the Comprehensive Exam, as well as one of the other capstone options.

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.

Master of Science in Natural Sciences

Program Rationale:

The MS in Natural Sciences for Track I expands the knowledge of the physical or earth science content areas. Track II, for certified teachers from grades K-12, expands upon inquiry and curriculum development and assessment in the science content areas, with a focus on the CT Science Standards. Both tracks provide opportunities for students to tailor their selections of study in their areas of interest and career goals.

Program Learning Outcomes:

Graduate students are expected to demonstrate:

- a deep understanding of scientific inquiry methods;
- acquisition of scientific content knowledge;
- an understanding of the history and nature of science; and
- skills necessary to advance in educational scholarship.

Course and Capstone Requirements (30 credits):

Core Requirements:

SCI 500 Science, Technology and Society

Either Track I or Track II

Track I-Physics or Earth Science

Specialization (12-24 credits):

Courses in either Physics or Earth Science as approved by advisor

Cognate (0-12 credits):

Courses in a related field or fields as approved by advisor

Research/Capstone (3-9 credits):

Research (PHYS 598 or ESCI 598) and/or Thesis (PHYS 599 or ESCI 599)

Plan A or Plan B can be chosen.

Track II-Science Education Specialization (for Certified Elementary and Secondary School Teachers)

Professional Education (3-6 credits):

One of the following:

EDF 500	Contemporary Educational Issues	3
EDF 516	School and Society	3
EDF 524	Foundations of Contemporary Theories of Curriculum	3
EDF 525	History of American Education	3
EDF 538	The Politics of Education	3
EDF 583	Sociological Foundations of Education	3
and		
SCI 520	The Physical Sciences	3
SCI 530	The Earth/Space Sciences	3
SCI 540	The Life Sciences	3

and additional science courses as approved by advisor (6-12 credits):

Research (6 credits):

SCI 595	Special Projects in Science Education	3
SCI 598	Research in Science Education	3

Note:

Plan A: 30 credits, including three credits of Thesis (SCI 599)

Plan C: 33 credits

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. Only students admitted before Fall 2002 are allowed nine credits at the 400 level, as approved by the graduate advisor.

Master of Science in Physical Education

Program Rationale:

The graduate program of Physical Education is designed to: (1) increase the competency of teachers of physical education and (2) provide valuable subject matter for professionals in exercise science and sports medicine.

An undergraduate program in physical education from an accredited institution of higher education is preferred for admission to the master's degree program.

Program Learning Outcomes:

Students in the program are expected to:

- interpret and determine appropriate application of any one or combination of the following theories: pedagogical (Pedagogy), psychological and sociological (Sport); biomechanical and physiological (Exercise Science);
- read and interpret research and apply significant findings to their profession; and
- expand and integrate knowledge of fitness, health, and wellness and apply it to the field of teaching or exercise science.

Admissions Requirements:

Admission to the School of Graduate Studies

Course and Capstone Requirements

(30 credits):

Electives and Professional Education:

3-6 credits of courses other than Physical Education as approved by faculty advisor. Students who are Certified Teachers must take a minimum of one Professional Education graduate course.

Core courses:

15-18 credits of department offerings as approved by faculty advisor. All students must take a minimum of one course from the Exercise Science category.

I. PEDAGOGY

PE 500 Improving Student Learning in Physical Education (Spring even years)

PE 505 Instructional Tools for Physical Education (Fall even years)

PE 510 Instructional Models for Physical Education (Fall odd years)

PE 520 Current Issues in Physical Education (Spring odd years)

PE 590 Independent Study/Topics in Physical Education (Irregular)

II. SPORT

EXS 507 Human Perspectives in Sport (Spring odd years)

EXS 515 Sport, Physical Activity and Exercise Psychology (Spring even years)

PE 524 Sport, Physical Education, Athletics and the Law (Fall even years)

PE 525 Concepts in Athletic Administration (Fall odd years)

III. EXERCISE SCIENCE

EXS 519 Sport Biomechanics (Fall even years)

EXS 522 Physical Activity and Health (Spring odd years)

EXS 523 Essentials of Sports Performance Training (Summer even years)

EXS 530 Nutrition for Health, Fitness & Sport Performance (Summer odd years)

EXS 590 Independent Study/Topics in Exercise Science and Sports Medicine (Irregular)

EXS 592 Advanced Physiology of Sport and Exercise (Fall odd years)

IV. RESEARCH (6-9 credits):

PE 597 Research in Physical Education and Exercise Science I (Fall; required for all plans)

NOTE: Students must take before successful completion of 12 credit hours

PE 598 Research in Physical Education and Exercise Science II (Spring; required for all plans)

NOTE: Students must take before successful completion of 24 credit hours

PE 599 Thesis (Irregular; PLAN A ONLY)

Capstone Requirement:

Plan A (Thesis)

or

Plan B (Comprehensive Exam)

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.

Master of Public Administration Political Science

The Department of Political Science does not offer a graduate program, but an agreement between the University of Connecticut and Central Connecticut State University makes it possible for qualified undergraduate students at CCSU to enroll in up to four graduate-level courses in UConn's Master of Public Administration program and later apply these credits toward the M.P.A. Part-time students who have a bachelor's degree may take up to three courses at the graduate level before applying for the M.P.A. program. UConn M.P.A. students may take approved courses at CCSU's campus. There is some exchange of faculty between the two schools. Questions about the specifics of the cooperative program should be addressed to the M.P.A. director at UConn or to the chair of the Political Science Department at CCSU.

CCSU courses that have been approved for credit toward the M.P.A. are the following:

PS 446 The Budgetary Process

PS 448 The Politics of Human Services

Outside of the M.P.A. program, courses numbered 400 or higher which are offered by the department and listed elsewhere in this catalog may be included on planned programs of graduate study if approved by the student's advisor and the appropriate dean.

Master of Arts in Psychology

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).

Course and Capstone Requirements:

M.A. Program

The program requires 36 to 42 credits, including a thesis. A common core of 18 credits is required for all students.

Common Core:

PSY 512	Seminar in Developmental Psychology	3
PSY 545	Introduction to Clinical Psychology	3
PSY 550	Introduction to Community Psychology	3
PSY 596	Psychological Research: Design and Analysis I	3
PSY 597	Psychological Research: Design and Analysis II	3
PSY 599	Thesis (defense required)	3

Specialization in General Psychology

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.

Common Core (18 credits)

Directed electives as approved by advisor (18 credits)

Specialization in Community Psychology

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.

Common Core (18 credits)

Specialization:

PSY 551	Primary Prevention	3
PSY 553	Developing Prevention Programs	3
PSY 595	Graduate Internship in Psychological Applications	3

Directed electives as approved by advisor (9 credits)

Specialization in Health Psychology

42 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.

Common Core (18 credits)

Specialization:

PSY 541	Health Psychology	3
PSY 542	Psychology of Stress	3
PSY 543	Stress Management: Theory and Research	3
PSY 530	Psychopathology	3
PSY 551	Primary Prevention	3
PSY 595	Graduate Internship in Psychological Applications	3
Choose 2 additional electives (6 credits) from the following:		
PSY 458	Human Neuropsychology	3
PSY 526	Psychology of Learning	3
PSY 544	Biofeedback: Principles and Practices	3
PSY 546	Short-Term Psychotherapy and Health Care	3
PSY 553	Developing Prevention Programs	3
PSY 571	Psychology of Women's Health	3
PSY 590	Advanced Topics in Psychology	3
PSY 591	Advanced Independent Reading and Research in Psychology	3

Note: A maximum of six credits at the 400 level may be included, with approval of faculty advisor, in the planned program of study.

Master of Arts in Public History

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.

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.

Course and Capstone Requirements

(33 credits, 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) (18 credits):

HIST 501	The Professional Historian	3
HIST 510	Seminar in Public History	3
HIST 511	Topics in Public History	6
	(taken twice with different topics)	
HIST 521	Public History Internship	3
HIST 595	Public History Research Project (Plan C)	3
	General history courses to be taken from the following list	(9 credits):
HIST 560	Seminar in American History	3-6
HIST 565	Seminar in 17th- and 18th-Century America	3
HIST 566	U.S. Civil War and Reconstruction	3
HIST 570	Immigration in American History	3
HIST 540	Seminar in European History	3-6
HIST 563	The Age of Jackson	3
HIST 512	Connecticut Encounters	3

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 Briann Greenfield, PhD, at 860-832-2821, greenfieldb@ccsu.edu

Master of Science Degree Programs in Reading and Language Arts

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, to enhance students' literacy learning, and who meet the standards for reading professionals as defined by the International Reading Association and by state mandates. The master's program offers three strands. Strand I: Classroom Instruction in Reading and Language Arts (30 credits) is designed to prepare teachers for teaching reading and language arts to diverse groups of students in a classroom context. Strand II: Reading-Mathematics (30 credits) is designed to prepare teachers to teach both literacy and numeracy to diverse groups of students in a classroom context. Strand III: Corrective and Remedial Reading and Language Arts (30 credits) 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.

The candidate's planned program of graduate study totals a minimum of 30 credits and must include the following: either Plan A: RDG 599 Thesis (6 credits) or RDG 599 (3 credits) and RDG 598 Seminar in Reading and Language Arts Research (3 credits) or Plan B: RDG 598 Seminar in Reading and Language Arts Research (3 credits) and Comprehensive Exam, including a field of study (27 credits).

A planned program of graduate 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 graduate study and therefore may exceed the minimum of 30 credits.

Program Learning Outcomes:

The Master of Science degree program in Reading and Language Arts is based on the IRA/NCTE standards for reading professionals. In order to prepare knowledgeable and competent reading and language arts classroom teachers and/or reading specialists, students in the program are expected to:

- meet the IRA 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; and
- 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.

Course and Capstone Requirements:

Strand in Classroom Instruction in Reading and Language Arts

(non-certification track)

The Strand in Classroom Instruction in Reading and Language Arts totals 30 credits. The candidate's planned program of graduate study requires the following reading and language arts courses:

RDG 503	Developmental Reading in PK-12	3
RDG 585	Reading in Content Area	3
RDG 589	Creative Language Arts	3

and includes courses from the following:

RDG 502	Current Trends in Developmental Reading PK-12	3
RDG 569	Folktelling Art and Technique	3
RDG 578	Teaching Writing in the Elementary Schools	3
RDG 579	Technology in Reading & Language Arts Instruction	3
RDG 582	Introduction to Critical Literacy	3
RDG 586	Literacy Instruction for Diverse Populations I	3
RDG 587	Bibliotherapy	3
RDG 588	Teaching Children's Literature	3

Strand in Reading-Mathematics

(non-certification track)

The strand in Reading-Mathematics totals 30 credits. The candidate's planned program of graduate study requires the following reading and language arts courses:

RDG 503	Developmental Reading in PK-12	3
---------	--------------------------------	---

RDG 585	Reading in Content Area	3
RDG 589	Creative Language Arts	3
and includes courses from the following:		
RDG 502	Current Trends in Developmental Reading PK-12	3
RDG 578	Teaching Writing in the Elementary Schools	3
RDG 579	Technology in Reading and Language Arts Instruction	3
RDG 582	Introduction to Critical Literacy	3
RDG 586	Literacy Instruction for Diverse Population I	3
RDG 588	Teaching Children's Literature	3

The remaining 12-15 credits are mathematics courses recommended by the department of mathematical sciences.

Strand in Corrective and Remedial Reading and Language Arts (certification track)

The Strand in Corrective and Remedial Reading and Language Arts totals 30 credits and requires the clinical sequence-RDG 594, 595, and 596-and the following courses:

RDG 503	Developmental Reading in PK-12	3
RDG 585	Reading in Content Area	3
RDG 589	Creative Language Arts	3

The rest of a candidate's planned program of graduate study may include courses from the following:

RDG 502	Current Trends in Developmental Reading PK-12	3
RDG 569	Folkelling Art and Technique	3
RDG 578	Teaching Writing in the Elementary Schools	3
RDG 579	Technology in Reading and Language Arts Instruction	3
RDG 582	Introduction to Critical Literacy	3
RDG 586	Literacy Instruction for Diverse Population I	3
RDG 587	Bibliotherapy	3
RDG 588	Teaching Children's Literature	3

Master of Science in Special Education: Specialization for Special Education Teachers (30 credits)

Program Rationale:

This program is designed for students who already hold a certification in special education. In this specialization students take course work designed to broaden and/or deepen their knowledge of the field. The curriculum for this program is aligned with the standards of the Council for Exceptional Children (CEC).

Program Learning Outcomes:

Students in the program are expected to:

Students will demonstrate knowledge of historical foundations, classic studies, major contributors, and current issues related to special education. Students will demonstrate knowledge of laws and policies that affect individuals with disabilities, their families and their educational programming. Students will promote practices that reduce the over-representation of culturally/linguistically diverse students in programs for individuals with disabilities. Students will broaden and/or deepen their knowledge of individual learning differences, instructional strategies and collaboration in special education. Students will implement action research processes to contribute to improved special education services to individuals with disabilities. Students will promote professional and ethical practices in the field of special education.

Professional Education (6 credits):

SPED 532 Contemporary Issues in Special Education 3

SPED 566 Legal and Administrative Issues in Special Education 3

Electives (15 credits)

Students take 15 credits of advanced-level course work in special education. Up to 6 credits of related course work from other departments may be included at the advisor's discretion.

Research and Capstone Requirements (9 credits):

SPED 598 Research in Special Education 3

SPED 596 Designing Action Research in Special Education (Plan E) 3

SPED 597 Implementing and Documenting Action Research in Special Education (Plan E) 3

Master of Science in Special Education: Specialization for Teachers Not Seeking Cross Endorsement (30 credits)

Program Rationale:

The Master of Science in Special Education is designed to prepare general education teachers to possess the knowledge, skills, and professional dispositions to develop effective teaching and learning environments for individuals with disabilities. This program track is designed for students who already hold teaching credentials in Connecticut. In this specialization students take course work designed to broaden and/or deepen their knowledge of the field. Completion of this program does not lead to a cross endorsement in special education. The curriculum for this program is aligned with the standards of the Council for Exceptional Children (CEC).

Program Learning Outcomes:

Students in this program will be expected to:

demonstrate knowledge of historical foundations, classic studies, major contributors, and current issues related to special education; demonstrate knowledge of laws and policies that affect individuals with disabilities, their families, and their educational programming; promote practices that reduce the over-representation of culturally/linguistically diverse students in programs for individuals with disabilities; broaden and/or deepen their knowledge of individual learning differences, instructional strategies, and collaboration in special education; implement action research processes to contribute to improved special education services to individuals with disabilities; and promote professional and ethical practices in the field of special education.

Professional Education (6 credits):

SPED 532 Contemporary Issues in Special Education 3

SPED 566 Legal and Administrative Issues in Special Education 3

Choose 6 credits from:

SPED 511 Behavioral/Emotional Disorders 3

SPED 512 Learning Disabilities 3

SPED 513 Developmental Disabilities 3

Electives (9 credits):

SPED 506 Foundations of Language for the Exceptional Child 3

SPED 510 Inclusive Education 3

SPED 536 Autism Spectrum Disorder 3

SPED 560 Positive Classroom Management for Students Receiving Special Education Services 3

SPED 578 The Juvenile Offender with Special Education Needs 3

SPED 580 Collaborative Process in Special Education 3

SPED 581 Assistive Technology in Special Education 3

SPED 595 Topics in Special Education 1-3

Note: Other courses offered in the Department of Special Education may be substituted as they become available; i.e., special topics.

Research and Capstone Requirements (9 credits):

SPED 598 Research in Special Education 3

SPED 596 Designing Action Research in Special Education (Plan E) 3

SPED 597 Implementing and Documenting Action Research in Special Education (Plan E) 3

Master of Science in Special Education: Specialization for Teachers Seeking Cross Endorsement (42-43 credits)

Program Rationale:

The Master of Science in Special Education: Specialization for Teachers Seeking Cross Endorsement is designed to prepare general education teachers to possess the knowledge, skills, and professional dispositions to develop effective teaching and learning environments for individuals with disabilities. Designed for students who have initial, provisional, or professional certification in elementary education or a 7-12 secondary subject certificate in biology, business, chemistry, earth science, English, history/social studies, mathematics, or physics, this Specialization leads to a master's degree and provides coursework that leads to a cross endorsement in Special Education. Students in this Specialization must have a current Connecticut teaching certification. The curriculum for this program is aligned with standards of the Council for Exceptional Children (CEC) and meets certification requirements of the Connecticut State Department of Education.

Program Learning Outcomes:

Students in this program will be expected to:

- demonstrate knowledge of foundational issues in special education and their impact on the field;
- demonstrate knowledge of the development and characteristics of learners, individual learning differences, and appropriate instructional strategies;
- promote effective learning environments and social interactions for individuals with disabilities;
- demonstrate knowledge of typical and atypical language development, cultural implications of language development, and alternative approaches to communication;
- further their knowledge of instructional planning, assessment, and collaboration to address the learning differences of individuals with a wider variety of academic problems;
- implement action research processes to contribute to improved special education services to individuals with disabilities; and
- promote professional and ethical practices in the field of special education.

Core (21 credits):

SPED 532 Contemporary Issues in Special Education 3
 SPED 511 Behavioral/Emotional Disorders 3
 SPED 512 Learning Disabilities 3
 SPED 513 Developmental Disabilities 3
 SPED 514 Cognitive Behavior Management and Social Skills Strategies 3
 SPED 515 Assessment in Special Education 3
 SPED 516 Instructional Programming for Students with Exceptionalities 3

Methods (6 credits):

SPED 517 Instructional Methods for Students with Special Needs—Elementary 3
 SPED 518 Instructional Methods for Students with Special Needs—Secondary 3

Student Teaching or Practicum (6-7 credits):

SPED 520 Seminar for Student Teachers 1
 SPED 521 Student Teaching in Special Education—Elementary 3
 SPED 522 Student Teaching in Special Education—Secondary 3
 (all three taken concurrently)

or

SPED 523 Practicum in Special Education—Elementary 3
 SPED 524 Practicum in Special Education—Secondary 3

Research and Capstone Requirements (9 credits):

SPED 598 Research in Special Education 3
 SPED 596 Designing Action Research in Special Education (Plan E) 3
 SPED 597 Implementing and Documenting Action Research in Special Education (Plan E) 3

Master of Arts in Teaching (MAT): Teacher Education with Specializations in English (7-12)

Contact: Nancy Hoffman (860-832-2425)

Program Rationale:

The MAT program is designed to offer high-quality, full-time, 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 of mathematics, sciences, English, Spanish, or technology and engineering education. The 13-month program begins in late May each year and uses a cohort model to enhance program completion rates and teacher retention as graduates enter teaching.

Note: Available science certifications include physics, chemistry, earth science, and biology.

Program Learning Outcomes:

Graduate students in the program will:

- possess strong knowledge of content, pedagogy, and students;
- use data, content knowledge, and 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;
- create a positive and supportive learning environment; and
- act ethically, respectfully, and responsibly in work with students, families, and colleagues.

Admission Requirements:

The MAT program selectively admits no more than 25 students each year. Admitted students proceed as a cohort group to complete a structured sequence of courses, field experiences, and classroom-based action 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, in technology and engineering education, presentation of a portfolio documenting that content preparation requirements have been met. 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.
- Scores on Praxis I PPST that meet the current CSDE passing standard or an SAT waiver letter from Connecticut State Department of Education.
- Scores on required state content knowledge examinations in the certification area:

In mathematics, sciences, English, and technology and engineering education, Praxis II scores that meet current CSDE passing standards are required.

In Spanish, ACTFL Oral Proficiency Interview and Writing Proficiency ratings that meet current CSDE passing standards are required. Preference will be given to applicants who score at the Advanced Low level or higher. 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:

- two sets of official undergraduate and graduate transcripts from all institutions attended except CCSU;
- acceptable scores on Praxis I or SAT waiver letter;
- acceptable scores on the required test of content knowledge;
- a resume documenting educational and work experiences;
- two references that assess the student's ability to work with children and other adults on the reference form provided (signed

originals). 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. Preference will be given to confidential references.

- 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 Spanish specialization must submit a second word-processed essay in Spanish, explaining why they believe they would be an effective Spanish 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

(47 credits):

All MAT programs include core, specialization, and capstone components.

Core (26 credits):

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	3
MAT 531	Literacy and Language Issues in the Classroom	3
MAT 534	Creating Productive Learning Environments	3
MAT 541	Internship Seminar	1
MAT 542	Assessment of Student Learning	3
MAT 551	Perspectives on Educational Policy and Practice	3

Specialization (15 credits):

English

MAT 529	Content Pedagogy in English 1	3
MAT 539	Content Pedagogy in English 2	3
MAT 533	Field Experience in English	3
MAT 540	Internship in English	6

Capstone (6 credits):

All students will be Plan E. All MAT candidates complete the following capstone courses.

MAT 532	Research I: Reading and Designing Educational Research	3
MAT 550	Research II: Conducting and Reporting Action Research	3

Master of Arts in Teaching (MAT): Teacher Education with Specializations in Mathematics (7-12)

Contact: Nancy Hoffman (860-832-2425)

Program Rationale:

The MAT program is designed to offer high-quality, full-time, 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 of mathematics, sciences, English, Spanish, or technology and engineering education. The 13-month program begins in late May each year and uses a cohort model to enhance program completion rates and teacher retention as graduates enter teaching.

Note: Available science certifications include physics, chemistry, earth science, and biology.

Program Learning Outcomes:

Graduate students in the program will:

- possess strong knowledge of content, pedagogy, and students;
- use data, content knowledge, and 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;
- create a positive and supportive learning environment; and
- act ethically, respectfully, and responsibly in work with students, families, and colleagues.

Admission Requirements:

The MAT program selectively admits no more than 25 students each year. Admitted students proceed as a cohort group to complete a structured sequence of courses, field experiences, and classroom-based action 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, in technology and engineering education, presentation of a portfolio documenting that content preparation requirements have been met. 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.
- Scores on Praxis I PPST that meet the current CSDE passing standard or an SAT waiver letter from Connecticut State Department of Education.
- Scores on required state content knowledge examinations in the certification area:

In mathematics, sciences, English, and technology and engineering education, Praxis II scores that meet current CSDE passing standards are required.

In Spanish, ACTFL Oral Proficiency Interview and Writing Proficiency ratings that meet current CSDE passing standards are required. Preference will be given to applicants who score at the Advanced Low level or higher. 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:

- two sets of official undergraduate and graduate transcripts from all institutions attended except CCSU;
- acceptable scores on Praxis I or SAT waiver letter;
- acceptable scores on the required test of content knowledge;
- a resume documenting educational and work experiences;
- two references that assess the student's ability to work with children and other adults on the reference form provided (signed originals). 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. Preference will be given to confidential references.

- 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 Spanish specialization must submit a second word-processed essay in Spanish, explaining why they believe they would be an effective Spanish 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

(47 credits):

All MAT programs include core, specialization, and capstone components.

Core (26 credits):

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	3
MAT 531	Literacy and Language Issues in the Classroom	3
MAT 534	Creating Productive Learning Environments	3
MAT 541	Internship Seminar	1
MAT 542	Assessment of Student Learning	3
MAT 551	Perspectives on Educational Policy and Practice	3

Specialization (15 credits):

Mathematics

MAT 529	Content Pedagogy in Mathematics 1	3
MAT 539	Content Pedagogy in Mathematics 2	3
MAT 533	Field Experience in Mathematics	3
MAT 540	Internship in Mathematics	6

Capstone (6 credits):

All students will be Plan E. All MAT candidates complete the following capstone courses.

MAT 532	Research I: Reading and Designing Educational Research	3
MAT 550	Research II: Conducting and Reporting Action Research	3

Master of Arts in Teaching (MAT): Teacher Education with Specializations in Sciences (7-12)

Contact: Nancy Hoffman (860-832-2425)

Program Rationale:

The MAT program is designed to offer high-quality, full-time, 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 of mathematics, sciences, English, Spanish, or technology and engineering education. The 13-month program begins in late May each year and uses a cohort model to enhance program completion rates and teacher retention as graduates enter teaching.

Note: Available science certifications include physics, chemistry, earth science, and biology.

Program Learning Outcomes:

Graduate students in the program will:

- possess strong knowledge of content, pedagogy, and students;
- use data, content knowledge, and 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;
- create a positive and supportive learning environment; and
- act ethically, respectfully, and responsibly in work with students, families, and colleagues.

Admission Requirements:

The MAT program selectively admits no more than 25 students each year. Admitted students proceed as a cohort group to complete a structured sequence of courses, field experiences, and classroom-based action 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, in technology and engineering education, presentation of a portfolio documenting that content preparation requirements have been met. 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.
- Scores on Praxis I PPST that meet the current CSDE passing standard or an SAT waiver letter from Connecticut State Department of Education.
- Scores on required state content knowledge examinations in the certification area:

In mathematics, sciences, English, and technology and engineering education, Praxis II scores that meet current CSDE passing standards are required.

In Spanish, ACTFL Oral Proficiency Interview and Writing Proficiency ratings that meet current CSDE passing standards are required. Preference will be given to applicants who score at the Advanced Low level or higher. 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:

- two sets of official undergraduate and graduate transcripts from all institutions attended except CCSU;
- acceptable scores on Praxis I or SAT waiver letter;
- acceptable scores on the required test of content knowledge;
- a resume documenting educational and work experiences;
- two references that assess the student's ability to work with children and other adults on the reference form provided (signed

originals). 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. Preference will be given to confidential references.

- 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 Spanish specialization must submit a second word-processed essay in Spanish, explaining why they believe they would be an effective Spanish 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

(47 credits):

All MAT programs include core, specialization, and capstone components.

Core (26 credits):

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	3
MAT 531	Literacy and Language Issues in the Classroom	3
MAT 534	Creating Productive Learning Environments	3
MAT 541	Internship Seminar	1
MAT 542	Assessment of Student Learning	3
MAT 551	Perspectives on Educational Policy and Practice	3

Specialization (15 credits):

Sciences

MAT 529	Content Pedagogy in Science 1	3
MAT 539	Content Pedagogy in Science 2	3
MAT 533	Field Experience in Science	3
MAT 540	Internship in Science	6

Capstone (6 credits):

All students will be Plan E. All MAT candidates complete the following capstone courses.

MAT 532	Research I: Reading and Designing Educational Research	3
MAT 550	Research II: Conducting and Reporting Action Research	3

Master of Arts in Teaching (MAT): Teacher Education with Specializations in Spanish (7-12)

Contact: Nancy Hoffman (860-832-2425)

Program Rationale:

The MAT program is designed to offer high-quality, full-time, 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 of mathematics, sciences, English, Spanish, or technology and engineering education. The 13-month program begins in late May each year and uses a cohort model to enhance program completion rates and teacher retention as graduates enter teaching.

Note: Available science certifications include physics, chemistry, earth science, and biology.

Program Learning Outcomes:

Graduate students in the program will:

- possess strong knowledge of content, pedagogy, and students;
- use data, content knowledge, and 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;
- create a positive and supportive learning environment; and
- act ethically, respectfully, and responsibly in work with students, families, and colleagues.

Admission Requirements:

The MAT program selectively admits no more than 25 students each year. Admitted students proceed as a cohort group to complete a structured sequence of courses, field experiences, and classroom-based action 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, in technology and engineering education, presentation of a portfolio documenting that content preparation requirements have been met. 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.
- Scores on Praxis I PPST that meet the current CSDE passing standard or an SAT waiver letter from Connecticut State Department of Education.
- Scores on required state content knowledge examinations in the certification area:

In mathematics, sciences, English, and technology and engineering education, Praxis II scores that meet current CSDE passing standards are required.

In Spanish, ACTFL Oral Proficiency Interview and Writing Proficiency ratings that meet current CSDE passing standards are required. Preference will be given to applicants who score at the Advanced Low level or higher. 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:

- two sets of official undergraduate and graduate transcripts from all institutions attended except CCSU;
- acceptable scores on Praxis I or SAT waiver letter;
- acceptable scores on the required test of content knowledge;
- a resume documenting educational and work experiences;
- two references that assess the student's ability to work with children and other adults on the reference form provided (signed

originals). 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. Preference will be given to confidential references.

- 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 Spanish specialization must submit a second word-processed essay in Spanish, explaining why they believe they would be an effective Spanish 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

(47 credits):

All MAT programs include core, specialization, and capstone components.

Core (26 credits):

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	3
MAT 531	Literacy and Language Issues in the Classroom	3
MAT 534	Creating Productive Learning Environments	3
MAT 541	Internship Seminar	1
MAT 542	Assessment of Student Learning	3
MAT 551	Perspectives on Educational Policy and Practice	3

Specialization (15 credits):

Spanish

MAT 529	Content Pedagogy in Spanish 1	3
MAT 539	Content Pedagogy in Spanish 2	3
MAT 533	Field Experience in Spanish	3
MAT 540	Internship in Spanish	6

Capstone (6 credits):

All students will be Plan E. All MAT candidates complete the following capstone courses.

MAT 532	Research I: Reading and Designing Educational Research	3
MAT 550	Research II: Conducting and Reporting Action Research	3

Master of Arts in Teaching (MAT): Teacher Education with Specializations in Technology and Engineering Education (K-12)

Contact: Nancy Hoffman (860-832-2425)

Program Rationale:

The MAT program is designed to offer high-quality, full-time, 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 of mathematics, sciences, English, Spanish, or technology and engineering education. The 13-month program begins in late May each year and uses a cohort model to enhance program completion rates and teacher retention as graduates enter teaching.

Note: Available science certifications include physics, chemistry, earth science, and biology.

Program Learning Outcomes:

Graduate students in the program will:

- possess strong knowledge of content, pedagogy, and students;
- use data, content knowledge, and 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;
- create a positive and supportive learning environment; and
- act ethically, respectfully, and responsibly in work with students, families, and colleagues.

Admission Requirements:

The MAT program selectively admits no more than 25 students each year. Admitted students proceed as a cohort group to complete a structured sequence of courses, field experiences, and classroom-based action 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, in technology and engineering education, presentation of a portfolio documenting that content preparation requirements have been met. 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.
- Scores on Praxis I PPST that meet the current CSDE passing standard or an SAT waiver letter from Connecticut State Department of Education.
- Scores on required state content knowledge examinations in the certification area:

In mathematics, sciences, English, and technology and engineering education, Praxis II scores that meet current CSDE passing standards are required.

In Spanish, ACTFL Oral Proficiency Interview and Writing Proficiency ratings that meet current CSDE passing standards are required. Preference will be given to applicants who score at the Advanced Low level or higher. 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:

- two sets of official undergraduate and graduate transcripts from all institutions attended except CCSU;
- acceptable scores on Praxis I or SAT waiver letter;
- acceptable scores on the required test of content knowledge;
- a resume documenting educational and work experiences;
- two references that assess the student's ability to work with children and other adults on the reference form provided (signed

originals). 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. Preference will be given to confidential references.

- 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 Spanish specialization must submit a second word-processed essay in Spanish, explaining why they believe they would be an effective Spanish 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

(47 credits):

All MAT programs include core, specialization, and capstone components.

Core (26 credits):

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	3
MAT 531	Literacy and Language Issues in the Classroom	3
MAT 534	Creating Productive Learning Environments	3
MAT 541	Internship Seminar	1
MAT 542	Assessment of Student Learning	3
MAT 551	Perspectives on Educational Policy and Practice	3

Specialization (15 credits):

Technology and Engineering Education

MAT 529	Content Pedagogy in Technology Education 1	3
MAT 539	Content Pedagogy in Technology Education 2	3
MAT 533	Field Experience in Technology Education	3
MAT 540	Internship in Technology Education	6

Capstone (6 credits):

All students will be Plan E. All MAT candidates complete the following capstone courses.

MAT 532	Research I: Reading and Designing Educational Research	3
MAT 550	Research II: Conducting and Reporting Action Research	3

Master of Science in Teaching English to Speakers of Other Languages (TESOL)

Program Rationale:

The Master of Science degree in Teaching English to Speakers of Other Languages (TESOL) is a plan of study especially designed for those students with an interest in language and linguistics who wish to work with non-English speaking students here or abroad.

The TESOL program prepares teachers to use modern methods to meet the varying instructional needs of students of English as a second language or foreign 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.

Program Learning Outcomes:

Graduates of the program 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 variation, use, status, and interactive norms of English and other languages
 - d. Apply the skills outlined in a-c to facilitate lessons and curricula in TESOL, including modifications based on each student's first language(s), current English proficiency, and general educational and cultural background
2. Analyze and interpret linguistic phenomena using current theories of second language acquisition (how language is learned), including:
 - a. Use theories of second language acquisition (SLA) to gain substantial insights into the stages and processes of language development in learners of all ages and backgrounds
 - b. Apply SLA theory to facilitate lessons and curricula in TESOL, including modifications based on each student's background, current proficiency, learning styles, and educational goals
3. 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

Admission:

To qualify for the Master of Science degree program in TESOL, an applicant must have completed three credits of study in a second language (non-native speakers of English may use English to satisfy this requirement). An applicant must 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 all of the requirements satisfactorily may be admitted conditionally at the discretion of the department, with a cumulative GPA between 2.40 and 2.99.

Applicants must submit the following to the Graduate Admissions Office:

- Graduate Application Form;
- Official undergraduate and (if applicable) graduate transcripts from every institution attended except CCSU; and
- Application fee.

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 TESOL and career plans and goals in TESOL

- Two letters of recommendation from individuals familiar with the applicant's academic or professional work

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 brochure 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 Plan A (33 credits plus a thesis) and Plan B (36 credits and a comprehensive examination).

TESOL Specialization (21 credits):

LING 400	Linguistic Analysis	3
LING 496	TESOL Methods	3
LING 497	Second Language Acquisition	3
LING 512	Modern Syntax	3
LING 513	Modern Phonology	3
LING 515	An Introduction to Sociolinguistics	3

One course from:

LING 530	Topics in Theoretical and Applied Linguistics	3
LING 533	Second Language Composition	3
LING 535	Second Language Testing	3
LING 596	TESOL Practicum	3

Research (3 credits):

LING 598	Research in TESOL and Applied Linguistics	
----------	---	--

Professional Education (6 credits):

At least one of the following courses and an additional course in the same area:

EDF 500	Contemporary Educational Issues	3
EDF 516	School and Society	3
EDF 524	Foundations of Contemporary Theories of Curriculum	3
EDF 525	History of American Education	3
EDF 538	The Politics of Education	3
EDF 583	Sociological Foundations of Education	3

and an additional course (3 credits) at the 500 level as approved by advisor

All planned programs and course sequences must 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 may elect Plan A only with the approval of an advisor in the program. Plan A students take LING 599 Thesis while writing the thesis.

Plan B students take one more general elective course. General electives are graduate course offerings as approved by the student's advisor, courses drawn from the departments of anthropology, English, modern languages, geography, history, political science, or other relevant fields.

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 control of English is deemed deficient.

Master of Science in Technology and Engineering Education

Program Rationale:

The Master of Science in Technology and Engineering Education is designed to develop the professional competencies of technology and engineering educators so that they may successfully progress in their professions.

The program is a balance of liberal arts, research, and professional and technology education courses leading to a Master of Science in Technology and Engineering Education degree. A minimum of 30 credits of study in approved graduate courses is required. The program is designed for flexibility in meeting the needs of the individual students. Programs of study are individualized through electives and independent study.

The primary purpose of the program is to develop the professional competencies of technology education instructors so that they may successfully progress in their chosen fields.

Program Learning Outcomes:

Technology and Engineering Education graduate students will be expected to:

- identify and document an area of technical expertise;
- develop technical research skills;
- demonstrate areas of professional competencies by taking two of three professional education courses from a recommended list;
- update their technical competencies and understandings in their major areas;
- analyze and evaluate recent issues in their fields, such as curriculum innovations and strategies for program improvement and/or implementation; and
- explain how the relationship between their fields and the academic disciplines impacts the development of their students.

With the guidance of an advisor, students select from the following plans: Plan A (30 credits including a thesis); Plan B (30 credits and comprehensive examination), or Plan C (30 credits including a special project).

Course and Capstone Requirements:

Professional Education (6-9 credits):

One of the following:

EDF 500	Contemporary Educational Issues	3
EDF 516	School and Society	3
EDF 524	Foundations of Contemporary Theories of Curriculum	3
EDF 525	History of American Education	3
EDF 538	The Politics of Education	3
EDF 583	Sociological Foundations of Education	3

and

Additional electives as approved by the faculty advisor - students may focus on instruction, curriculum development, administration/supervision, special education, or research.

Technology and Engineering Education offerings approved by advisor (12-21 credits)

Research (3-6 credits):

TE 598 Research in Technology Education (required as part of first 12 credits of the graduate program)

ED 599 Thesis (for Plan A)

or

TE 596 Special Projects in Technology Education (for Plan C)

or

Comprehensive Examination (for Plan B)

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, for the M.S. degree.

Master of Science in Technology Management

Program Rationale:

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.

Program Learning Outcomes:

Graduate students in the program will be expected to:

- communicate effectively in written, oral, graphic, and visual modes;
- understand the management of projects, human resources, and technology;
- function effectively on teams and within a diverse environment; and
- have knowledge of contemporary issues and an understanding of the impact of technology applications from a global perspective.

Course and Capstone Requirements:

The Master of Science in Technology Management consists of three different plans. A is 33 credits with a thesis, B is 33 credits with comprehensive exams and C is 33 credits with a research project.

a. All three plans have a core curriculum (18 credits) as follows:

TM 500	Product Life Cycle Management
TM 510	Industrial Operations Management
TM 551	Project Management
TM 561	Applications of Lean Principles
TM 572	Innovative Leadership
TM 594	Research Methods in Technology

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
- Environmental and Occupational Safety
- Computer Networking

c. All three plans have capstone course requirements of 0-3 credits.

Plan A: TM 599 Thesis

Plan B: Comprehensive exam

Plan C: TM 595 Applied Research Capstone Project

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.

Sixth-Year Certificates

- [Sixth-Year Certificate in Educational Leadership](#)
- [Sixth-Year Certificate in Mathematics Education Leadership](#)
- [Sixth-Year Certificate in Reading and Language Arts](#)

Sixth-Year Certificate in Educational Leadership

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.

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

Admissions to this program is limited and highly competitive. The department accepts applications for summer and fall semesters only. All application and supporting materials for admission to the program must be received by May 1 for students taking EDL 590 in the summer and December 1 for students taking EDL 590 in the spring. In addition to meeting the general requirements, admission to the Sixth-Year Certificate program will be based on the completion of EDL 590 and submission of an application portfolio evaluated on the following criteria:

- Possess a master's degree from a regionally accredited institution of higher education
- Attained a 3.30 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 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 focuses on (1) the reasons that led the candidate to the area of school leadership, and (2) future career goals
- Materials required from the EDL 590 course: Leaders as Learners: Educational Leadership and Self-Assessment
- Successful presentation of the application portfolio to a team of faculty members.

EDL 590 will be offered only twice a year and students may enroll with permission of the chair. All applicants must take this course in either the spring or summer semester. Application portfolio presentations will be scheduled at the end of the EDL 590 course.

Course Requirements

The Sixth-Year Certificate in Educational Leadership, including recommendation for certification for the Intermediate Administrator/Supervisor, requires a minimum of 30 credits. Requirements include completion of EDL 590, 24 credits of professional core and 3-6 credits of advisor-approved electives.

Pre-admission Course Requirement (3 credits):

EDL 590	Leaders as Learners: Educational Leadership and Self-Assessment	3
---------	---	---

Professional Core (24 credits):

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 615	Understanding External Environments of School Leadership I	3
---------	--	---

EDL 616	Understanding External Environments of School Leadership II	3
---------	---	---

EDL 690	Internship in Educational Leadership I	2
---------	--	---

EDL 691	Internship in Educational Leadership II	2
---------	---	---

EDL 692	Internship in Educational Leadership III	2
---------	--	---

Electives (3-6 credits of advisor-approved electives)

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 Mathematics Education Leadership

Program Rationale

The overall objective of the Sixth Year Certificate Degree in Mathematics Education Leadership is to develop highly skilled and knowledgeable educators who can play leadership roles in their schools and districts to improve student learning in mathematics. There are two tracks within this degree to meet the objectives of our graduates. One track leads to the department chair certification (DCC). The other track leads to the intermediate administrator certification (IAC).

Program Learning Outcomes

When students complete this program they will be effective leaders in mathematics and as such will have the following abilities:

- Effective leaders in mathematics education possess deep content knowledge of the mathematics that is taught in the school, with a focus on grades K-12, and are able to analyze any mathematics curriculum in terms of its logical, psychological, and sociological sources.
- Effective leaders in mathematics education are knowledgeable about research on the learning and teaching of mathematics and its impact in the classroom.
- Effective leaders in mathematics education examine cultural connections with mathematics and mathematics education and are aware of equity issues, such as gender, race, ethnicity, social class, language acquisition, access to technology, and achievement.
- Effective leaders in mathematics education understand how to use assessment as a tool for continued program improvement.
- Effective leaders in mathematics education apply their deep understanding of curriculum, learning, teaching, the social context of education, and assessment issues to the challenges of improving teaching and learning in their school and district.

Admission Requirements

This is a cohort program. The first cohort began the program in August 2009 and is expected to complete the program in 2011 or 2012. The next cohort begins the program in August 2011, with new cohorts starting every alternating year thereafter.

Admission to the program requires that the candidate meet the following requirements.

- Master's degree, preferably in mathematics or mathematics education. Applicants with master's degrees in other fields may be asked to successfully complete additional mathematics courses as a condition for admission.
- Minimum of three years experience teaching mathematics within grades K-12.
- Praxis II (secondary mathematics-Exam 0061) for applicants without secondary certification. Students who have not taken Praxis II may be conditionally admitted. Such students will be able to enroll in a one-credit review course (MATH 440) in order to prepare for this examination. For spring 2009 applicants, this course will be offered during the Spring 2009 semester and again in the Summer 2009 semester.

Applicants will be expected to have passed STAT 453 (Applied Statistical Inference) or its equivalent with a B or higher. Applicants who do not meet this requirement may be admitted on condition that they successfully complete STAT 453 within the first year, earning a B or higher.

Applicants are strongly encouraged to become certified as BEST (Beginning Educator Support and Training) mentors, if appropriate to current teaching position.

Students who are admitted to this sixth year program are guaranteed acceptance into the Department Chair Certification Track and may, upon completion of EDL 655, apply for candidacy for the Intermediate Administrator Track to the Department of Educational Leadership through the School of Graduate Studies.

Application deadline is May 1 for admission to the program for summer 2009 matriculation. Review of applications will begin March 1. Applicants will be notified of admission decisions by June 15.

Course and Capstone Requirements

Department Chair Certification (DCC) Track (33 credits):

August of first year

EDL 655 Leadership and Supervision 3

Fall of first year

MATH 611 Mathematics Curriculum K-8 Theory and Implementation 3

Spring of first year

MATH 612 Mathematics Curriculum 7-14 Theory and Implementation 3

MATH elective 3

Summer of second year

MATH 615 The Cultural Context of Mathematics Education 3

STAT 453 Applied Statistical Inference (if needed) 3

Fall of second year

MATH 613 Research on the Learning of Mathematics	3
MATH elective	3
Spring of second year	
MATH 614 Research on the Teaching of Mathematics	3
EDL 514 Administration	3
Summer of third year	
MATH 616 Assessment in Mathematics Education	3
Fall of third year	
MATH 622 Internship in Mathematics Education Leadership	2
Intermediate Administrator Certification (IAC) Track (37 credits):	
August of first year	
EDL 655 Leadership and Supervision	3
Fall of first year	
MATH 611 Mathematics Curriculum K-8 Theory and Implementation	3
Students notified of acceptance to IAC track	
Spring of first year	
MATH 612 Mathematics Curriculum 7-14 Theory and Implementation	3
Summer of second year	
MATH 615 The Cultural Context of Mathematics Education	3
STAT 453 Applied Statistical Inference (if needed)	3
Fall of second year	
MATH 613 Research on the Learning of Mathematics	3
EDL 610 School Leadership I	3
Spring of second year	
MATH 614 Research on the Teaching of Mathematics	3
EDL 611 School Leadership II	3
Fall of third year	
EDL 615 Understanding External Environments of School Leadership I	3
EDL 690 Internship in Educational Leadership I: Theory and Practice	2
Spring of third year	
EDL 616 Understanding External Environments of School Leadership II	3
EDL 691 Internship in Educational Leadership II: Research and Practice	2
Summer of third year	
MATH 616 Assessment in Mathematics Education	3
Prepare for Connecticut Administrators Test	

Sixth-Year Certificate in Reading and Language Arts

Program Rationale:

The Sixth-Year Certificate in Reading and Language Arts program leads to the award of the professional certificate. This program may include course work required for endorsement as a Reading and Language Arts Consultant in the State of Connecticut. The certification-track program is designed to provide opportunities for the candidate to examine reading and language arts from a perspective beyond classroom teaching. 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. Related areas of study may be developed in disciplines such as Elementary Education, Educational Leadership, Educational Technology, Mathematics, and Special Education. A minimum of 15 credits of 600-level courses is required in both the certification track and the non-certification track programs for the certificate.

Program Learning Outcomes:

The Sixth-Year Certificate in Reading and Language Arts program expands on CCSU's master of science degree program in reading and language arts and is based on the IRA/NCTE standards for reading professionals. In order to prepare knowledgeable and competent literacy professionals and/or literacy coaches, students in the program are expected to:

- meet the IRA standards for reading professionals 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, including technologically based assessments, 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.

Course and Capstone Requirements:

Reading/Language Arts Consultant Certification Track

The candidate's planned program of study totals a minimum of 30 credits and must include the following:

RDG 588	Teaching Children's Literature	3
RDG 692	Specialized Diagnosis and Remedial Techniques	3
RDG 694	Organization, Administration, and Supervision of Reading & Language Arts Programs	3
RDG 696	Practicum for Reading and Language Arts Consultants	3
RDG 697	Practicum for Reading and Language Arts Consultants II	3
RDG 698	Research Seminar	3

Required prerequisites:

RDG 503	Developmental Reading in PK-12	3
RDG 585	Reading in Content Area	3
RDG 589	Creative Language Arts	3
RDG 594	Diagnosis of Reading and Language Arts Difficulties	3
RDG 595	Remedial and Corrective Techniques in Reading & Language Arts	3
RDG 596	Clinical Practices in Reading & Language Arts	6

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 Certification in Reading and Language Arts Non-Certification Track

Research (3 credits):

RDG 698	Research Seminar	3
---------	------------------	---

Related Area of Study (6 credits)

Area of Specialization (15-18 credits)

Electives (3-6 credits)

Required prerequisites:

RDG 503	Developmental Reading in PK-12	3
RDG 585	Reading in Content Area	3
RDG 589	Creative Language Arts	3

Doctoral Degree Programs

- [Doctor of Education \(Ed.D.\) in Educational Leadership](#)

Doctor of Education (Ed.D.) in Educational Leadership

Program Rationale:

The doctorate in education (Ed.D.) has been designed for delivery to a cohort of full-time educational professionals on weekends, evenings, and during the summer. The program has many innovative features and serves teachers and administrators in PreK-12 education who want to prepare for a variety of leadership positions: principals, lead teachers, department heads, curriculum and assessment specialists, assistant superintendents, and superintendents. 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 education in the State of Connecticut.

Program Learning Outcomes:

Students are expected to:

- create collaborative learning communities which reflect sensitivity to the ethical and moral obligations of leaders to design and implement programs that promote positive learning for all;
- create and sustain a powerful vision of teaching and learning that promotes individual and organizational learning through assessment, professional development, program evaluation, and action research;
- demonstrate an appreciation for diversity by creating a culture of success that is connected to salient historical, philosophical, cultural, community, and political contexts;
- use technology to support and advance learning, improve communication, and process information; and
- research, collect, analyze, and interpret data that informs the change process; evaluate research critically; apply research to determine best practice; and provide leadership for research that improves teaching and learning.

Admissions

Admission to the program is available in alternate years for a cohort of 25 students. Deadline for admission is December 1. 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 professional goals that are consistent with the goals and beliefs of the program. Admission to the program is open to all qualified applicants without regard to age, race, sex, religion, physical disability, or national origin.

Admission Criteria

The following minimum criteria have been established for admission into the Ed.D. Program:

1. Master's degree from an accredited institution of higher education in a discipline or professional field that is relevant to the Ed.D. Program
2. 3.00 GPA on all graduate coursework
3. Two positive letters of reference from leaders in education familiar with the applicant's work
4. Detailed résumé that illustrates important work-related experiences
5. Acceptable scores on the Graduate Record Examination (within five years of admission and including a writing assessment)
6. An acceptable personal statement covering three important topics:
 - a. Career goals
 - b. Reasons for pursuing a doctorate
 - c. Ability and commitment to devote four weeks to summer study for the first two summers of the program and some additional on-campus summer study during the third or fourth summers
7. If selected as a finalist, a satisfactory interview with the admission committee

Admission Process

The application packet for the Ed.D. can be obtained from the Ed.D. Program websites. Admission decisions are determined by a faculty admissions committee.

Program of Study

The program is divided into four major components: (1) a required core in educational leadership; (2) a specialty area; (3) a series of inquiry-oriented seminars; and (4) the dissertation component. These components and the credits required in each component are summarized below.

Component I:

Core in Educational Leadership (18 credits)

Component II:

Specialty area in one of the following (15 credits):

- Administrative Leadership
- Curriculum and Literacy

Component III:

Inquiry Seminars (16 credits)

Component IV:

Capstone: Dissertation and Dissemination (14 credits)

Total: minimum 63 credits

Component I establishes the foundational core of the program with particular emphasis in education leadership and teaching and learning. Four core courses are required of all candidates. Courses include: EDF 700; EDL 701, 702, 705; and EDT 700. All courses in the core are open only to Ed.D. students.

Component II includes a specialty area of the student's choice. Two specializations are available:

- Administrative Leadership. 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) and the superintendency.
- Curriculum and Literacy. This specialization is for students who plan leadership careers in PK-12 settings such as reading and curriculum specialists. It includes courses in literacy, curriculum, and instructional leadership.

Component III of the program includes research courses, field-based inquiry projects, and a series of seminars designed to help students understand the processes of inquiry. Component III leads into and facilitates Component IV.

Component IV is the completion of the dissertation and dissemination of the results of the students' study to appropriate audiences. Special course work in research and ongoing inquiry projects will culminate with the completion of the student's dissertation. More information about all of these components is available on the program's website.

Please note that students take 10 credits during each of the first two summers in the program, and additional courses during evenings and some Saturdays during the first two academic years. During the third year and beyond, the focus is on dissertation requirements, including some on-campus study during the last summer of study.

Candidate Assessment

The curriculum of the Ed.D. program has been designed to align with national and state standards for doctoral studies in the field of educational leadership and with the program's conceptual framework. Prior to being granted the Ed.D. degree, each candidate completes a dissertation and demonstrates proficiency on each program standard. Criteria for judging performance on other standards are described in the Assessment and Dissertation Handbook.

During the second year of the program, each Ed.D. candidate completes a summative electronic portfolio. This portfolio consists of evidence (artifacts, evaluations, projects, and reflections) gathered from the beginning of the program. All entries must be tied to the program's conceptual framework and to the program's advanced leadership standards. Candidates present their portfolios to a committee of faculty, including their dissertation advisors.

Course and Capstone Requirements:

Foundational Core (18 credits):

EDF 700	The Purposes of Education in America	3
EDL 705	Leadership to Promote Effective Teaching & Learning	6
EDT 700	Topics in Leadership for Technology in Schools	3
EDL 701	Leading Organizational Change I: Theory	3
EDL 702	Leading Organizational Change II: Program Development & Evaluation	3

Inquiry Seminars and Dissertation (30 credits required; up to six additional credits optional):

EDL 710	Inquiry Seminar I: The Study of Human & Organizational Learning Research I	3
EDL 712	Inquiry Seminar III: Quantitative and Qualitative Research II	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: The Dissertation Proposal	3
EDL 716	Inquiry Seminar VII: Dissertation I	2
EDL 717	Inquiry Seminar VIII: Dissertation II	5
EDL 718	Inquiry Seminar IX: Dissertation III	5

EDL 719 Inquiry Seminar X: Dissertation IV (may be repeated for up to 6 credits over three calendar years)	1
EDL 720 Inquiry Seminar XI: Disseminating Research Findings	2
Specialty Study (15 credits of electives in Administrative Leadership or Curriculum and Literacy):	
Administrative Leadership	
EDL 610 School Leadership I	3
EDL 611 School Leadership II	3
EDL 615 Understanding External Environments of School Leadership I	3
EDL 616 Understanding External Environments of School Leadership II	3
EDL 634 Seminar in Curriculum Development	3
EDL 652 Advanced Topics in Educational Leadership	1-6
EDL 681 The Superintendency I: Leading District Operations	3
EDL 682 The Superintendency II: Board and Public Relations	3
EDL 690 Internship in Educational Leadership I	2
EDL 691 Internship in Educational Leadership II	2
EDL 692 Internship in Educational Leadership III	2
EDL 695 Internship: The Superintendency I	3
EDL 696 Internship: The Superintendency II	3
EDL 697 Readings and Conference (repeated for up to 6 credits)	1-6
Curriculum and Literacy	
RDG 667 Multicultural Literature in the Classroom	3
RDG 675 Reading and Writing as Integrated Process	3
RDG 680 Current Trends and Issues in Reading and Language Arts	3
RDG 686 Literacy Instruction for Diverse Populations II	3
RDG 698 Research Seminar	3
RDG 700 Seminar in Literacy	3
EDL 634 Seminar in Curriculum Development	3
EDL 652 Advanced Topics in Educational Leadership	1-6
EDL 697 Readings and Conference (repeated for up to 6 credits)	1-6

Post-Baccalaureate Teacher Certification Programs

Students who already hold a bachelor's degree may pursue teacher certification through our post-baccalaureate programs. These programs prepare students for teacher certification and do not result in a master's degree. Additional policies governing these certification programs are found in the Undergraduate Catalog. Students can seek certification in the following fields.

- Elementary Education
- Secondary Education in the following subjects: Biology, Chemistry, Earth Sciences, English, French, General Science, German, History, Italian, Mathematics, Physics, Social Studies and Spanish
- NK-12 Education in the following subjects: Art, Music, Physical Education, TESOL, Technology and Engineering Education

Information on admission to the post-baccalaureate programs can be found on the School of Education and Professional Studies page, linked [here](#).

Students may enroll part time or full time, extended over a number of years in any certification field. Each student will, together with an advisor, submit a planned program of graduate study which would satisfy all certification requirements. Each planned program is individualized, based on the student's previous college course work, CCSU program requirements, and state certification requirements.

-
- [Art Education](#)
 - [Biology](#)
 - [English](#)
 - [History](#)
 - [Music Education](#)
 - [Physical Education](#)
 - [Special Education](#)
 - [Technology and Engineering Education](#)
 - [TESOL](#)

Post-Baccalaureate Teaching Certification Program in Art Education

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 NK–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 coursework, 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.

Certification in Biology for Secondary Education

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 Certification in English

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 Certification in History

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 Certification in Music Education

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 Program for Certification in Physical Education

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 Certification in Special Education

Program Rationale:

This non-degree program is designed for students who, after receiving an undergraduate degree that did not lead to teacher certification (i.e., psychology, sociology, general sciences, human services, mathematics, business, liberal arts, etc.), want to pursue coursework leading to teacher certification in special education. The curriculum for this program is aligned with the standards of the Council for Exceptional Children (CEC) and the certification requirements of the Connecticut State Department of Education.

Program Learning Outcomes:

Students in the program are expected to:

- demonstrate knowledge of foundational issues in special education and their impact on the field;
- demonstrate knowledge of the development and characteristics of learners, individual learning differences, and appropriate instructional strategies;
- promote effective learning environments and social interactions for individuals with disabilities;
- demonstrate knowledge of typical and atypical language development, cultural implications of language development, and alternative approaches to communication;
- demonstrate knowledge of instructional planning, assessment, and collaboration to address the learning differences of individuals with disabilities; and
- promote professional and ethical practices in the field of special education.

Course and Requirements:

- Professional Requirements (9 credits)
- 30 hours of verified field experience with regular education students
- 10 hours of verified field experience with exceptional learners.

SPED 501 Education of the Exceptional Learner 3	
SPED 502 Principles of Learning in Special Education	3
or	
EDTE 315 Principles of Learning: Elementary	4
RDG 503 Developmental Reading in PK-12	3
Specialization Requirements:	
SPED 511 Behavioral/Emotional Disorders	3
SPED 512 Learning Disabilities	3
SPED 513 Developmental Disabilities	3
SPED 514 Cognitive Behavior Management and Social Skills Strategies	3
SPED 515 Assessment in Special Education	3
SPED 516 Instructional Programming for Students with Exceptionalities	3
SPED 517 Instructional Methods for Students with Special Needs- Elementary	3
SPED 518 Instructional Methods for Students with Special Needs- Secondary	3
SPED 520 Student Teaching Seminar	1
SPED 521 Student Teaching in Special Education-Elementary (eight weeks)	3
SPED 522 Student Teaching in Special Education-Secondary (eight weeks)	3

Note: It is the student's responsibility to consult with their advisor on a regular basis since program policies and procedures are subject to change.

Students must be sure to consider prerequisite requirements before registering for courses. Numerical listing does not necessarily indicate correct sequence.

In addition to maintaining a 3.00 overall average, students must maintain a B- (2.70) average in special education courses to be recommended for certification.

The School of Education and Professional Studies requires students to complete a departmental performance assessment in order to qualify for student teaching and to complete the Professional Program. In addition, students are expected to abide by the standards outlined in the current Undergraduate Catalog for maintaining good standing in the Professional Program.

Admission to the Professional Program is a prerequisite for SPED 515-522.

SPED 516, 517, and 518 may be counted toward a master's degree in special education.

Technology and Engineering Education Certification Program for College Graduates

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

Certification in TESOL is a non-degree program offered to persons with a bachelor's degree whose undergraduate course work does not meet State of Connecticut certification requirements for English as a second language teacher in the public school system. Certification may be obtained for the PK-12 level.

A minimum of 15 credits in TESOL content areas is required before student teaching. Interested candidates may contact the TESOL program for further information.

Post-Baccalaureate Official Certificate Programs

- [Cell and Molecular Biology](#)
- [Construction Management](#)
- [Data Mining \(Graduate Certificate\)](#)
- [Environmental Health and Occupational Safety](#)
- [Lean Manufacturing and Six Sigma](#)
- [Pre-Health Studies](#)
- [Public Relations/Promotions](#)
- [Supply Chain and Logistics](#)
- [TESOL](#)

Advanced Official Certificate Programs

- [Professional Counseling](#)
- [Reading and Language Arts](#)
- [School-Based Marriage and Family Therapy](#)
- [Superintendent of Schools](#)

Master's Degree required for admission into Advanced Certificate Programs

Post Master's Study

Students with a master's degree may apply for acceptance into a post-master's study program in the following areas:

- Art
- Counselor Education (Profession; School; Student Development and Higher Education)
- History
- Music Education
- Natural Sciences: Science Education
- Physical Education
- Elementary Education
- Technology and Engineering Education

Students will be assigned an advisor to assist in designing a 30-credit planned program. Consent of the chair may be required for admission. For more information, contact the respective departments.

Official Certificate Program: Post-Baccalaureate Certificate in Cell and Molecular Biology

Program Overview

This non-degree certificate program is designed for college graduates wishing to expand or update their knowledge of modern cell and molecular biology, but who are not ready to commit to graduate programs leading to the master's degree. This post-baccalaureate certificate program provides these students a formal option for acquiring both advanced instruction and academic advisement.

Admission

Students must have completed a bachelor's degree to participate in the program. Potential students should contact the Office of Graduate Admissions to request an application packet. The application requires official transcripts from all colleges and universities attended and an essay describing why the student is interested in the program. Completed applications will be filed with the Graduate Admissions Office. The biomolecular sciences chair will schedule an interview with the applicant, during which an advisory committee will work with the candidate to develop an individualized plan of study in keeping with their academic backgrounds and professional goals. The advisory committee will make admission recommendations to the department which will make final admission decisions on a rolling basis. Successful applicants will have a 2.70 undergraduate cumulative grade point average and course prerequisites must be met, including BMS 102 and 103 (or BIO 121), BMS 190, 201, 290; and CHEM 161, 162, 163, and 164; or equivalent. Post-baccalaureate students will be 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

The Official Certificate Program in Cell and Molecular Biology will require 18-20 credits in approved cell and molecular biology courses (see below), including BMS 572, BMS 591 and at least two cell and molecular biology courses that include laboratory instruction. Any individual program must be selected and approved in consultation with the biomolecular sciences advisor. A minimum of 15 credits in the planned program must be taken at CCSU.

Program

Research Component:

BMS 572	Laboratory Rotation in Cell and Molecular Biology	1
BMS 591	Independent Research Project in BMS	2

Laboratory Science Component:

2 courses with lab from the following:

BMS 412/413	Human Physiology (with lab)	4
BMS 505	Molecular Biology	4
BMS 506/497	Biosynthesis, Bioenergetics, and Metabolic Regulation (with lab)	4
BMS 540	Advanced Topics in BMS	4
BIO 449/450	Plant Physiology/Investigations in Plant Physiology	4

Elective Component:

7-9 credits elected from any additional Laboratory Science course(s) listed above and/or from the following:

BMS 412	Human Physiology	3
BMS 415	Advanced Exploration in Cell, Molecular & Physiological Biology	3
BMS 506	Biosynthesis, Bioenergetics, and Metabolic Regulation	3
BMS 516	Medical Microbiology	3
BMS 519	Physiology of Human Aging	3
BMS 540	Advanced Topics in BMS	3
BMS 562	Developmental Biology	3
BMS 570	Advanced Genetics	3
BMS 590	Focused Study in Advanced BMS	3-4
BIO 449	Plant Physiology	3
BIO 416	Immunology	3
CHEM 456	Toxicology	3
CHEM 458	Advanced Biochemistry	3

Note: To enroll in BMS 572 or 591, students need to have a planned program approved by the biomolecular sciences advisor.

The student 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 dean, 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 the post-baccalaureate certificate program may be counted towards a master's degree, provided that the graduate-syllabus option is elected at the time of course registration in all 400-level courses; all master's program admissions and degree requirements are met; and the courses are part of a planned program of study approved by the master's degree advisor. Students must apply for the MA through Graduate Admission.)

Official Certificate Program in Construction Management

Participants must successfully complete the following courses (12 credits): CM 435, 500 or 505, 515, 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).

Graduate Certificate in Data Mining

Program Prerequisites:

Applicants to the Graduate Certificate in Data Mining program are expected to have completed a first semester course in undergraduate or graduate statistics. Students may be admitted on condition that they complete these prerequisite courses with a grade of B or better.

Admission Criteria:

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 point 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 a candidate with an undergraduate GPA as low as 2.40, only if the student receives no grades lower than a B in his/her first three core courses in the program.

The following materials, in addition to those required by the School of Graduate Studies, are required:

- a formal application essay of 500-1000 words, focusing on (a) academic and work history, (b) reasons for pursuing the Graduate Certificate in Data Mining, (c) future professional aspirations, and (d) where and how the applicant has completed the program prerequisite: a first-semester course in statistics. The essay will also be used to demonstrate a command of the English language; and
- two letters of recommendation.

The application and all transcripts should be sent to the Graduate Admissions Office. The other materials, including the formal application essay, the prerequisites letter, and the two letters of recommendation, should be sent to:

Dr. Daniel T. Larose

Re: Graduate Certificate in Data Mining Admissions Materials

Department of Mathematical Sciences

Marcus White 118

Central Connecticut State University

New Britain, CT, 06050

Note: Only hard copy materials are acceptable. No attachments to emails or other electronically transmitted material will be considered in admission decisions.

Course Requirements (18-20 credits):

Required Courses (12 credits)

STAT 521 Introduction to Data Mining	4
STAT 522 Clustering and Affinity Analysis	4
STAT 523 Predictive Analytics	4

Elective Courses (6-8 credits)

Choose two of:

STAT 520 Multivariate Analysis for Data Mining	4
STAT 525 Web Mining	3
STAT 526 Data Mining for Genomics and Proteomics	4
STAT 527 Text Mining	4
STAT 529 Current Issues in Data Mining	3

Some other graduate-level data mining or statistics course, with approval of program coordinator.

More information can be found at: <http://web.ccsu.edu/datamining/>

Official Certificate Program in Environmental Health and Occupational Safety

Participants must successfully complete the following courses (12 credits): TM 414, 456, 511, 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).

Official Certificate Program in Lean Manufacturing and Six Sigma

Participants must successfully complete the following courses (12 credits): TM 464, 490, 510, 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).

Official Certificate Program: Post-Baccalaureate Certificate 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). Additional information is available at <http://www.prehealth.ccsu.edu>.

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

Students must have completed a bachelor's degree to participate in the program. Potential students should contact the Graduate Admissions Office to request an application packet. The application requires that official transcripts be sent from all colleges and universities attended and an essay describing why the student is interested in the program. Completed applications should be sent through the Graduate Admissions Office. The Pre-PAC chair will schedule an interview with the applicant, during which an advisory committee (including the Chief Health Professions Advisor) will work with the candidate to develop an individualized planned program of study in keeping with his or her academic background and professional goals.

Applications must be received by the priority deadline of November 1 but no later than December 1 for students wishing both to begin classes in the spring and continue into the summer to be considered for financial aid as matriculated students. However, students may begin the program in any semester and applications will be accepted throughout the year within the graduate admission deadlines of July 1 and December 1. 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*

45 credits

Life Science (21 credits), including:

BIO 122	General Biology II	4
BMS 201	Principles of Cell and Molecular Biology	4
BMS 306	Genetics	4
or		
BMS 316	Microbiology	4
BIO 318/ BMS 318	Anatomy and Physiology I	4
BIO 591	Independent Research Project in Advanced Biology	1
or		
BMS 591	Independent Research Project in BMS	1
BIO 319/ BMS 319	Anatomy and Physiology II	4
or		
BIO 412/413/ BMS 412/413	Human Physiology and lab	4
Chemistry (16 credits), including:		
CHEM 161	General Chemistry I	3

CHEM 162	General Chemistry I Laboratory	1
CHEM 163	General Chemistry II	3
CHEM 164	General Chemistry II Laboratory	1
CHEM 210	Organic Chemistry I	3
CHEM 211	Organic Chemistry I Laboratory	1
CHEM 212	Organic Chemistry II	3
CHEM 213	Organic Chemistry II Laboratory	1
Physics (8 credits) including:		
PHYS 121	General Physics I	4
PHYS 122	General Physics II	4

*For course descriptions and prerequisites for courses numbered lower than 400, please see the Undergraduate Catalog.

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.)

Post-Baccalaureate Certificate in Public Relations/Promotions

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 consisting of COMM 505 Persuasive Communication, COMM 506 Principles and Processes of Communication Campaigns, COMM 507 Campaign Planning and Evaluation, and COMM 508 Public Relations Writing Strategies. One other course from the department's master's degree program in communication can be substituted for one of the four 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. 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; admissions to the M.S. is required.

Official Certificate Program in Supply Chain and Logistics

Participants must successfully complete the following courses (12 credits): TM 562, 563, 565, 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).

Official Certificate in TESOL

This non-degree program at the graduate level will provide professionals in the field of TESOL with an opportunity for further professional development. This also affords candidates who are interested in establishing a foundation in TESOL without going through a rigorous Masters program an opportunity to do so. This program does not grant State of Connecticut ESL Teaching Certification.

Certificate requirements (12 credits):

Required courses (9 credits):

LING 400	Linguistic Analysis	3
LING 496	TESOL Methods	3
LING 497	Second Language Acquisition	3
EDF 583	The Politics of Education	3

Students must choose one elective from the following:

LING 515	Introduction to Sociolinguistics	3
LING 533	Second Language Composition	
LING 535	Second Language Testing	
LING 596	TESOL Practicum	
LING 598	TESOL Research Methods	

Advanced Official Certificate Program in Professional Counseling

The Advanced Official Certificate Program in Professional Counseling is designed for practicing counselors who already hold a master's degree in counseling or psychology and are preparing for state licensure or advanced practice as a Professional Counselor. A certificate in advanced graduate work in Professional Counseling is issued upon completion of 7-18 credits of selected 500-level courses, with a grade of B or better, designated for the certificate program. Candidates for the OCP who are interested in licensure are responsible for working with the Connecticut Department of Public Health regarding specific required coursework for their Licensed Professional Counselor (LPC) eligibility.

Admission criteria for the Advanced Official Certificate Program in Professional Counseling:

- Master's degree in counseling or psychology with an overall 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

All students will be required to take Orientation to Professional Counseling, a one-credit course.

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. Candidates are expected to have a Master of Science degree in Reading and Language Arts and to take courses required by the State of Connecticut for Reading and Language Arts Consultant Certification, including prerequisite courses when necessary. The required courses are as follows, for a total of 15 to 27 credits of coursework:

RDG 588	Teaching Children's Literature	3
RDG 692	Specialized Diagnosis & Remedial Techniques	3
RDG 694	Organization, Administration, and Supervision of Reading and Language Arts Programs	3
RDG 696	Practicum for Reading and Language Arts Consultants	3
RDG 697	Practicum for Reading and Language Arts Consultants II	3
Required prerequisites:		
RDG 594	Diagnosis of Reading & Language Arts Difficulties	3
RDG 595	Remedial & Corrective Techniques in Reading & Language Arts	3
RDG 596	Clinical Practices in Reading & Language Arts	6

School-Based Marriage and Family Therapy (12 credits)

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.

Degree Requirements

ED 515	School Law	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

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

Total credits: 12-15

The program is designed for educational professionals seeking certification as a School District Superintendent. The core program consists of two courses on theory and research (EDL 681 and EDL 682) and two courses on practice (EDL 695 and EDL 696). Candidates who have completed their graduate work at CCSU will be required to take 12 credits. Candidates who have completed their graduate work at other institutions will be required to complete 15 semester hours as mandated by State Department of Education. Courses to be approved by advisor are dependent on student's prior coursework.

Accounting

Note: Enrollment in 300 and 400-level accounting courses requires admission to the School of Business or permission of the department chair.

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

200s

AC 210 Principles of Industrial Accounting (3)

An introductory study of the measurement of financial position, net income, manufacturing costs, cost behavior, direct costing, standard costs, and budgeting. Emphasis on the managerial uses of accounting data in industry. IT majors only.

AC 211 Introduction to Financial Accounting (3)

Prereq.: MATH 101 (C- or higher). 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.

AC 212 Introduction to Managerial Accounting (3)

Prereq.: AC 211 (with C- or higher). 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.

300s

AC 300 Foundations of Accounting: The Profession, Processes & Analysis (3)

Prereq.: FIN 295 (may be taken concurrently), and AC 212 (both with C- or higher). Develop understanding of accounting profession and role in society. Review of the accounting cycle and analysis of enterprise economic resources, obligations, revenues, and expenses, including: methods of measurement and recognition; the conceptual framework; and authoritative standards. Analysis of financial statements, risk, and role of internal controls. Emphasis on research, measurement and reporting, and problem solving and decision making.

AC 301 Cost Management Systems (3)

Prereq.: AC 300 (may be taken concurrently), and STAT 200 (both with C- or higher). 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.

AC 302 Introduction to Income Taxation (3)

Prereq.: LAW 250 and AC 212 (both with C- or higher). 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.

AC 311 Accounting Applications (3)

Prereq.: AC 212 (C- or higher). Current financial reporting processes, issues and applications are studied. Emphasis on bookkeeping processes and technology. Irregular.

AC 312 Financial Reporting I (3)

Prereq.: AC 300 (C- or higher). Financial accounting with special emphasis on measurement and recognition issues pertaining to assets.

AC 313 Financial Reporting II (3)

Prereq.: AC 312 (C- or higher) taken within five years. Designed to further prepare students for professional competency. Topics include accounting for liabilities, stockholders' equity, investments, income taxes, employee compensation, post-employment benefits, leases, cash flows, changes and errors, and disclosure.

AC 340 Accounting Information Systems (3)

Prereq.: AC 312 (may be taken concurrently) and AC 300 (both with C- or higher); MIS 201. 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.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"**AC 402 Fundamentals of Corporate Taxation (3)**

Prereq.: AC 302 (C- or higher). Analysis of federal tax law relating to the formation, operation, and liquidations of corporations including dividend distributions and stock redemptions.

AC 404 Taxation of Business Pass-Through Entities (3)

Prereq.: AC 302 (C- or higher). Analysis of federal tax law relating to (1) the formation, operation, and liquidation of partnerships and LLCs including current distributions; and (2) the election, operation, and termination of Subchapter S corporations. Irregular.

AC 407 Advanced Accounting (3)

Prereq.: AC 313 (C- or higher). Accounting for partnerships and branches; business combinations and consolidated financial statements; foreign currency transactions and translation of foreign currency financial statements.

AC 410 Fraud Examination (3)

Prereq.: AC 211. 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. Irregular.

AC 420 Managerial Analysis & Cost Control (3)

Prereq.: AC 301 (C- or higher). Advanced topics in managerial and cost accounting. Emphasis on the use of accounting information for management decision making and cost management in traditional and lean business enterprises. Cases and problems. Fall.

AC 421 Accounting for Lean Enterprises (3)

Prereq.: AC 301 with a grade of C- or higher. Replacing traditional accounting with techniques supporting continuous improvement and a lean culture, including value stream performance measurement and costing, features and characteristics costing, and target costing. Linked with AC 521. AC 421 and 521 cannot both be taken for credit. Spring.

AC 430 Accounting for Non-Profit Institutions (3)

Prereq.: AC 313 (C- or higher). Comprehensive survey of governmental and other non-profit institution accounting as it relates to budgeting, cost accounting and financial reporting. Statutory influences which direct and control operation funds, bonded debt, fixed assets, investments, revenue and expenditure classification, general property taxes, and inter-fund relationships are subjected to detailed study.

AC 445 Auditing (3)

Prereq.: AC 313 (may be taken concurrently), AC 340, STAT 201 (all with C- or higher). 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.

AC 455 Internal Auditing (3)

Prereq.: AC 313 (may be taken concurrently), AC 340, STAT 201 (all with C- or higher). Role and responsibilities of internal auditors in financial auditing. Understanding the need and role of governmental auditing. Topics include operational audits, compliance audits, performance audits.

AC 490 Current Accounting Topics (3)

Prereq.: Permission of instructor. 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. Irregular.

AC 497 Independent Study in Accounting (3)

Prereq.: Senior standing and permission of instructor. Research-oriented project in a special area of accounting. On demand.

AC 498 Internship in Accounting (3)

Prereq.: AC 312 (C- or higher); permission of internship instructor and department chair. 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.

500s

AC 521 Accounting and Performance Measurement for Lean Enterprises (3)

Prereq.: Admission to the M.S. program in Technology Management. Performance metrics and financial reporting supporting continuous improvement and a lean culture, including value stream performance measurement and costing, features and characteristics costing, and target costing. Linked with AC 421. No credit given to students with credit for AC 421. Spring.

Actuarial Science

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

300s

ACTL 335 Theory of Interest 3

Prereq.: MATH 152. 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. Fall. (E)

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

ACTL 465 Actuarial Models I 4

Prereq.: STAT 315. 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. Fall. (O)

ACTL 466 Actuarial Models II 4

Prereq.: STAT 315. 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. Spring. (O)

ACTL 480 Topics in Actuarial Science 1 TO 3

Prereq.: Permission of instructor. Topics chosen from theory of interest, risk theory, demography, and graduation. Irregular. [GR]

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. Spring. [GR]

ACTL 482 Review -SOA/CAS Course II 3

Prereq.: ACTL 335 and permission of instructor. Review and extension of the principles of theory of interest, economics, and finance as related to the material on the SOA/CAS Course 2 exam. Spring. [GR]

500s

ACTL 564 Mathematics of Financial Derivatives 3

Prereq.: Admission to the M.A. in mathematics with specialization in actuarial science or permission of the instructor. Study of mathematical models used to value financial derivatives. Includes both discrete time models such as binomial trees and simulation as well as continuous time models based upon Brownian motion and Ito's lemma. Fall.

ACTL 565 Graduate Actuarial Models I 4

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

ACTL 566 Graduate Actuarial Models II 4

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

ACTL 580 Advanced Topics in Actuarial Science 3

Prereq.: Permission of instructor. 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. Irregular.

African-American Studies

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

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. Fall. Study Area II

200s

AFAM 200 Dimensions of Diversity and Inequality 3

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

Cross listed with ENG 212. See ENG 212 for detailed description. No credit given to students with credit for ENG 212.

300s

AFAM 345 Modern African-American Literature 3

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.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

AFAM 424 Peoples and Cultures of Africa 3

Cross listed with ANTH 424. See ANTH 424 for detailed description. Fall. (E)

AFAM 469 African Americans in the 20th-Century 3

Prereq.: HIST 301 or 310 or permission of instructor. Cross listed with HIST 469. See HIST 469 for detailed description. No credit given to students with credit for HIST 469. Fall. (O)

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. Fundamentals of the basic structure of ASL grammar, vocabulary, fingerspelling/numbers, information related to Deaf Culture. May not be used to fulfill the foreign language requirement. Skill Area I

ASL 112 American Sign Language II 3

Prereq.: ASL 111 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. May not be taken to fulfill the foreign language requirement. Skill Area I

American Studies

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

AMS 110 Introduction to American Studies 3

Examines socio-cultural, political, and historical factors, as well as literary and artistic expressions, in addressing the overarching questions: What does it mean to be an American? and What is America?. Spring. Study Area III

200s

AMS 241 Introduction to Planning 3

Cross listed with GEOG 241. See GEOG 241 for detailed course description. No credit given to students with credit for GEOG 241. Study Area II

300s

AMS 322 Race and Ethnic Relations 3

Prereq.: SOC 110, 212. Cross listed with SOC 322. See SOC 322 for detailed course description. No credit given to students with credit for SOC 322. Fall.

AMS 332 Civil Liberties 3

Prereq: PS 110. Cross listed with PS 332. See PS 332 for detailed course description. No credit given to students with credit for PS 332.

AMS 341 The American Renaissance 3

Cross listed with ENG 341. See ENG 341 for detailed course description. No credit will be given to students with credit for ENG 341.

AMS 345 Modern African-American Literature 3

Cross listed with AFAM 345 and ENG 345. See ENG 345 for detailed course description. No credit given to students with credit for either AFAM 345 or ENG 345.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

AMS 422 Native Americans 3

Cross listed with ANTH 422. See ANTH 422 for detailed course description. No credit will be given to students with credit for ANTH 422. Fall. [I]

AMS 430 The American Presidency 3

Prereq.: PS 104, 110 or permission of instructor Cross listed with PS 430. See PS 430 for detailed course description. No credit given to students with credit for PS 430. Spring.

AMS 448 Advanced Studies in American Literature 3

Prereq.: ENG 398, or permission of instructor. 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. Cross listed with ENG 448. No credit given to students with credit for ENG 448. [GR]

AMS 490 Internship in American Studies 3

Prereq.: Permission of program coordinator. Supervised work in appropriate institutions requiring application of interdisciplinary principles related to American Studies. Series of consultations and a final project analyzing procedures and conclusions are required. On demand.

Anthropology

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

ANTH 140 Introduction to Anthropology 3

Major fields of anthropology, prehistory, and ethnology, with emphasis on the distinctive perspectives of anthropology as a cultural and human science. Cannot be used for credit toward the major in Anthropology. Study Area III [I]

ANTH 150 Introduction to Archaeology 3

Survey of methods used in the acquisition, analysis and interpretation of archaeological data and how those data are used in culture reconstruction. Study Area III

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.

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. Study Area III

ANTH 170 Introduction to Cultural Anthropology 3

Human ways of life and how to investigate them. Introduces basic skills and knowledge necessary for the description, analysis, and understanding of cultures. CSUS Common Course. Study Area III [I]

200s

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. Cross listed with AFAM 200. No credit given to students with credit for AFAM 200. Study Area III

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. Fall. Study Area III

ANTH 215 Before History 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. Spring. Study Area III

ANTH 230 North American Prehistory 3

Surveys the pre-historic past of the North American continent. Begins with the archaeology of the earliest human settlement and continues until the period of European contact in the sixteenth and seventeenth centuries A.D. Fall. (O)

ANTH 239 Work and Culture 3

A cross-cultural exploration of humanity as creator A cross-cultural exploration of humanity as creator invention, and the beliefs and values surrounding them in various cultures. Spring. (E) [I]

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. Fall. Study Area III [I]

ANTH 245 Laboratory in Biological Anthropology 3

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. Fall. (O)

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. Fall.

300s

ANTH 322 Historical Archaeology 3

Anthropological study of Euro-American cultural history, using documentary and artifactual data to interpret changing cultural patterns in post-contact New England. Specialized techniques of document research, field excavation and artifact analysis in historical archaeology are studied. Fall. (O)

ANTH 323 Urban Archaeology 3

Cross-cultural examination of the archeology of urban life. Views the nature of urban centers and populations of the past and their relation to the social systems in which cities are located. Irregular.

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. Irregular.

ANTH 329 Experimental Archaeology 3

Prereq.: ANTH 150 or permission of instructor. An investigation of the techniques used by archaeologists in the reconstruction of prehistoric technology. This course will include actual experiments in tool manufacture and use. Fall.

ANTH 335 Theories of Human Evolution and Behavior 3

Prereq. ANTH 140 or 160 or permission of instructor. 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. Fall. (E)

ANTH 340 Theories of Culture 3

Prereq.: ANTH 140 or 170 or permission of instructor. A historical survey of major schools of thought in socio-cultural anthropology. Includes critical analysis of Evolutionist, Historicist, Functionalist, Structuralist, Interpretive, and Marxist explanations with focus on post-1960s period. Fall.

ANTH 350 Men and Women in Different Cultures 3

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

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. Spring. (E)

ANTH 365 The Anthropology of Human Differences 3

Prereq.: 100 level Anthropology course or permission of instructor. The biological and cultural processes which have brought about the individual, sexual, and racial variation of the human species. Spring.

ANTH 374 Field Research Methods 3

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. Spring.

ANTH 375 Anthropological Data Analysis 3

Prereq.: STAT 104 or equivalent. 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. Spring.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"**ANTH 401 City Life & Culture 3**

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. Spring. (O) [GR]

ANTH 416 Archaeology of Africa 3

Prereq.: ANTH 150 or permission of instructor. Examines pre-historic and historic period of Africa via archaeological, documentary, and oral historical data. Spring. (O) [GR]

ANTH 418 New England Prehistory 3

Prereq.: ANTH 140 or 150 or permission of instructor. An examination of the prehistoric people 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. Spring. (E) [GR]

ANTH 420 African Diaspora Archaeology 3

Prereq.: ANTH 150 or permission of instructor. 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. Spring. [GR]

ANTH 424 Peoples and Cultures of Africa 3

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. Fall. (E) [I] [GR]

ANTH 425 Human Ecology 3

Prereq.: 100-level anthropology course or permission of instructor. Explores the relationship between humans and their environments. How humans have changed the face of the earth and to what extent different environments have influenced human biological and cultural evolution. Cross listed with AFAM 425. No credit given to students with credit for AFAM 425 or ANTH 325. Fall. (O) [GR]

ANTH 426 People and Cultures of Eastern Europe 3

A survey of culture in the nations of Eastern Europe concentrating on their contemporary aspects. Spring. (E) [I] [GR]

ANTH 428 Cultures of Latin America 3

Prereq.: ANTH 140 or ANTH 170 or SOC 110. 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. Cross listed with LAS 428. No credit given to students with credit for LAS 428. Fall. [I] [GR]

ANTH 429 Global India 3

Examination of Indian society and culture considering India's relationship with other world areas. Topics include colonialism, postcolonialism, globalization. Separate requirements for graduate and undergraduate students. Spring. (O) [I] [GR]

ANTH 433 Independent Study in Anthropology 1 TO 3

Prereq.: Senior standing and permission of department chair. Directed study in Anthropology. On demand.

ANTH 437 Internship in Anthropology 3

Prereq.: Permission of instructor and written acceptance of sponsoring organization. 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. On demand.

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. Summer. [GR]

ANTH 451 Field School in Cultural Anthropology 3 TO 6

Prereq.: Permission of instructor. 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. Irregular. [GR]

ANTH 475 Topics in Anthropology 3

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

ANTH 490 Senior Thesis 3

Prereq.: One course from ANTH 329, 345, 370, 374, 450, 451, 470; and one course from ANTH 433, 437. Semester-long supervised research and thesis preparation, including in-class discussion and oral presentation. Fall.

Art

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

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. Study Area I

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. Study Area I

ART 112 History of Art I 3

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

ART 113 History of Art II 3

Prereq.: ART 112. Continuation of ART 112. A survey of paintings, sculpture, and architecture from the Renaissance to the present. CSUS Common Course. Study Area I

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. Study Area I

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. Study Area I

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. Study Area I

200s

ART 210 Greek Art 3

Prereq.: ART 110 or 112. Historical development of painting, sculpture and architecture from the Bronze Age through the Golden Age of Greece to the end of the Hellenistic Era. Spring.

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. Fall.

ART 216 Modern Art 3

Prereq.: ART 110 or 112 or 113. Historical development of painting, sculpture, and architecture from the late 19th century to the present. Study Area I

ART 218 Renaissance Art 3

Prereq.: ART 110 or 112 or 113. Historical development of European painting, sculpture, and architecture from 1400 to 1600. Spring.

ART 224 Illustration I 3

Prereq.: ART 130. 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. Study Area I

ART 230 Drawing II 3

Prereq.: ART 130. An in-depth study in drawing techniques as applied to individual expression. Study Area I

ART 240 Printmaking I 3

Prereq.: ART 120 or ART 130. Introduction to the technical processes and the aesthetic possibilities of lithography, intaglio and silkscreen. CSUS Common Course. Fall. Study Area I

ART 247 Photography I 3

Photography as an art form of aesthetic choice is emphasized of aesthetic choices is emphasized. Explore creativity within the context of digital photography as a means of self-expression. Digital camera is required for students. Fall. Study Area I

ART 250 Watercolor Painting 3

Prereq.: ART 120 and 130. Styles and techniques of painting in transparent and opaque watercolors, with emphasis on individual creative expression. Study Area I

ART 252 Painting I 3

Prereq.: ART 130. Exploration of techniques of painting in still life, landscape, and creative composition. CSUS Common Course. Study Area I

ART 260 Ceramics I 3

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

ART 261 Sculpture I 3

Prereq.: ART 124. 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. Study Area I

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.

ART 264 Design--Handicraft Materials and Techniques I 3

Prereq.: ART 120 or 130. Varied handicrafts and materials are included. May not be substituted for ART 263. Study Area I

ART 265 Exploratory Topics in Art 1 TO 6

Prereq.: To be stipulated at time of course offering. Selected topics in studio art/art education announced each semester. Students may not take this course for credit under the same topic name more than once. Irregular.

ART 270 Mural Painting 3

Prereq.: ART 252 or permission of instructor. Introductory studio course of mural painting techniques - students develop, organize and execute group and individual public works. Includes study of the history of public art and contemporary trends in mural painting.

300s

ART 301 Art Education Theory and Practice I 3

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

ART 302 Pre-Practicum in Art Education 1

Prereq.: ART 099, 301, and admission to the professional program in teacher education. Taken concurrently with ART 303. Eight-week pre-student teaching requirement involving on-site classroom 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. 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.

ART 303 Practicum in Art Education I 2

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

ART 324 Illustration II 3

Prereq.: ART 099 and 224. Continuation of Illustration I.

ART 332 Life Drawing I 3

Prereq.: ART 099 and 230. Structural approach to drawing the nude and clothed model with focus on gesture, proportion, and the figure in the environment. Open to majors only.

ART 341 Intaglio I 3

Prereq.: ART 099 and 240. A successful portfolio review is required before enrollment. Investigations in hardground, softground, aquatint, spitbite, sugarlift, drypoint, and monotype procedures using single and multicolor applications. Spring.

ART 343 Silkscreen I 3

Prereq.: ART 099 and 240. 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. Fall.

ART 347 Photography II 3

Prereq.: ART 099 and 247. A successful portfolio review is required before enrollment. Use of a computer to expand subjective expression of photography-based aesthetic concepts. Topics include fine arts photo processes and procedures, analysis of subject matter, and examination

and history of digital photography. Spring.

ART 348 Video Art I 3

Prereq.: Art 099. A successful portfolio review (ART 099) is required before enrollment. Use of videography to explore experimental art-making possibilities. Production of video art projects and examination of the aesthetics and history of video as an art medium. Fall.

ART 349 New Media Arts I 3

Prereq.: ART 099, 347, and ART 348. 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. Spring.

ART 352 Painting II 3

Prereq.: ART 099 and 252. Continuation of Painting I.

ART 353 Painting III 3

Prereq.: ART 099 and 352. Continuation of Painting II.

ART 360 Ceramics II 3

Prereq.: ART 099 and 260. Continuation of ART 260, with emphasis on wheel skills and glaze calculation.

ART 361 Sculpture II 3

Prereq.: ART 099 and 261. A successful portfolio review is required before enrollment. Continuation of Sculpture I.

ART 362 Sculpture III 3

Prereq.: ART 099 and 361. Further refinement of a particular sculpture theme via materials and techniques.

ART 366 Handwrought Jewelry 3

Prereq.: ART 099 and ART 120 or 130. 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.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

ART 400 Art Education Theory and Practice II 3

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

ART 401 Student Teaching Seminar - Art 1

Prereq.: ART 099 and 400. 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.

ART 402 Practicum in Art Education II 1

Prereq.: ART 099 and ART 402 must be taken concurrently with or after completion of ART 401, EDSC 428, 429. Supervisory, mentoring, evaluatory experience in addition to exhibition installation for the CCSU Children's Art Workshop. Art Education majors only. 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.

ART 403 Art Education and Technology 3

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

ART 408 The Art of Greece in the Bronze Age 3

Prereq.: ART 110 or 112 or 113. Introduction to the art of Greece in the Bronze Age. The artistic and cultural development of mainland Greece, Crete, the Cycladic Islands, and Western Asia Minor from the Paleolithic to the end of the Bronze Age. Emphasis on the art of flourishing Minoan and Mycenaean civilizations.

ART 409 Studies in Art History 3

Prereq.: ART 110 or 112 or 113. Selected topics in the history of art, announced each semester. Students may not take this course under the same topic more than once.

ART 411 Roman Art 3

Prereq.: ART 110 or 112. Historical development of painting, sculpture and architecture from Romulus to Constantine. Spring.

ART 412 Oriental Art 3

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

ART 414 American Art 3

Prereq.: ART 110 or 112 or 113. Historical development of painting, sculpture and architecture in America from the 17th century to the present.

ART 420 Issues in Contemporary American Art 3

Prereq.: ART 110 or 112 or 113. American art post-World War II to the present with emphasis on topics such as post modernism, public sculpture, feminist art, multiculturalism and contemporary art criticism. Includes visits to Hartford and New York galleries. (O) [GR]

ART 424 Illustration III 3

Prereq.: ART 099 and ART 324. A successful portfolio review (ART 099) is required before enrollment. Topics in the development of individual media techniques. [GR]

ART 430 Color Drawing 3

Prereq.: ART 099 and 230 or 252 or 431. 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. Fall. [GR]

ART 432 Life Drawing II 3

Prereq.: ART 099 and ART 332 or permission of instructor. Continuation of ART 332. Open to majors only. [GR]

ART 435 Advanced Drawing 3

Prereq.: ART 099 and permission of instructor. Emphasis on development of expressive use of line and value. Various materials used including ink, pencil, conte crayon, chalk, wire, charcoal, and others. [GR]

ART 441 Intaglio II 3

Prereq.: ART 099 and ART 341, graduate standing or permission of instructor. before enrollment. Continuation of Intaglio I. Spring. [GR]

ART 443 Silkscreen II 3

Prereq.: ART 099 and ART 343, graduate standing or permission of instructor. Continuation of Silkscreen I. Fall. [GR]

ART 448 Video Art II 3

Prereq.: ART 099 and 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. Spring.

ART 449 New Media Arts II 3

Prereq.: ART 099 and ART 349. 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. Spring.

ART 450 Advanced Watercolor Painting and Related Media 3

Prereq.: ART 099 and ART 250 or permission of instructor. 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. [GR]

ART 460 Ceramics III 3

Prereq.: ART 099 and 360. Advanced clay and glaze techniques. [GR]

ART 464 Design-Handcraft Materials and Techniques II 3

Prereq.: ART 099 264 or 435. Continuation and extension of ART 264. Varied handcrafts, materials, and processes are explored as modes of artistic expression. [GR]

ART 465 Studio Topics 1 TO 3

Prereq.: ART 099 and others to be stipulated at time of course offering. Selected topics in studio art, announced each semester. Students may not take this course for credit under the same topic more than once. [GR]

ART 466 Jewelry Design 3

Prereq.: ART 099 and 366. Course exploring possibilities of materials and equipment in jewelry and metal work, with emphasis on design. [GR]

ART 468 Ceramics IV 3

Prereq.: ART 099 and ART 460. Thesis-clay and glaze design used to express a statement in form. [GR]

ART 490 Curatorship 3

Prereq.: ART 099. Theory and practice in collection management, gallery and museum programming, and exhibition design. On demand. [GR]

ART 491 Aesthetic and Critical Dialogue About Art 3

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

ART 494 Location Studies - Art 3 OR 6

Prereq.: ART 099. 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. Summer. [I] [GR]

ART 498 Independent Study 1 TO 3

Prereq.: Formal application to Art Department chair following procedure approved by the Art Department faculty. 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. [GR]

ART 499 Capstone in Art 3

Prereq.: ART 099 and permission of advisor. Intensive exploration of the student's individual development of artistic direction. Emphasis on either the professional-level portfolio or research project in art. On demand.

500s

ART 500 Problems in Art Education 3

Prereq.: 9 credits of approved graduate study or approval of advisor. 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. Spring.

ART 509 Advanced Studies in Art History 3

Prereq.: Permission of department chair. 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. NOTE: This is a link course, on demand, with ART 408, 411 412, 414, or 420. On demand.

ART 549 Advanced Painting I 3

Prereq.: Permission of department chair. Exploration of varied qualities of painting media, historical and contemporary techniques and styles.

ART 550 Advanced Painting II 3

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

ART 551 Advanced Painting III 3

Prereq.: ART 550. Continuation of ART 550.

ART 559 Advanced Ceramics I 3

Prereq.: Permission of department chair. Emphasis on skills in wheel use, glazing and firing techniques.

ART 560 Advanced Ceramics II 3

Prereq.: Permission of instructor or chair or admission to M.S. in Art Education. Various types of firings. Advanced techniques leading to professional studio potter.

ART 561 Advanced Ceramics III 3

Prereq.: ART 560. Using self-designed clay and glaze to make a mini solo exhibition.

ART 565 Advanced Studies in Art: 3

Prereq.: Permission of department chair. 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. On demand.

ART 570 Advanced Sculpture I 3

Prereq.: Permission of instructor or chair or admission to M.S. in Art Education. Students pursue directed assignments in several sculptural areas. Past and present styles discussed. Studio and seminar.

ART 571 Advanced Sculpture II 3

Prereq.: ART 570 or equivalent. In-depth exploration of one or possibly two sculptural processes to be announced. Irregular.

ART 572 Advanced Sculpture III 3

Prereq.: ART 571. Continuation of ART 571.

ART 576 Independent Study in Art and/or Art Education 1 TO 6

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

ART 597 Exhibition Research (Plan C) 3

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

ART 598 Research in Art Education 3

Prereq.: 9 credits of approved graduate study or recommendation of student's advisor. Designed to familiarize student with techniques and resources associated with research in the field of specialization. Opportunity for practical application will be provided. Fall.

ART 599 Thesis (Plan A) 3

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

Biology

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

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. Irregular. Study Area IV

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. Irregular. Study Area IV

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. Irregular. Study Area IV [I]

BIO 111 Introductory Biology 3

Humans and the biological world, with emphasis on structure and function of the human organism, including topics on disease, heredity and evolution. Cannot be used to meet requirements for major or minor in biology. Three lectures per week. No credit given to those with credit for BMS 111. CSUS Common Course. Study Area IV

BIO 113 Laboratory Experience in Biology 1

Prereq.: BIO 100 or 111 (may be taken concurrently), or permission of department chair. Laboratory experiences in biology, with a strong emphasis on hypothesis development, experimentation, data analysis, and written reports. One two-hour laboratory per week. Study Area IV

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. Summer. Study Area IV

BIO 121 General Biology I 4

Structural and physiological organization of cells involved in growth and inheritance of living organisms is discussed. Consideration of growth of flowering plants and comparisons of levels of specialization reached among major groups within the plant kingdom. Lecture topics are paralleled in laboratory, where living, prepared and preserved materials are used for study and dissection. Three lectures and one three-hour laboratory per week. Required for major, minor, or specialization in biology, but open to anyone interested in the subject. CSUS Common Course. Study Area IV

BIO 122 General Biology II 4

Prereq.: BIO 121. Consideration of major animal groups, emphasizing diversity of animal life and its wide distribution. Vertebrate type is used to illustrate differentiation, division of labor, and development of organ systems, stressing integration to make unified whole. Embryology, evolution, and ecology. In laboratory, living, prepared, and preserved materials are used for study and dissection. Three lectures and one three-hour laboratory per week. CSUS Common Course. Study Area IV

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. Study Area IV [I]

BIO 133 Laboratory in Introductory Ecology 1

Prereq.: BIO 132. 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. Study Area IV

BIO 150 Long Island Sound -- Introductory Ecology 4

An introduction to the physical, chemical, geological, and biological characteristics of estuaries, using Long Island Sound as a model. Laboratories and field trips will emphasize identifying common coastal organisms and understanding their roles in estuarine ecosystems. Lectures, laboratories, and field trips. Summer. Study Area IV

BIO 170 Introductory Field Studies in Biology 1 TO 4

Prereq.: Permission of instructor based on interview. Travel-based field biology experience. Non-major students will learn to identify biological

questions, design and conduct observations and/or experiments, analyze their data, and reach valid conclusions. May be repeated at different field sites. Irregular. Study Area IV

BIO 171 Introductory Field Studies in Biology 1 TO 4

Prereq.: Permission of instructor based on interview. 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. Irregular. Study Area IV [I]

200s

BIO 200 Integrative Biology 4

Prereq.: BIO 121 and BIO 122. Emphasis on integration of genetic concepts with ecology, evolution, and biodiversity. Includes DNA replication, gene expression, viruses, phylogeny, animal behavior, and population dynamics. Laboratories include biotechnology and field ecology research techniques. Three hours of lecture and one three-hour laboratory per week.

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. Study Area IV

BIO 230 Natural History 2

Prereq.: BIO 121; or BIO 132 and 133; or BIO/BMS 111 and 113. Consideration of local wild species and their range, habitats, natural history traits, and evolutionary history. Two, one-hour lecture meetings per week. Noteworthy field and library work expected outside of class time. Fall. Study Area IV

BIO 290 Biology Research Experience I 2

Prereq.: MATH 101 (or math placement exam) and BIO 121 (may be taken concurrently). Introduction to research design and the analysis, interpretation, and presentation of biological data. Includes lectures, seminars, and computer laboratory.

300s

BIO 315 Microbial Ecology 4

Prereq.: BIO 200 (or permission of instructor) and CHEM 161 and 162 or CHEM 121. 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. Fall.

BIO 318 Anatomy and Physiology I 4

Prereq.: BIO 122 or BMS 201 or NRSE 150; or permission of department chair. 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. Cross listed as BMS 318. No credit given to students with credit for BMS 318. Fall.

BIO 319 Anatomy and Physiology II 4

Prereq.: BIO 122; or BMS 201; or NRSE 150; or permission of department chair. 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. Cross listed as BMS 319. No credit given to students with credit for BMS 319. Spring.

BIO 322 Vertebrate Zoology 4

Prereq.: BIO 200 or permission of the department chair. 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. Spring. (E)

BIO 326 Mushrooms, Mosses, & More 4

Prereq.: BIO 200 or permission of the department chair. 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. Irregular.

BIO 327 Vascular Plants 4

Prereq.: BIO 200 or permission of the department chair. 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. Spring.

BIO 331 Neurobiology 4

Prereq: Bio 200 or permission of instructor. 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. Spring. (O)

BIO 333 Endocrinology 3

Prereq: Bio 200 or permission of department chair. Structure and function of endocrine systems. Endocrine disease and hormonal control mechanisms involved in regulating reproduction, growth, and homeostatic systems within animals. Spring. (E)

BIO 390 Biology Research Experience II 1

Prereq.: BIO 290, or permission of instructor and department chair. 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. On demand.

BIO 391 Internship in Biology 1 TO 6

Prereq.: Written permission of instructor and department chair. 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. On demand.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"**BIO 401 Human Nutrition and Metabolism 3**

Prereq.: BIO 200 and BIO 290, or permission of department chair. 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. Spring. [GR]

BIO 402 Evolutionary & Ecological Genetics 3

Prereq.: BIO 200 and 290 or permission of instructor. Study of the genetic diversity of species and populations, and the processes that affect their evolution, including natural selection, gene flow, and mutation. Review of basic genetics from General Biology. Applications of genetics to modern problems in ecology and conservation. Spring. [GR]

BIO 405 Ecology 4

Prereq.: BIO 200 and BIO 290 (or permission of department chair) and CHEM 163 and CHEM 164 or CHEM 122. 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. Fall. [GR]

BIO 410 Ecological Physiology 4

Prereq.: BIO 200 and BIO 290 and CHEM 163 and CHEM 164 or CHEM 122 or permission of department chair. An examination of the physiological interactions between organisms and their associated ecosystems. Equivalent of three hours of lecture and three hours of laboratory per week. Summer. [GR]

BIO 412 Human Physiology 3

Prereq.: BIO 122; or BMS 201; or BIO/BMS 318 or 319; or permission of department chair. 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. Cross listed as BMS 412. No credit given to students with credit for BMS 412. Fall. [GR]

BIO 413 Human Physiology Laboratory 1

Prereq. or coreq.: BIO 412 or BMS 412 (either may be taken concurrently). Laboratory course to accompany BIO 412. One three-hour laboratory per week. Cross listed as BMS 413. No credit given to students with credit for BMS 413. Fall. [GR]

BIO 414 Human Disease 3

Prereq: BIO 200 and BIO 290. 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. Irregular.

BIO 420 Ornithology 4

Prereq.: BIO 200 and BIO 290 or permission of department chair. 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. Spring. (E) [GR]

BIO 421 Marine Invertebrate Biology 4

Prereq.: BIO 200 and 290; or permission of the department chair. 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. Irregular. [GR]

BIO 425 Aquatic Plant Biology 4

Prereq.: BIO 200 and BIO 290, or permission of department chair. Ecology and classification of microalgae, macroalgae and vascular plants from marine, estuarine, and freshwater environments. Laboratories and field trips include collection and identification of plants from Connecticut aquatic habitats. Three hours of lecture and one three-hour laboratory per week. Some Saturday field trips required. Fall. (E) [GR]

BIO 434 Ecology of Inland Waters 4

Prereq.: BIO 200 and BIO 290, or permission of department chair and CHEM 163 and CHEM 164 or CHEM 122. 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. Fall. (O) [GR]

BIO 436 Environmental Resources and Management 3

Prereq.: BIO 200 and BIO 290, or permission of department chair and CHEM 163 and CHEM 164 or CHEM 122. 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 over-population and methods for control, significance and loss of biodiversity, aquatic pollution, and global climate change. Spring. (E) [GR]

BIO 438 Aquatic Pollution 4

Prereq.: BIO 200 and BIO 290 (or permission of department chair) and CHEM 163 and CHEM 164 or CHEM 122. 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. Spring. (O) [GR]

BIO 440 Evolution 3

Prereq.: BIO 200 and BIO 290 or permission of department chair. Mechanisms of inter-generational change including mutation selection, and drift; sexual selection; speciation; and extinction. Fall. (O) [GR]

BIO 444 Plant Taxonomy 3

Prereq.: BIO 200 and BIO 290 or permission of department chair. 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. Fall. [GR]

BIO 449 Plant Physiology 3

Prereq.: BIO 200 and BIO 290; or BMS 201 or permission of department chair. Basic principles of plant function. Emphasis on the soil-plant-air continuum, phloem transport, photosynthesis and mechanisms of plant responses to the environment. Spring. [GR]

BIO 450 Investigations in Plant Physiology 1

Prereq.: BIO 449 (may be taken concurrently) or permission of instructor. Investigative laboratory in plant physiology. Topics include water potential, transpiration, mineral nutrition, phloem transport, photosynthetic and respiratory gas exchange, photosynthetic electron transfer, plant movements, and plant hormones. One three-hour lab per week. Spring. [GR]

BIO 469 Entomology 4

Prereq.: BIO 200 and BIO 290 or permission of department chair. In depth study of insect systematics and biology. Laboratory includes building an insect collection and working with live specimens. Fall. [GR]

BIO 470 Field Studies in Biology 1 TO 4

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

BIO 471 International Field Studies in Biology 1 TO 4

Prereq.: BIO 200 and BIO 290, or permission of department chair; and interview with instructor. 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. Irregular. [I]

BIO 480 Animal Behavior 4

Prereq.: BIO 200 and BIO 290 or permission of department chair. Understanding animal behavior from the perspectives of adaptive function, evolutionary history, development and physiological. 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. Fall. (E) [GR]

BIO 489 Vertebrate Dissection 2

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

BIO 490 Topics in Biology 3 TO 4

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

BIO 491 Advanced Studies in Biology 1 TO 3

Prereq.: BIO 390, written permission of instructor and department chair. 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. On demand.

BIO 499 Undergraduate Thesis in Biology 1

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

500s

ACP 500 Basic Principles of Nurse Anesthesia Practice 0

Prereq.: Completion of 24 credits in DNAP program or 21 credits in M.S. Biological Sciences: Anesthesia Program. Overview of current anesthetic practice. Topics include pre-anesthesia evaluation, fluid and blood therapy, monitoring the anesthesia machine, acid-base balance, pain management, post anesthesia care unit, and regional anesthesia. Conducted at affiliated hospital school of nurse anesthesia. Spring, Summer.

ACP 501 Anesthesia Clinical Practicum 0

Prereq.: Completion of 33 credits in DNAP program or 21 credits in M.S. Biological Sciences: Anesthesia Program and 3.00 cumulative GPA. Structured, supervised clinical training and experience to learn how 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. Includes clinical practice, advanced principles of nurse anesthesia practice, applied pharmacology, physics, and professional aspects of nurse anesthesia practice. Summer.

ACP 502 Anesthesia Clinical Practicum 0

Prereq.: ACP 501 and 3.00 cumulative GPA. 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. Fall.

ACP 503 Anesthesia Clinical Practicum 0

Prereq.: ACP 502 and 3.00 cumulative GPA. 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. Spring.

ACP 504 Anesthesia Clinical Practicum 0

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

ACP 505 Anesthesia Clinical Practicum 0

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

BIO 500 Seminar in Biology 1 TO 2

Prereq.: Admission to the graduate school or permission of department chair. Study of contemporary topics in biology through individual readings, discussions and presentations. Irregular.

BIO 508 Coastal Ecology 3

Prereq.: Admission to the graduate school or permission of the department chair. Introduction to northeastern coastal ecology. Emphasis will be upon intertidal and shallow estuarine systems with a comparative ecosystems perspective. Three hours of lecture. Spring. (O)

BIO 509 Coastal Ecology Laboratory 1

Prereq.: BIO 508, may be taken concurrently, or permission of department chair. Laboratory to accompany BIO 508. One three-hour laboratory per week. Some Saturday field trips required. Spring. (O)

BIO 515 Foundations of Ecology 3

Prereq.: Admission to graduate school or permission of department chair. 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. Spring. (E)

BIO 517 Human Anatomy, Physiology, and Pathophysiology 6

Prereq.: CHEM 311 or 550, or permission of department chair. 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. Summer.

BIO 518 Pathophysiology and Applied Physiology 3

Prereq.: BIO 412 or BMS 412 or BIO 517 or permission of department chair. For students in anesthesia and health sciences; others require permission of anesthesia program coordinator. Continuation of BIO 517, with emphasis on organ system physiology and pathophysiology. Cardiac, renal, and respiratory systems will be stressed. Three hours of lecture per week. Spring.

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. Fall.

BIO 520 Plant Ecology 3

Prereq.: Admission to graduate school or permission of department chair. Interactions between plants and their living and non-living surroundings. Reproductive ecology, species interactions including competition, community structure, succession, phytogeography with emphasis on the tropics, and the biodiversity crisis. One Saturday field trip required. Three hours of lecture per week. Spring. (O)

BIO 525 Advanced Physical Health Assessment for Nurse Anesthetists 3

Prereq.: Admission to M.S. Biological Sciences: Anesthesia Program; or Admission to DNAP Program. Lectures, demonstrations, group discussions 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. Spring.

BIO 528 Pharmacology 4

Prereq.: BIO 412 or BIO 517 or BMS 412, and CHEM 550 or permission of department chair. For students in anesthesia and health sciences; others require permission of anesthesia program coordinator. A comprehensive investigation into the pharmacological agents and their utilization with relevance to the health sciences. Special consideration given to pharmacodynamics. Fall.

BIO 530 Immunology 3

Prereq.: Admission to graduate program or permission of department chair. 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. Spring.

BIO 540 Topics in Advanced Biology 3 TO 4

Prereq.: Permission of department chair. 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. Irregular.

BIO 571 Advanced Field Studies in Biology 1 TO 4

Prereq.: Admission to graduate program or permission of department chair. 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. Irregular.

BIO 590 Focused Study in Advanced Biology 1 TO 4

Prereq.: Written permission of instructor(s) and department chair. 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. On demand.

BIO 591 Independent Research Project in Advanced Biology 1 TO 4

Prereq.: Written permission of instructor and department chair. 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. On demand.

BIO 598 Research in Biology 3

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

BIO 599 Thesis 3 OR 6

Prereq.: BIO 598, permission of thesis advisor, and a 3.00 overall GPA. Preparation of the thesis under the supervision of the thesis advisor. On demand.

Biomolecular Sciences

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

BMS 100 Search in Biomolecular Sciences 3

Examination of various topics, contemporary issues, and problems in biomolecular sciences. Three hours of lecture per week. No credit given toward a major or minor in the sciences. Course may be repeated one time with a different topic. Winter, summer. Study Area IV

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. Irregular. Study Area IV

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. Study Area IV

BMS 103 Introduction to Biomolecular Science Laboratory 1

Prereq.: BMS 102 (may be taken concurrently). Laboratory course to accompany BMS 102. One, three-hour lab per week. Study Area IV

BMS 111 Cells and the Human Body 3

An overview of the structure and function of the cell and its metabolism. Topics include genetics and molecular mechanisms underlying cellular structure and function, and the need for and generation of multiple cell types and organ systems in the human body. Covers the workings of the major organ systems in maintaining the overall health of an individual. No credit given to students with credit for BIO 111. Cannot be used to meet requirements for major or minor in biomolecular sciences. Study Area IV

BMS 113 Laboratory Experience in Biomolecular Science 1

Prereq.: BMS 100 or BMS 102 or BMS 111 or BIO 100 or BIO 111 (any of these may be taken concurrently). Laboratory experiences in biomolecular sciences, with a strong emphasis on hypothesis development, experimentation, data analysis and written reports. One, two-hour laboratory per week. Study Area IV

BMS 190 Introduction to Research I .5

Prereq.: BMS 102 (may be taken concurrently). Weekly discussions with research seminars, presentations by students currently doing research, and other instruction appropriate to the first year biomolecular sciences major (portfolio, career advising, workshops, etc.). One hour per week.

200s

BMS 201 Principles of Cell and Molecular Biology 4

Prereq.: BMS 102 and BMS 103 or BIO 121; or permission of department chair. 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. Study Area IV

BMS 206 Genetics for Nursing 3

Prereq.: BMS 102, or BMS 111, or BIO 111, and CHEM 150. Introduction to human and clinical genetics for nursing majors. Will include overview of transmission and molecular genetics, with special emphasis on human and health-related issues. Cannot be used to satisfy the requirements for a major in biomolecular science or biology. Three hours of lecture per week. Irregular.

BMS 216 Microbiology for Nursing 3

Prereq.: BMS 102, or BMS 111, or BIO 111, and CHEM 150, or permission of department chair. 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. Irregular.

BMS 290 Introduction to Research II .5

Prereq.: BMS 201 (may be taken concurrently) and BMS 190; or permission of department chair. Weekly discussions consisting of research seminars by biomolecular sciences faculty and students. Coverage of career options, the nature of research, and advising. One hour per week.

300s

BMS 306 Genetics 3

Prereq.: BMS 201 or permission of the department chair, and CHEM 161 and CHEM 162 or CHEM 121. Historical development of basic principles and modern concepts of genetics. Integrated survey of each of the major fields of genetics is presented. Three hours of lecture and one.

BMS 307 Genomics 4

Prereq.: BMS 201 and CHEM 161 & 162, or permission of department chair. 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. Spring.

BMS 308 Genetics Laboratory 1

Prereq.: BMS 306 (may be taken concurrently). Laboratory to accompany BMS 306.

BMS 311 Cell Biology 4

Prereq.: BMS 201 or permission of the department chair, and CHEM 161 and CHEM 162 or CHEM 121. 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. No credit given to students with previous credit for BIO 411. Irregular.

BMS 316 Microbiology 4

Prereq.: BMS 201 or permission of the department chair and CHEM 161 and CHEM 162 or CHEM 121. 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.

BMS 318 Anatomy and Physiology I 4

Prereq.: BIO 122 or BMS 201 or NRSE 150, or permission of department chair. 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. Cross listed as BIO 318. No credit given to students with credit for BIO 318. Fall.

BMS 319 Anatomy and Physiology II 4

Prereq.: BIO 122 or BMS 201 or NRSE 150 or permission of department chair. 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. Cross listed as BIO 319. No credit given to students with credit for BIO 319. Spring.

BMS 320 Histology 2

Prereq.: BMS 201 or permission of department chair. A laboratory-based course building on the concepts of protein and cell structure learned in BMS 201. Students will identify tissues and understand their special function and location in the body. Students will also learn techniques for tissue embedding, sectioning and staining. Two, two-hour laboratories per week. Irregular.

BMS 321 Experimental Developmental Biology 2

Prereq.: BMS 201 or permission of department chair. 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. Irregular.

BMS 322 Comparative Animal Physiology 4

Prereq.: BMS 201. 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.

BMS 340 Biomolecular Techniques 2

Prereq.: BMS 201 or permission of department chair. 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. Irregular.

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. Note: 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

Prereq.: BMS 290 and written permission of instructor and department chair. 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. On demand.

BMS 391 Internship in Biomolecular Science 1 TO 3

Prereq.: Written permission of instructor and department chair. 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. On demand.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

BMS 412 Human Physiology 3

Prereq.: BIO 122, or BMS 201; or BIO/BMS 318 or 319; or permission of department chair. 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. Cross listed as BIO 412. Fall. [GR]

BMS 413 Human Physiology Laboratory 1

Prereq.: BMS 412 or BIO 412 (either may be taken concurrently). Laboratory course to accompany BMS 412. One three-hour laboratory per week. Cross listed as BIO 413. Fall. [GR]

BMS 414 Pharmacology, Physiology, and Drug Development 3

Prereq.: BMS 318 or BMS 319 or BMS 412 or BIO 318 or BIO 319 or BIO 412; and CHEM 163 and CHEM 164; or permission of department chair. Basic principles of pharmacology and the physiological mechanisms underlying drug action. Focus on the pharmacology of: the nervous and cardiovascular systems, chemical dependency and chemotherapy for cancer. Irregular.

BMS 415 Advanced Exploration in Cell, Molecular, and Physiological Biology 3

Prereq.: BMS 306 or BMS 307; or BMS 311 or BMS 316 or permission of department chair. The focus will be on understanding a modern biological issue at the level of molecular, cellular, and physiological inquiry. The treatment of the topic will be at an advanced level, reflective of current research in the field. May be repeated under a different topic for a maximum of 6 credits. Irregular. [GR]

BMS 416 Experimental Microbiology 2

Prereq: BMS 316, or permission of department chair. 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. Irregular.

BMS 480 Emergency Medical Services Instructor 4

Prereq.: BMS 380 or equivalent, and current CT EMT certification. Examination of principles and practices related to teaching and learning in emergency medical services. Emphasizes application of pedagogical and andragogical theory and research applicable to the instruction of pre-hospital emergency medical services professionals who instruct Emergency Medical Responders (EMR), Emergency Medical Technicians (EMT) and others emergency medical professionals. 25 hours of clinical field teaching experience required. Successful completion leads to Connecticut Office of Emergency Medical Services certification as an Emergency Medical Services Instructor. Irregular.

BMS 490 Topics in Biomolecular Sciences 1 to 4

Prereq.: BMS 201 or permission of department chair. 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. Irregular.

BMS 491 Advanced Independent Research in Biomolecular Science 1 TO 3

Prereq.: BMS 390 and written permission of instructor and department chair. 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 for a maximum of five credits. On demand.

BMS 492 Mentorship in Biomolecular Science 1

Prereq.: BMS 491, and written permission of instructor and department chair. 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. On demand.

BMS 495 Capstone in Molecular Biology 4

Prereq.: BMS 306 or permission of the department chair. 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. Irregular.

BMS 496 Capstone in Biosynthesis, Bioenergetics and Metabolic Regulation 3

Prereq.: BMS 306 or BMS 311 or BMS 316; and CHEM 212 and CHEM 213; or permission of department chair. For advanced undergraduates. Study of the molecular 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. Irregular.

BMS 497 Biosynthesis, Bioenergetics and Metabolic Regulation Laboratory 1

Prereq. or coreq.: BMS 496 or BMS 506. Laboratory to accompany BMS 496 or 506. One three-hour laboratory per week. Irregular. [GR]

BMS 499 Undergraduate Thesis in Biomolecular Sciences 1

Prereq.: BMS 491 (may be taken concurrently) and written permission of thesis advisor. 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. On demand.

500s

BMS 505 Molecular Biology 4

Prereq.: BMS 306 or BMS 307 or permission of the department chair. 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. Irregular.

BMS 506 Biosynthesis, Bioenergetics, and Metabolic Regulation 3

Prereq.: BMS 306, BMS 307, BMS 311, or BMS 316 and CHEM 212 and 213. For entering graduate students. Study of the molecular 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. Irregular.

BMS 516 Medical Microbiology 3

Prereq.: Admission to a BMS program, or permission of the department chair. Course will focus on interactions between humans and microorganisms that lead to health and disease. Topics will include microbial pathogenesis and human defenses. Irregular.

BMS 519 Physiology of Human Aging 3

Prereq.: BMS 412, or BIO 412 or BIO 517, or permission of department chair. Course will use a systems approach to compare the physiology of young adults and aged adults. Dysregulation of normal physiology and affects on organ systems will be related at the cellular and molecular levels. Irregular.

BMS 540 Advanced Topics in Biomolecular Science 1 to 4

Prereq.: Permission of department chair. 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. Irregular.

BMS 562 Developmental Biology 3

Prereq.: BMS 306 or BMS 307 or permission of department chair. Structural and functional aspects of development of organisms are studied. Emphasis on cellular differentiation and primary morphogenesis. Irregular.

BMS 570 Advanced Genetics 3

Prereq.: BMS 306 or BMS 307 or permission of department chair. Study of contemporary genetic research. Readings will be assigned from various texts and journals. Irregular.

BMS 572 Laboratory Rotation in Cell and Molecular Biology 1

Prereq.: Permission of department chair. Supervised research in three different cell and molecular biology laboratories as an introduction to modern research methods. One hour of seminar and three hours of research per week. On demand.

BMS 590 Focused Study in Advanced Biomolecular Sciences 1 TO 4

Prereq.: Written permission of instructor(s) and department chair. 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. On demand.

BMS 591 Independent Research Project in Biomolecular Sciences 1 TO 4

Prereq.: Written permission of instructor and department chair. 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. On demand.

BMS 592 Advanced Mentorship in Biomolecular Science 1

Prereq.: BMS 591, and written permission of instructor and department chair. 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. On demand.

BMS 599 Thesis 3

Prereq.: Permission of thesis advisor; approval of thesis plan by departmental thesis committee; 3.00 overall GPA. Preparation of the thesis under the supervision of the thesis advisor. On demand.

Business

BUS 101 Introduction to Business 3

Introduction to the functional areas of business designed for first-year students. This course is intended to be taken simultaneously with an FYE 101 section offered by the School of Business. Students who have taken any course in the lower division business core may not take this course.

Business Education

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

BE 410 Office Education Methods 3

Prereq.: Senior status, MIS 201, Keyboarding Proficiency Examination, and Word Processing Proficiency Examination or WP 204. 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. Spring. [GR]

BE 450 Office Systems Application Software and Records Management 3

Prereq.: BE 410. Survey of selected office application software and evaluation techniques. Includes a discussion of records management, forms design, formatting, and layout. Fall. [GR]

Chemistry

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

CHEM 100 Search in Chemistry and Biochemistry 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. May be repeated with a different topic for up to 6 credits. Irregular. Study Area IV

CHEM 102 Chemistry of Nutrition 3

An introduction to nutrition, the basic nutrients, their chemistry, and their role in health. Two hours of lecture and one two-hour laboratory per week. Study Area IV

CHEM 111 Introductory Chemistry 3

Introduction to fundamental concepts of chemistry; descriptive aspects of inorganic and organic chemistry. For Art, Technology, Elementary, and other non-science majors. Two hours of lecture and one two-hour laboratory per week. Study Area IV

CHEM 116 Introduction to Forensic Chemistry 3

The concepts of chemistry as applied to law. Emphasis will be placed on the utility and validity of scientific evidence and the techniques of chemical analysis as used in criminal investigations. Two hours of lecture and one two-hour laboratory per week. Intended for students with a criminology major or minor. No credit given to students with credit for CHEM 111. Fall. Study Area IV

CHEM 150 Chemistry of Allied Health I 3

Prereq.: MATH 101. Introduction to the structure and behavior of matter in relation to its functions in the body and in health. Topics include: atomic structure, nuclear chemistry, chemical bonding, the mole, chemical reactions and energy changes, gas laws, acid-base theory and an introduction to biomolecules of living systems. Three hours of lecture per week. Intended for non-science majors in physical education nursing, and allied health fields. Fall. Study Area IV

CHEM 152 Chemistry of Allied Health II 4

Prereq.: CHEM 150. Basic principles of organic and biological chemistry in the context of living systems. Topics include functional groups and reactions of organic compounds; structure and function of biomolecules in the cell; enzymes and vitamins; principles of metabolism and energy production. Three hours of lecture and one, three-hour laboratory per week. Intended for non-science majors in nursing, physical education and allied health fields. Spring. Study Area IV

CHEM 161 General Chemistry I 3

Prereq.: MATH 101 or math placement exam. Emphasizes relationships of basic chemical principles and theories to properties of substances, their reactivity and uses. Contributions to the quality of life are introduced. Intended for science and engineering students. Three hours of lecture per week. CSUS Common Course. Study Area IV

CHEM 162 General Chemistry I Laboratory 1

Prereq.: CHEM 161 (may be taken concurrently). Basic techniques of chemical synthesis and analysis. One three-hour laboratory per week. CSUS Common Course. Study Area IV

CHEM 163 General Chemistry II 3

Prereq.: CHEM 161 and CHEM 162. Quantitative aspects of chemistry including kinetics, thermodynamics, and oxidation-reduction chemistry. Three hours of lecture per week. CSUS Common Course. Study Area IV

CHEM 164 General Chemistry II Laboratory 1

Prereq.: CHEM 163 (may be taken concurrently). Intermediate techniques of chemical synthesis and analysis. One three-hour laboratory per week. CSUS Common Course. Study Area IV

200s

CHEM 210 Organic Chemistry I 3

Prereq.: CHEM 163 and CHEM 164 (formerly combined as CHEM 122). The syntheses, reactions, and nomenclature of the principal classes of aliphatic and aromatic carbon compounds will be introduced. The topics of stereochemistry and conformational analysis are also considered. Three hours of lecture per week.

CHEM 211 Organic Chemistry I Laboratory 1

Prereq.: CHEM 163 and CHEM 164 and CHEM 210 (may be taken concurrently). Basic techniques used in organic synthesis. Determination of

physical constants such as melting and boiling point, refractive index, and optical rotation. Basic separation techniques including recrystallization, simple and fractional distillation, extraction, and chromatography. Several experiments elucidating the chemistry of organic compounds introduced in CHEM 210. Three hours of laboratory per week.

CHEM 212 Organic Chemistry II 3

Prereq.: CHEM 210 and CHEM 211. Syntheses, reactions, and nomenclature of the advanced classes of aliphatic, aromatic, and carbonyl-containing carbon compounds. Mass spectrometry, and infrared and nuclear magnetic resonance spectroscopies are considered. Three hours of lecture per week. Spring, Summer.

CHEM 213 Organic Chemistry II Laboratory 1

Prereq.: CHEM 210 and CHEM 211 and CHEM 212 (may be taken concurrently). Synthesis and reactions of the organic functional groups introduced in CHEM 212 will be performed. Spectral analysis of organic compounds also emphasized. Three hours of laboratory per week. Spring, Summer.

CHEM 238 Introduction to Research 1 TO 6

Prereq.: CHEM 162 and permission of instructor. Research experience for first-year students to juniors under faculty supervision. May be repeated for a maximum of 6 credits. On demand.

CHEM 250 Basic Organic and Biochemistry 4

Prereq.: CHEM 152 or CHEM 163 and 164. Principal family of organic compounds important in biological systems; fundamentals of biochemistry including acid-base properties, and metabolic pathways for energy production and biosynthesis of cellular components. Relevance is made to human health and everyday living. Three hours of lecture and one three-hour laboratory per week. Spring. (O)

300s

CHEM 301 Analytical Chemistry 4

Prereq.: CHEM 163 and 164 (formerly combined as CHEM 122), and MATH 119 (formerly combined MATH 121). Theory and practice of gravimetric and volumetric quantitative analysis, introduction to colorimetric analysis, and methods of separation. Two hours of lecture and two three-hour laboratories per week. Fall.

CHEM 316 Spectrometric Identification of Organic Compounds 3

Prereq.: CHEM 212 and CHEM 213. 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. Fall. (O)

CHEM 320 Biophysical Chemistry 3

Prereq.: PHYS 122 or 126 (either may be taken concurrently), CHEM 212, MATH 152. 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. Fall.

CHEM 321 Physical Chemistry of Thermodynamics & Kinetics 3

Prereq.: PHYS 126 (may be taken concurrently), CHEM 212, and CHEM 301, MATH 221. In-depth examination of solid, liquid, and gas behavior, including thermodynamics and kinetics as applied to chemical processes. Three hours of lecture per week. Fall. (O)

CHEM 322 Physical Chemistry of Quantum & Statistical Mechanics 3

Prereq.: PHYS 126 (may be taken concurrently), CHEM 212, CHEM 301, MATH 221. 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. Fall. (E)

CHEM 323 Physical Chemistry Laboratory 1

Prereq.: CHEM 321 or 322 (either may be taken concurrently). Physical chemistry methods in laboratory including spectroscopic methods, computational methods, thermochemical analysis, vacuum system methods and instrumentation construction. Fall. (O)

CHEM 354 Biochemistry 3

Prereq.: CHEM 212. General principles of biochemistry, chemical constituents of cells, metabolic pathways, energies, and biochemical regulators. Three hours of lecture per week. Fall.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"**CHEM 402 Instrumental Methods in Analytical Chemistry 4**

Prereq.: CHEM 301 and CHEM 322 or CHEM 320; or admission to graduate studies. 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. Spring. (E) [GR]

CHEM 406 Environmental Chemistry 3

Prereq.: CHEM 301 and CHEM 210 and 211. 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. Spring. (O) [GR]

CHEM 432 Chemistry Seminar 2

Prereq.: CHEM 320 or 321 or 322. Students will prepare presentations on topics of current interest in various fields of chemistry and may be required to attend seminars by faculty or outside speakers. Introduction to the use of the library, literature, and searching procedures in chemical research. One conference per week. Spring.

CHEM 438 Undergraduate Research 1 TO 6

Prereq.: CHEM 213 and permission of instructor. Research participation for sophomore to senior students under faculty supervision. May be repeated for a maximum of 6 credits. On demand.

CHEM 455 Biochemistry Laboratory 1

Prereq.: CHEM 213 and either CHEM 354 or BMS 496. Experimental work in Biochemistry. One three-hour laboratory period per week. Spring. (E) [GR]

CHEM 456 Toxicology 3

Prereq.: CHEM 212. 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. Spring. [GR]

CHEM 458 Advanced Biochemistry 3

Prereq.: CHEM 354 or BMS 496. 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. Spring. [GR]

CHEM 459 Bioinorganic Chemistry 3

Prereq.: CHEM 354 or BMS 496. Principles of inorganic chemistry as applied to biology. Focuses on correlation of function, structure and reactivity of metals in biological systems. Three hours of lecture per week. Spring. (O) [GR]

CHEM 460 Inorganic Symmetry & Spectroscopy 3

Prereq.: CHEM 320 or 321 or 322. 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. Spring. (E)

CHEM 461 Descriptive Inorganic Chemistry 3

Prereq.: CHEM 320 or 321 or 322. A systematic study of main-group elements and the multitude of compounds they form. Acid-base, substitution, and oxidation-reduction reactions along with structural descriptions will be emphasized. Three hours of lecture per week. Spring. (O)

CHEM 462 Inorganic Chemistry Laboratory 1

Prereq.: CHEM 316. 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. Spring. (O)

CHEM 485 Topics in Chemistry 3

Prereq.: CHEM 320 or CHEM 321 or CHEM 322. 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. Irregular. [GR]

CHEM 490 Independent Study in Chemistry 1 TO 3

Prereq.: Permission of instructor. Special topics of interest in chemistry. May be repeated under different topics for a maximum of 6 credits. Irregular.

500s

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. Summer.

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. Irregular.

Chinese

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

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. Fall. Skill Area III

CHIN 112 Elementary Chinese II 3

Prereq.: CHIN 111 or equivalent (normally, two years high school study). 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. Spring. Skill Area III

CHIN 125 Intermediate Chinese I 3

Prereq.: One year of college Chinese or equivalent. 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. Fall. Skill Area I [I]

CHIN 126 Intermediate Chinese II 3

Prereq.: CHIN 125. 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. Spring. Skill Area I [I]

200s

CHIN 225 Intermediate Chinese III 3

Prereq.: CHIN 125 or 126, or permission of instructor. Designed to help students improve speaking skills through discussion of Chinese contemporary texts. Taught in Chinese. Fall. Skill Area I [I]

CHIN 226 Intermediate Chinese IV 3

Prereq.: CHIN 125 or 126, or permission of instructor. Designed to help students improve writing skills by means of frequent composition in Chinese. Taught in Chinese. Spring. Skill Area I [I]

CHIN 261 Business Chinese 3

Prereq.: CHIN 126 or permission of instructor. 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. Irregular. Skill Area III [I]

300s

CHIN 304 Topics in Chinese Literature 3

Prereq.: CHIN 225 or 226 (either may be taken concurrently), or permission of instructor. Representative selections from modern Chinese authors. Taught in Chinese. May be repeated for up to 9 credits with different topics. Irregular. Study Area I [I] [L]

CHIN 315 Topics in Chinese Culture 3

Prereq.: CHIN 225 or 226 (either may be taken concurrently), or permission of instructor. Aspects of Chinese cultural development. Taught in Chinese. May be repeated for up to 9 credits with different topics. Irregular. Study Area II [I]

CHIN 335 Advanced Chinese for Oral Expression 3

Prereq.: CHIN 225 or permission of instructor. Student development of oral proficiency in Chinese through discussion of readings, films and other authentic materials. Taught in Chinese. Irregular. [I]

CHIN 336 Advanced Chinese Composition 3

Prereq.: CHIN 226 or permission of instructor. Student development of written proficiency in Chinese based on readings, translations, and frequent compositions. Taught in Chinese. Irregular. [I]

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

CHIN 475 Studies in Classical Chinese 3

Prereq.: CHIN 304 or 315, or permission of instructor. Introduction to classical Chinese literature, including etymology, semantics, grammar, and literature Taught in Chinese. May be repeated for up to 6 credits with different topics. Irregular. []

Cinema Studies

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

200s

CINE 201 The Language of Film 3

Prereq.: ENG 110. 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. Fall. Study Area I

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. Cross-listed with COMM 220. No credit may be received by students who have received credit for COMM 220. Fall.

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. Cross-listed with HUM 270. No credit may be received by students who have received credit for HUM 270. Irregular. Study Area I. [I].

300s

CINE 319 Filmic Narrative 3

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.

CINE 350 Laughter, Blood, and Tears: Studies in Film Genre 3

Prereq.: ENG 110. 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. Spring. (O)

CINE 365 Nonfiction and Documentary Film 3

Prereq.: ENG 110. Investigates the history and theory of nonfiction and documentary film. Outside screenings required. Spring. (E)

CINE 380 Women and Film 3

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. No credit may be received by students who have received credit for COMM 380. Fall. (E)

CINE 382 American Cinema 3

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. Spring.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

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. Cross-listed with ENG 460. No credit may be received by students who have received credit for ENG 460. Spring. (O)

CINE 465 Global Cinema 3

Prereq.: ENG 110 or equivalent and junior or senior standing required; for non-English majors, permission of instructor recommended. 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. Cross-listed with ENG 465. No credit may be received by students who have received credit for ENG 465. Irregular. [I]

CINE 466 American Cinema in the 60s and 70s 3

Prereq.: ENG 110. 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. Cross-listed with ENG 466. No credit may be received by students who have received credit for ENG 466. Spring. (O)

CINE 467 Hitchcock 3

Prereq.: ENG 110. 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 Žižek. Cross-listed with ENG 467. No credit given to students with credit for ENG 467. Irregular.

CINE 480 Topics in Cinema Studies 3

Prereq.: ENG 110. Selected topics. Students may take this course under different topics for a maximum of 6 credits. Irregular.

CINE 489 Studies in Film Adaptation 3

Prereq.: ENG 110. 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. Cross listed with ENG 489. Irregular.

CINE 490 Cinema Studies: Independent Study 3

Prereq: Permission of program coordinator. Senior conference course for a student wishing to pursue a planned program of writing and study. On demand.

Civil Engineering

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

200s

CE 253 Introduction to Engineering Surveying 3

Prereq.: ENGR 150 (C- or higher) and MATH 152; or permission of instructor. 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. Lecture/laboratory course. Fall.

300s

CE 357 Advanced Surveying 0 TO 3

Prereq.: MATH 152 and CE 253. Advanced topics in surveying including horizontal and vertical curve layout, traversing earthwork, and computational geometrics. Computer applications and effective total station usage is stressed. Lecture/lab course. Spring. (O)

CE 375 Hydraulic Engineering 3

Prereqs: MATH 221 (C- or higher) and ME 354 (C- or higher). Engineering topics pertaining to the hydrological cycle. Application of basic fluid mechanics and incompressible flow in conduits for pipe system analysis and design. Dimensional analysis, hydraulic similitude, open channel flow, flow measurement, analysis and design of pumps systems, and groundwater flow. Spring.

CE 397 Structural Analysis 3

Prereq.: MATH 221 (C- or higher) and ENGR 257 (C- or higher). Analysis of statically determinate structures; influence lines, deflection analysis of trusses, beams and frames; introduction to indeterminate structural analysis using superposition principles and moment distribution; computer applications. Fall.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

CE 451 Soil Mechanics & Foundations 0 TO 4

Prereq.: ENGR 257 (C- or higher) and ME 354 (C- or higher). Fundamentals of the physical and mechanical properties of soils. Application of solid mechanics and fluid mechanics to describe strength, permeability and consolidation. Design of simple foundation and earth retaining systems. Laboratory measurement of soil properties. Lecture/lab course. Spring.

CE 454 Introduction to Transportation Engineering 0 TO 3

Prereq.: MATH 226 and CE 253. Engineering for the planning, design, construction and maintenance of transportation projects. Driver and vehicle performance characteristics, highway geometric design, pavement design, intersection design, and traffic flow and safety. Lecture/lab course. Spring.

CE 458 GPE Mapping for GIS 3

Prereq.: CE 253 or GEOG 378. Use of the Global Positioning Systems to collect information for use in a Geographic Information System. Includes integration of vector and raster data sets with GPS data. Hands-on use of GPS equipment is introduced. Spring. (E)

CE 470 Structural Steel Design 3

Prereq.: CE 397 (C- or higher). 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. Fall.

CE 471 Reinforced Concrete Design 3

Prereq.: CE 397. 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. Spring.

CE 472 Timber Structures 3

Prereq.: CE 397 (C- or higher). 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. Spring. (E)

CE 475 Hydrology & Storm Drainage 0 TO 3

Prereq.: ME 354 (C- or higher) and CE 375 (C- or higher). Application of surface water hydrology for evaluation of floods and the design of

surface runoff facilities. Watershed characteristics, probabilistic methods, design storms, infiltration methods, unit hydrographs, open-channel hydraulics, and hydrologic modeling. Laboratory sessions apply computer methods and physical models for analysis and design. Lecture/lab required. Fall.

CE 476 Environmental Engineering 3

Prereq.: CHEM 161 and 162, and MATH 221 (C- or higher) and CE 375 (C- or higher). Engineering analysis of environmental conditions including air, surface and groundwater pollution. Design of water and wastewater treatment systems, environmental monitoring and assessment, solid and hazardous waste collection and disposal systems, and groundwater characterization and treatment methods. Spring.

CE 497 CE Professional Practice and Senior Project Research 2

Prereq.: CE 253, CE 375 (C- or higher), CE 397 (C- or higher), and CE senior standing. First of two-course design sequence. Students work in teams in an environment appropriate to a professional engineering setting. Teams propose and begin 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. Fall.

CE 498 Civil Engineering Senior Design Project (Capstone) 2

Prereq.: CE 497. 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 register to take the fall or spring NCEES FE exam. Spring.

Communication

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

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. Skill Area I

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. Skill Area I

200s

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. Study Area III

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. Cross-listed with CINE 220. No credit may be received by students who have received credit for CINE 220.

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. Study Area III

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.

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.

COMM 240 Survey of the Field of Communication 3

Development of communication as a discipline and as an intellectual and practical field. Introduction to theories of rhetoric, public relations, broadcast journalism, media studies and organizational communication.

COMM 245 Introduction to Rhetorical Studies 3

Roots of communication as a discipline and as an intellectual and practical field. Basic principles of persuasion, rhetoric, genres and criticism.

COMM 253 Introduction to Organizational Communication 3

Introduction to the structure, function, and process of communication in organizational life and modern society. Fall.

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.

COMM 256 Professional Communication 3

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. Spring. Skill Area I

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. Skill Area I

COMM 296 Global Studies in Communication 3

On-site group studies in Communication. This topics course normally involves travel outside the United States. [I]

300s

COMM 301 Critical Thinking 3

Prereq.: Sophomore standing (or higher). Development of critical thinking skills as a basis for thoughtful and effective communication. Analysis of arguments and persuasive appeals.

COMM 302 Problem-Solving and Decision Making 3

Prereq. Sophomore standing (or higher). Introduction to small group interaction processes with emphasis on fundamental forms of communication in all discussion settings. May require group meetings outside of class.

COMM 315 Political Communication 3

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. Fall.

COMM 319 Filmic Narrative 3

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.

COMM 320 History of African-American Speakers 3

Survey of African-American speakers from the end of the 18th century to the present. Examination of the lives and texts of both the famous and lesser-known speakers and how they contributed to our nation's culture. Spring.

COMM 329 Screenwriting 3

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.

COMM 330 Digital Film and Television Production I 3

Introduces and investigates television production and narrative filmmaking techniques and processes through field and/or studio production as a basis for visual forms of storytelling.

COMM 332 Web Publishing 3

Prereq.: Majors only. 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.

COMM 334 Public Relations Strategies and Techniques 3

Prereq.: COMM 234 (C- or higher). Public relations strategies and techniques through analysis and practical applications.

COMM 335 Communication Management 3

Communication management in broadcast, cable, closed-circuit, or related environments. Facility planning, scheduling, personnel supervision, programming, sales, marketing strategies, and government regulations are explored.

COMM 336 Media Literacy 3

Prereq.: COMM 230 (C- or higher). A review of current changes in philosophy, content, and processes in media use and application as this use affects society and its value system.

COMM 338 Analysis of News 3

Prereq.: COMM 230 (C- or higher). Broad array of critical and interpretive skills that can be used to analyze the news. Examines economic, social and political underpinnings in the manufacturing of the news, and the processes affecting the formal and structural characteristics of the news. Substantial practical experience in the process of news analysis. Fall.

COMM 344 Models of Intercultural Communication 3

Study and discussion of models of intercultural communication in various contexts. Spring.

COMM 345 Writing for the Electronic Media 3

Prereq.: COMM 230, 330 (both with C- or higher). How to research, create, write, and produce news stories and narratives for broadcast and web-based media. Fall.

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.

COMM 380 Women and Film 3

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. No credit may be received by students who have received credit for CINE 380.

COMM 382 American Cinema 3

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.

COMM 384 Nonverbal Communication 3

Research-based class focused on understanding the various forms of nonverbal messages and their impact on perception, individuals, and communication. Spring.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

COMM 405 Principles and Processes of Mass Communication 3

Prereq.: COMM 230 (C- or higher). Explanation of the theories, principles and processes of mass communication.

COMM 406 Case Studies in Public Relations 3

Prereq.: Junior or senior status. COMM 234 (C- or higher). Case studies of public relations/promotions principles and practices in variety of internal and external, public and private, for-profit and non-profit contexts. This is a link course with COMM 506. Spring. (E)

COMM 410 Public Opinion 3

Prereq.: Junior or senior standing. Dissects the social-psychological phenomenon of public opinion to understand its nature as well as to explore its social function. Goes in depth into the most important public opinion research methodologies. Cross-listed with JRN 410. No credit given to students who have received credit for JRN 410. Spring.

COMM 416 Gender and Communication 3

Prereq.: Junior standing or higher. Examines different theoretical approaches to gender and the implications these have for our understanding of communication theories and practices. Winter, Spring.

COMM 420 Principles of Digital Photography for Convergent Media 3

Prereq.: COMM 255 or 336 (either with C- or higher). 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. Fall.

COMM 427 Digital Film and Television Production II 3

Prereq.: COMM 330 (C- or higher). Increased focus on story conception, investigation and structure while developing skills in cinematography, direction, lighting design, non-linear editing and audio acquisition in such genres as news, documentary, short film, music video and podcasting.

COMM 428 Digital Film and Television Production III 3

Prereq.: COMM 427 (C- or higher). Advanced focus on the production process from conception to delivery, including developing skills in cinematography, direction, lighting design, non-linear editing, and audio acquisition in such genres as news, documentary, short film, music video and podcasting.

COMM 431 Mass Media and Society 3

Prereq.: COMM 230, 330 (both with C- or higher). 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. Spring. (O)

COMM 434 Campaign Development Methods 3

Prereq.: COMM 234 (C- or higher). 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. Spring.

COMM 435 Images of Gender in the Media 3

Prereq.: Junior standing or higher. 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 will be given to students with credit WS or WGSS 435. Spring.

COMM 436 Streaming Media in Web Publishing 3

Prereq.: COMM 332 (C- or higher) and Majors only, or permission of instructor. 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. Spring.

COMM 443 Communication and Social Influence 3

Prereq.: Junior standing or higher. Principles and processes of influencing attitudes, beliefs and behavior. Practical illustrations drawn from advertising, speeches, and other communicative settings. Spring.

COMM 445 Advertising and Society 3

Prereq.: Junior or above standing. Examines advertising as a cultural and economic force in mass society. Emphasis will be on concepts and

methods that enable a critique of advertising campaigns and strategies. Irregular.

COMM 450 Communication Skills for Training and Development 3

Prereq.: Junior standing or higher. 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. Irregular. [GR]

COMM 451 Environmental Communication 3

Prereq.: Junior standing or above. 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. On demand. [GR]

COMM 453 Organizational Communication 3

Prereq.: COMM 253 (C- or higher). Study of communication theory and processes within organizational contexts. Spring.

COMM 454 Communication and Social Change 3

Prereq.: Junior standing or above. For graduate students, COMM 500 (may be taken concurrently). 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. Fall. [GR]

COMM 455 Global Visual Communication 3

Prereq.: COMM 255 (C- or higher). 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. Spring. [I]

COMM 456 Corporate Communication 3

Prereq.: Junior standing or higher. Examines the origins and nature of corporate communication and how it is carried out within businesses, associations, agencies, and the government. Investigates the communication of an organization with its various shareholders, including investors, customers, employees, and the press. Fall. (E)

COMM 480 Television Documentary Production 3

Prereq.: COMM 427 (C- or higher). Students develop and produce short documentaries. Also focuses upon different modes of documentary filmmaking, and the history of documentary production in the U.S. and other countries. Spring.

COMM 485 Topics in Media and Culture 3

Prereq.: Junior standing (or higher). Study of selected topics using critical and interpretive approaches to Media. May be repeated once with a different topic. Irregular.

COMM 486 Topics in Film and Aesthetics 3

Prereq.: Junior standing (or higher). Study of selected topics in Film & Aesthetics. May be repeated once with a different topic. Irregular.

COMM 490 Internship Study 1 TO 6

Prereq.: Permission of faculty advisor and department chair. 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.

COMM 491 Independent Study 1 TO 3

Prereq.: Permission of advisor and department chair. 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. On demand.

COMM 492 Political/Legislative Intern Experience 3 OR 6

Prereq.: Junior standing or higher; permission of faculty and department chair. Major or minors only. Can be taken concurrently with COMM 490. Work in the State Legislature or other political contexts. In addition, a series of seminars, assigned readings, and completion of a substantial research project are required.

COMM 495 Special Topics in Communication 3

Prereq.: Junior or senior standing or permission of instructor. Study of selected topics in Communication. May be repeated once with a different topic. Majors and minors only.

COMM 496 Field Studies in Communication 3

Prereq.: Junior or senior standing or permission of instructor. On-site group studies in communication. This course normally involves travel outside the United States. May be repeated for a maximum of nine credits. [I]

500s

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. Fall.

COMM 501 Theories of Human Communication within an Organizational Context 3

Prereq.: COMM 500. 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. Spring.

COMM 503 Research Methods in Communication 3

Prereq.: Completion of 18 credits in COMM graduate courses. 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. Spring.

COMM 504 Organizational Communication Audits 3

Prereq.: COMM 500 or permission of instructor. Study of information/communication flow and patterns, and formal/informal networks. Case studies of relational, environmental, and structural communication problems form a basis for discussion. Fall. (E)

COMM 505 Persuasive Communication 3

Prereq.: COMM 500 (may be taken concurrently) or permission of department chair. Theories and empirical research related to the influence of audiences external to an organization. Fall.

COMM 506 Case Studies in Public Relations 3

Prereq.: COMM 500 or permission of instructor. Case studies of public relations/promotions principles and processes in variety of internal and external, public and private, for-profit and non-profit contexts. This is a link course with COMM 406. No credit given to students with credit for COMM 406. Spring. (E)

COMM 507 Campaign Planning and Evaluation 3

Prereq.: COMM 500 or permission of instructor. Methods and procedures used to plan, monitor, and evaluate communication campaigns. Both quantitative and qualitative methodologies are explored. Fall. (E)

COMM 508 Public Relations Writing Strategies 3

Prereq.: COMM 500 or permission of department chair. 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. Irregular.

COMM 512 Communication & Change 3

Prereq.: COMM 500. Examination and critical analysis of existing theories and paradigms of communication and development (social change) and evaluation of current approaches and methods to the use of communication (Interpersonal, Folk/Traditional, Group and Mass Media) for development/social change objectives. Irregular.

COMM 522 Corporate Communication 3

Prereq.: COMM 500. 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. Spring. (E)

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. Fall. (O)

COMM 544 Strategies in Negotiation and Conflict Resolution 3

Prereq.: COMM 500. Study of the theories and empirical research regarding negotiation and conflict resolution strategies and appropriate communication patterns unique to each approach and their impact on an organization's effectiveness. Fall. (O)

COMM 551 Policy Issues in Organizational Communication 3

Prereq.: COMM 500. Examines communication's impact on decision-making, planning, organizational policy, and ethics. Spring. (E)

COMM 562 Communication and High-Speed Management 3

Prereq.: COMM 500. Study of theory and empirical research which delineates the communication patterns necessary for the effective use of new high-speed management tools. Complex coordination patterns peculiar to processes of communication among managers and employees resulting from the application of these tools will be examined. Fall. (O)

COMM 585 Special Topics 3

Prereq.: COMM 500. Study of selected topics in organizational and managerial communication. May be repeated once with different topic. Irregular.

COMM 586 Graduate Field Studies in Communication 3

Prereq.: COMM 500 or permission of instructor. On-site group studies in communication. Involves travel outside the United States. May be repeated under different topics for a maximum of six credits. Irregular.

COMM 590 Independent Study 1 TO 3

Prereq.: Completion of Communication Core or permission of instructor. 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. On demand.

COMM 597 Special Project 3

Prereq.: COMM 500 and a 3.00 overall GPA. 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. On demand.

COMM 599 Thesis 3

Prereq.: COMM 500 and a 3.00 overall GPA. 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. On demand.

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. Study Area III

Computer Electronics & Graphics Technology

CEGT 200 Seminar 1

Prereq.: CET 113. Review of mathematical operations, software and applications. Emphasis placed on written/oral communication for technical reports and assignment within the major courses.

Computer Electronics Technology

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

CET 113 Introduction to Information Processing 3

Emphasis placed on the computer as a productivity tool. Laboratory assignments are related to technical applications and problem solving. Two hours lecture and two hours laboratory, course meets four hours per week. On demand. Skill Area IV

200s

CET 201 Photonics Principles 3

Prereq.: MATH 115. 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. Three hours lecture and two hours laboratory, course meets five hours per week. Fall.

CET 223 Basic Electrical Circuits 3

Prereq.: PHYS 111 and either MATH 115 or MATH 119 (either with C- or higher) or math placement exam. 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. Three hours lecture and two hours laboratory, course meets five hours per week. No credit given to those with credit for CET 236.

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. Three hours lecture and two hours laboratory, course meets five hours per week. Fall.

CET 233 Advanced Electrical Circuits 3

Prereq.: CET 223; PHYS 111 or 122 or 126. 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. Three hours lecture and two hours laboratory, course meets five hours per week. No credit given to those with credit for CET 236. Spring.

CET 236 Circuit Analysis 3

Prereq.: ENGR 150 or ROBO 110, and either MATH 135 or MATH 152, and either PHYS 122 or PHYS 126. 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. Three hours lecture and two hours laboratory, course meets five hours per week.

CET 243 Analog Electronics I 3

Prereq.: CET 233 or CET 236. Semiconductor and the 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. 3 hr Lecture/2 hr Laboratory per week. Fall.

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 (IPv & 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.

300s

CET 301 Fiber-Optics Communications 3

Prereq.: CET 201. Introduction to fiber-optic communication systems. Optical detectors and receivers. Coherent light wave systems. WDM communication systems and optical amplifiers. Three hours lecture and two hours laboratory, course meets five hours per week. Spring.

CET 323 Analog Electronics II 3

Prereq.: CET 243. 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. 3 hr Lecture/2hr Laboratory per week. Spring.

CET 339 Computer System Administration 3

Prereq.: CET 229. 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. Three hours lecture and two hours laboratory, course meets five hours per week.

CET 346 Signals & Systems 3

Prereq.: CET 236, and either MATH 136 or MATH 221; or PHYS 122 or PHYS 126. Signal representation, applications of Fourier series, Fourier transform, Laplace transform, and Z-transform in the analysis of circuits and systems. Three hours lecture and two hours laboratory, course meets five hours per week. Spring.

CET 349 Network Routing 3

Prereq.: CET 249. Major emphasis on routing theory and design, TCP/IP protocol stack, how this applies to Internet access. Concentrates on OSI model transport, network, data link and physical layers. Lab includes hands-on routing configuration and troubleshooting Layer 2 and Layer 3 equipment and software. Two hours lecture and two hours laboratory, course meets four hours per week.

CET 363 Digital Circuits 3

Prereq.: CET 223 or CET 236. 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. Three hours lecture and two hours laboratory, course meets five hours per week.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

CET 402 Topics in Computer Electronics Technology 1 TO 3

Prereq.: Permission of department chair. 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. On demand. [GR]

CET 405 Applied Topics in Computer Electronics Technology 3

Prereq.: Permission of department chair. 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. Three hours lecture and two hours laboratory, course meets five hours per week. On demand. [GR]

CET 443 Electronic Communications 3

Prereq.: CET 236 or acceptance to the Graduate MSCIT or MSTM programs. 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. Three hours lecture and two hours laboratory, course meets five hours per week. On demand. [GR]

CET 449 Advanced Networking 3

Prereq.: CET 349 or acceptance to the Graduate MSCIT or MSTM programs. Major emphasis on switching and STP, VLANs and InterVLAN routing. Basic Wireless concepts and configuration. In-depth focus on WAN technology, theory and design including serial communication, HDLC, PPP, Frame Relay. Secure router management and ACL creation. Lab includes hands-on switching and routing configuration and troubleshooting Layer 2 and Layer 3 networking equipment and software. Three hours lecture and two hours laboratory, course meets five hours per week. [GR]

CET 453 Microcomputers 3

Prereq.: CS 213 or CS 151, and CET 363; or acceptance to the Graduate MSCIT or MSTM programs. 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. Three hours lecture and two hours laboratory, course meets five hours per week. Spring. [GR]

CET 459 Network Security Technologies 3

Prereq.: CET 249. 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. On demand.

CET 466 Logic Design 3

Prereq: CET 363. 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. Three hours lecture and two hours laboratory, course meets five hours per week. Irregular.

CET 479 Network Administration 3

Prereq.: CET 339 or acceptance to the Graduate MSCIT or MSTM programs. 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. [GR]

CET 497 Capstone Project I 1

Prereq.: CET 346, CET 349. 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. On demand.

CET 498 Capstone Project II 2

Prereq.: CET 497. Implementation of the proposed solution in the developed Report in CET 497. A functional prototype is simulated, built, measured, and evaluated. A final Report is presented and the project demonstrated. On demand.

500s

CET 501 Applied Networking Technology I 3

Prereq.: acceptance to the Graduate MSCIT or MSTM programs. 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. Fall.

CET 502 Applied Networking Technology II 3

Prereq.: CET 501. 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. On demand.

CET 513 Computer Applications for the Professional 3

Prereq.: Admission to the School of Graduate Studies. 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. On demand.

CET 533 Digital Transmission in Telecommunications 3

Prereq.: acceptance to the Graduate MSCIT or MSTM programs. Digital transmission techniques including signals, coding, decoding, modulation, multiplexing, and switching in telecommunications networks. Also covers fundamental principles, system architectures and services. On demand.

CET 543 Telecommunications Systems 3

Prereq.: CET 533 or permission of department chair. 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. On demand.

CET 559 Applied Network Security 3

Prereq.: CET 501. 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. On demand.

CET 596 Technological Problems and Issues 1 TO 3

Prereq.: Admission to graduate program. Extensive study of selected technological issues and problems. Course may be repeated with different topics for a maximum of 6 credits. On demand.

Computer Information Technology

CIT 595 Capstone in Computer Information Technology 3

Prereq.: Permission of advisor, CIT director, dean of the School of Graduate Studies, and a 3.00 overall GPA. 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.

Computer Science

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

CS 110 Introduction to Internet Programming and Applications 3

Examination of physical infrastructure of local and wide area networks, internet protocol implementation, world-wide web interface programming, interactive Java applet, and Visual Basic web programming. Skill Area II

CS 113 Introduction to Computers 3

Introduction to computer programming together with the consideration of the impact of computers on society. Emphasis on logical problem-solving and algorithms. No credit given to students with credit for CS 151, 213 or MATH 446, 471. Skill Area II

CS 115 Workshop in Computer Science 3

Prereq.: MATH 099 or placement test. Topics vary and include application-oriented languages, computer literacy-oriented software packages, and human-computer interface procedures. Skill Area IV

CS 151 Computer Science I 3

Prereq.: MATH 152 (may be taken concurrently) or placement test. 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. Skill Area II

CS 152 Computer Science II 3

Prereq.: CS 151 and MATH 152. Further topics in object-oriented programming: enhancing classes (inheritance, polymorphism) and using Application Programmer Interface. Event-driven programming. Elementary searching and sorting techniques. Introduction to software engineering issues. Recursion.

CS 153 Computer Science III 3

Prereq.: CS 152. Fundamental data structures: linked lists, stacks, queues. Introduction to binary search trees. Advanced sorting: quick and merge sorts. Study of a second programming language. Alternative implementations of linked lists. Basics of algorithmic analysis.

200s

CS 207 Introduction to Computer Graphics 3

Prereq.: ART 110, 112 or 113 and either MATH 099 or placement test. This course will use the computer facilities to produce abstract designs and images, with special emphasis on color forms, shapes, texture, and basic design. Spring. Skill Area II

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. Skill Area IV

CS 213 Applications of Computing I 3

Prereq.: MATH 115 or MATH 116 or 119 or 125 or placement examination. 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. No credit given to students with credit for CS 151. Skill Area II

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. On demand. Skill Area II

CS 253 Data and File Structures 3

Prereq.: CS 152. A software design course which develops concepts and techniques for structuring and manipulating data, both in the computer and on external storage devices. Topics include a review of basic data structures, balanced tree structure, graphs, sequential and direct access files, external sorting. An introduction to database systems is also provided.

CS 254 Computer Organization and Assembly Language Programming 3

Prereq.: CS 151 or MATH 471. Concepts of assembly language, machine language, macro-instructions, subroutines, program checkout, interrupt structure of assemblers, and use of operating system. No credit given to students with credit for MATH 472.

CS 290 Topics in Computer Science 1 TO 3

Prereq.: CS 151 or equivalent, and permission of instructor. 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. Irregular.

300s

CS 300 Computer Science Work Experience I 3

Prereq.: Permission of department. Students must go through Co-op office prior to receiving credit. A six-month employment experience relevant to the Computer Science program. No more than 6 credits of other course work may be taken concurrently.

CS 301 Computer Science Work Experience II 3

Prereq.: CS 300 and permission of department. Students must have a job which is different from their CS 300 job. Students must go through the Co-op office prior to receiving credit. A six-month employment experience relevant to the Computer Science program. No more than 6 credits of other course work may be taken concurrently.

CS 354 Digital Systems Design 3

Prereq.: CS 254 and MATH 218. 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.

CS 355 Introduction to Systems Programming 3

Prereq.: CS 153 and 254 Introduction to the design of systems software. Topics include comparative machine organizations, the design of assemblers and loaders, an introduction to operating systems and an introduction to compiler design.

CS 385 Computer Architecture 3

Prereq.: CS 354. 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. Spring.

CS 398 Independent Study in Computer Science 1 TO 3

Prereq.: CS 152 and 254. 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. On demand.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"**CS 407 Advanced Topics in Computer Science 1 TO 3**

Prereq.: CS 152 and 254 and permission of instructor. 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. [GR]

CS 410 Introduction to Software Engineering 3

Prereq.: CS 253. 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. Irregular. [GR]

CS 423 Computer Graphics 3

Prereq.: CS 253 or (for graduates) CS 501. 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. Fall. [GR]

CS 425 Image Processing 3

Prereq.: CS 253. 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. Spring.

CS 460 Database Concepts 3

Prereq.: CS 253 or (for graduates) CS 501. Database systems are considered from both the designer's and user's point of view. Physical implementation and data access techniques are studied. Irregular. [GR]

CS 462 Artificial Intelligence 3

Prereq.: CS 253 or (for graduates) CS 501. 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. Spring. [GR]

CS 463 Algorithms 3

Prereq.: CS 253 or (for graduates) CS 501. Topics include algorithms in combinatorics, integer and real arithmetic, pattern matching, list processing, and artificial intelligence. Algorithmic analysis and domain-independent techniques are also considered. Irregular. [GR]

CS 464 Programming Languages 3

Prereq.: CS 253 or (for graduates) CS 501. 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. Irregular. [GR]

CS 465 Compiler Design 3

Prereq.: CS 355. 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. Fall. [GR]

CS 473 Simulation Techniques 3

Prereq.: CS 152 or 213, and STAT 315. Basic principles of simulation methods using digital computers. Topics covered include random number generators, stochastic variate generators, computer models, and simulation languages. Irregular. [GR]

CS 481 Operating Systems Design 3

Prereq.: CS 253 or CS 501. Theory and design of computer operating systems. Topics include machine and interrupt structure, memory, processor, device, and information management. Spring. [GR]

CS 483 Theory of Computation 3

Prereq.: MATH 218 and CS 463. 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. Irregular. [GR]

CS 490 Computer Communications Networks & Distributed Processing 3

Prereq.: CS 253 and 254. Study of networks of interacting computers. The problems, rationale, and possible solution for both distributed processing and distributed data bases will be examined. Irregular. [GR]

CS 491 Wireless Communication Networks 3

Prereq.: CS 253 and CS 254. 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. Irregular.

CS 492 Computer Security 3

Prereq.: CS 253 and CS 254. The fundamentals of computer and network security issues are explored. Topics include classical and modern techniques of conventional encryption; algorithms; public-key encryption, and hash functions; network security, with regard to e-mail, IP, and the Web; and system security intruders, viruses, worms, and firewalls. Irregular.

CS 495 Legal, Social, Ethical, and Economic Issues in Computing 3

Prereq.: Permission of instructor. Topics include privacy, security, law of torts in computing, and legal protection of software. Spring. [GR]

CS 498 Senior Project 1 TO 3

Prereq.: Senior standing, 21 credits toward major including one advanced course. Opportunity for student to participate in design and implementation of large problem with small group of people. Problem will be chosen in consultation with instructor. [GR]

CS 499 Seminar in Computer Science 3

Opportunity for student to explore topics of current interest not covered in normal curriculum. Majors only. Irregular. [GR]

500s

CS 500 Computer Science for Computer Information Technology 3

Prereq.: Permission of department chair or C.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.

CS 501 Foundations of Computer Science 3

Prereq.: CS 500 or CS 153 or permission of instructor. Software design for structuring and manipulating data. Topics include stacks, queues, hash tables, trees, graphs, advanced sorting, and analysis of algorithms.

CS 502 Computing and Communications Technology 3

Prereq.: Admission to the CIT program or permission of the program director. 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. Spring.

CS 530 Advanced Software Engineering 3

Prereq.: CS 501, 502. Study of the software lifecycle including requirements analysis, specification, design, coding, testing, and maintenance. Includes proofs of correctness and techniques of formal specification. Spring. (O)

CS 550 Topics in Human-Computer Interaction 3

Prereq.: CS 501, 502. 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. Irregular.

CS 570 Topics in Artificial Intelligence 3

Prereq.: CS 501, 502. Topics include advanced techniques for symbolic processing, knowledge engineering, and building problem solvers. Irregular.

CS 580 Topics in Database Systems and Applications 3

Prereq.: CS 501, 502. 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. Irregular.

CS 590 Topics in High Performance Computing and Communications 3

Prereq.: CS 481, 501, 502. 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. Irregular.

Construction Management

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

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. Fall. Study Area III [I]

CM 135 Construction Graphics/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.

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.

200s

CM 235 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 construction.

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.

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. Spring.

300s

CM 325 Building Construction Estimating 3

Prereq.: CM 135 and CM 235. 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. Fall.

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. Spring.

CM 345 Heavy/Highway Construction Estimating 3

Prereq.: CM 135 and CM 245. 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. Spring.

CM 353 Introduction to Surveying 4

Prereq.: MATH 115 or 119 or 121. 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. Spring.

CM 355 Construction Planning 3

Prereq.: CM 325 or 345. 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. Fall.

CM 356 Materials of Construction 4

Prereq.: MATH 115 or 119 and CM 235 or ET 150. 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. Fall.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"**CM 405 Topics in Construction 3**

Prereq.: Permission of department chair. 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. On demand.

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. Spring. (E)

CM 435 Construction Superintendency 3

Prereq.: Senior standing. Examination of the role of the construction supervisor. Emphasis on personnel scheduling, time keeping, trade unions, superintendents, and the duties of the project manager. [GR]

CM 455 Construction Project Management 3

Prereq.: CM 355 or admission to M.S. in Construction Management or Technology Management, or permission of department chair. Emphasis on administrative procedures, quality control, time and cost control, resource management, field office practices, construction processing, job site meetings, and correspondence. Two hours lecture and two hours laboratory, course meets four hours per week. Spring. [GR]

CM 465 Construction Internship 3

Prereq.: Junior Standing. Introduction to the construction workplace. Emphasis on field operations and management applications as they apply to building and heavy/highway construction projects. On demand.

CM 475 Construction Business Principles 3

Prereq.: CM 155 and AC 211. Examination of the roles of the owner of a construction company. Emphasis on ethical, organizational, financial, legal, managerial, and personnel issues. Fall/Spring.

CM 485 Construction Management Senior Seminar 1

Prereq.: Permission of department chair. Capstone activities including program assessments, networking events and lectures by industry representatives. Taken by students in the semester of graduation.

500s

CM 500 Fundamentals of Construction Management 3

Prereq.: Permission of the department chair. 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.

CM 505 Construction Project Delivery Systems 3

Explanation of various project delivery systems. Emphasis on design-bid-build, design-build, program management and construction management practices. Additional topics include ethics, professionalism, public responsibility, TQM and partnering. Spring. (O)

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. Spring. (O)

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. Fall. (O)

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. Fall. (E)

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. Spring. (E)

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. Fall. (O)

CM 585 Advanced Construction Law 3

Prereq.: CM 515 or permission of instructor. 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.

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 6 credits. On demand.

Counseling

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

200s

CNSL 299 Human Service in the Residence Halls 3

Prereq.: Appointment to the staff (Department of Residence Life) and/or permission of instructor. Topics include competencies in personal development, student development theory and multicultural issues.

500s

CNSL 500 The Dynamics of Group Behavior 3

Prereq.: Admission to the graduate program and/or permission of department chair. 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. Fall, Spring, Summer.

CNSL 501 Theories and Techniques in Counseling 6

Prereq.: Admission to M.S. in Counselor Education or Marriage and Family Therapy. Investigation of theories and techniques in counseling, including research findings and skill development. Fall, Spring, Summer.

CNSL 503 Supervised Counseling Practicum 3

Prereq.: Written permission from advisor. 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. Fall, Spring, Summer.

CNSL 504 Professional Studies in Counseling 3

Prereq.: Matriculation into the graduate program. 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.

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. Cross listed with MFT 505. No credit given to students with credit for MFT 505.

CNSL 506 Counseling Children & Adolescents 3

Prereq.: CNSL 501 or permission of chair. An examination of counseling theories and strategies for working with children and adolescents. Spring, Summer.

CNSL 507 Methods in Group Facilitation 3

Prereq.: CNSL 500 and 503. The impact of the facilitator's behavior on a group. Students will experience leading a group and observe different leadership styles as well as didactic presentations on group theory and leader interventions. Students will co-facilitate a group in the community. Recommended to be taken with either practicum or internship. Fall.

CNSL 509 Independent Study in Counseling 1 TO 3

Prereq.: Permission of department chair. Systematic study of problems of special interest in counseling. Students are guided in selection of topics for study. Can be taken more than once for a maximum of 6 credits.

CNSL 510 Intensive In-home Evidence-Based Models in Family Therapy 3

Prereq.: MFT 541 or permission of instructor. 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. Cross-listed with MFT 510. No credit given to students with credit for MFT 510. Spring.

CNSL 520 Guidance Principles, Organization and Administration 3

Prereq.: Admission into department. Introduction to principles of guidance in modern school and study of guidance services, practices, and basic concepts relating to organization and operation of guidance programs. Fall.

CNSL 521 Career Counseling and Development 3

Prereq.: CNSL 501. 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. Fall, Summer.

CNSL 522 Appraisal Procedures in Counseling 3

Prereq.: CNSL 501. 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. Spring, Summer.

CNSL 524 Consulting in the Schools 3

Prereq.: CNSL 520, or permission of department chair. 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. Fall.

CNSL 525 Multicultural Counseling 3

Prereq.: CNSL 501. 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.

CNSL 526 Principles of Comprehensive School Counseling 3

Prereq.: Admission to the graduate program and/or permission of department chair. 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. Spring.

CNSL 530 Student Development in Higher Education 3

Prereq.: Admission to the graduate program and/or permission of department chair. Overview of college student development, including characteristics of contemporary students. Fall.

CNSL 531 Student Services in Higher Education 3

Prereq.: Admission to M.S. in Counselor Education or Marriage and Family Therapy. Overview of student services in higher education including characteristics of special student populations. Spring.

CNSL 532 Program Design in Student Services 3

Prereq.: CNSL 530. Design of experiential education for adults in higher education, including needs assessment, creation of developmental programs and learning communities, and program implementation and evaluation. Spring.

CNSL 533 Legal, Financial, and Policy Issues in Student Affairs 3

Prereq.: Admission to the Program in Student Development in Higher Education (Counseling). Examination of policy formation, law, and financial issues as they pertain to student affairs administration in higher education. Fall.

CNSL 560 Introduction to Rehabilitation Counseling 3

Prereq.: Admission to department. Overview of the philosophy and practice of rehabilitation counseling. Emphasis on the rehabilitation client, types of disabilities, and the life adjustment that disability entails. Fall.

CNSL 561 Advanced Rehabilitation Counseling 3

Prereq.: CNSL 560 or permission of the department chair. Case management and service coordination services including independent living services, job development, and placement of individuals with disabilities. Spring.

CNSL 563 Medical Aspects of Rehabilitation Counseling 3

Prereq.: Admission to the graduate program or permission of the department chair; CNSL 500 (may be taken concurrently). 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. Spring.

CNSL 564 Rehabilitation and Disability Case Management Practices 3

Prereq.: CNSL 560. 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. Spring.

CNSL 568 Alcohol and Drug Counseling 3

Prereq.: CNSL 501 or permission of department chairperson. Basic assessment, intervention, and treatment techniques in working with individuals and families affected by alcohol and other drug abuse. Spring.

CNSL 571 Mental Health Counseling 3

Prereq.: CNSL 501. Principles and practices for assessing, diagnosing, treating, and preventing mental and emotional disorders. Includes general principles for promoting optimal mental health and human development. Spring.

CNSL 575 Co-Occurring Substance Abuse and Mental Health Counseling 3

Prereq.: CNSL 568 and CNSL 571. Unique etiology, treatment, and recovery concerns of persons diagnosed with co-occurring substance abuse and mental health disorders. Forensic and legal issues working with persons mandated or coerced into treatment.

CNSL 580 Topics in Counseling 1 TO 3

Prereq.: Degree candidacy or permission of instructor. 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.

CNSL 581 Orientation to Professional Counseling 1

Prereq.: Admission to Official Certificate Program in Professional Counseling. Introduction to the practice of professional counseling. Review of licensure laws, ethical practices and professional associations. Students will enhance their understanding of the role and work of a professional counselor. Summer.

CNSL 591 Supervised School Guidance Internship 3 TO 6

Prereq.: CNSL 503 and permission of instructor. 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.

CNSL 592 Supervised Internship in Higher Education 3

Prereq.: CNSL 532 or permission of instructor. 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.

CNSL 594 Supervised Clinical Practice-Professional Counseling 3

Prereq.: Permission of instructor. Supervised 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.

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. Fall.

CNSL 599 Thesis 3

Prereq.: Permission of advisor; ED 598 or equivalent as accepted by advisor; completion of 24 credits; and a 3.00 overall GPA. Preparation of the thesis under the supervision of the thesis advisor.

Criminology and Criminal Justice

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

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. Study Area II

200s

CRM 220 Ideology & Violence 3

Examination of the causes and consequences of politically-motivated violent crime. Irregular. Study Area III

CRM 230 Law Enforcement & Society 3

Prereq.: CRM 110 (C- or higher). 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. Study Area III

CRM 231 Criminal Procedure and the Courts 3

Prereq.: CRM 110 (with a grade of C- or higher). 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.

CRM 238 Corrections 3

Prereq.: CRM 110 (with a grade of C- or higher). 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.

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. Irregular.

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. Study Area III

CRM 260 Criminology 3

Prereq.: CRM 110 (C- or higher). 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.

300s

CRM 322 Research Methods in Criminal Justice 3

Prereq.: CRM 230, CRM 231, CRM 238, and CRM 260 (all with grades of C- or higher). 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.

CRM 330 Domestic Violence 3

Prereq.: CRM 230, CRM 231, CRM 238, and CRM 260 (all with grades of C- or higher). 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. Irregular.

CRM 360 Victimology 3

Prereq.: CRM 230, CRM 231, CRM 238, and CRM 260 (all with grades of C- or higher). Current theory and research regarding the victims of crime. Topics include victim vulnerability and culpability, restitution, mediation, treatment, and compensation. Majors only. Irregular.

CRM 361 Principles and Ethics in Criminal Justice 3

Prereq.: CRM 230, CRM 231, CRM 238, CRM 260 (all with grades of C- or higher). Examination of selected principles of law enforcement, courts,

and corrections. Overview of ethical dilemmas relevant to criminal justice.

CRM 362 Crime and Capitalism 3

Prereq.: CRM 230, CRM 231, CRM 238, and CRM 260 (all with grades of C- or higher). Critical examination of capitalism in crimes against humanity; white collar, corporate, transnational, and government crime; and the creation of a criminal underclass. Majors only. Irregular.

CRM 363 Constitutional Law and the Criminal Justice System 3

Prereq.: CRM 230, CRM 231, CRM 238, and CRM 260 (all with grades of C- or higher). 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. Irregular.

CRM 364 Criminal Justice Risk and Resilience 3

Prereq.: CRM 230, CRM 231, and CRM 238 and CRM 260 (all with C- or higher). 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. Irregular.

CRM 365 Criminal Law and Legal Writing 3

Prereq.: CRM 230, CRM 231, CRM 238, and CRM 260 (all with grades of C- or higher). Sources of criminal law, limitations of criminal law, the elements of criminal law, criminal law and the Constitution, criminal defense, and criminal offenses. Fundamental principles of legal writing including memoranda and briefs. Irregular.

CRM 366 Extreme Offending 3

Prereq.: CRM 230, CRM 231, CRM 238, and CRM 260 (all with grades of C- or higher). 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.

CRM 367 Criminal Justice Prevention and Policy Planning 3

Prereq.: CRM 230, CRM 231, CRM 238 and CRM 260 (all with grades of C- or higher). This course is designed to provide students with a broad analysis of both historic and contemporary crime control strategies implemented by the police, courts, legislators, and the correctional system. Studies indicating strengths and weaknesses of each strategy are examined. The course will offer suggestions as to where more research in this area might be best directed. Irregular.

CRM 368 Defendant Assessment in the Legal System 3

Prereq.: CRM 230, CRM 231, CRM 238, and CRM 260 (all with grades of C- or higher). This course will focus on the various ways defendants are assessed and evaluated within the legal system (e.g., competence to stand trial, the insanity defense, juror evaluation, etc.). Emphasis will be placed on social science research across several disciplines (e.g., criminology, psychology, sociology, etc.) to achieve a better understanding of defendant assessment issues. Irregular.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

CRM 401 Hate Crimes 3

Prereq.: CRM 322 (with a grade of C- or higher). 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. Irregular.

CRM 403 Juvenile Offending: Origins and Interventions 3

Prereq.: CRM 322 (with a grade of C- or higher). This course will introduce students to the theory and research-based causes of juvenile offending and evidence-based intervention. Irregular.

CRM 404 Investigative Interviewing 3

Prereq.: CRM 322 (with grade of C- or higher). Principles, procedures, and research regarding crime-related investigative interviewing. Recommended (as opposed to detrimental) interviewing techniques for adult and child witnesses/victims of crimes. Irregular.

CRM 411 Community Corrections 3

Prereq.: CRM 322 (with a grade of C- or higher). 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, probation, parole, and alternatives to corrections. Irregular.

CRM 412 Crime Prevention 3

Prereq.: CRM 322 (with a grade of C- or higher). 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. Irregular.

CRM 420 Current Issues in Criminal Justice Policy 3

Prereq.: CRM 322 (with a grade of C-or higher). 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. Irregular.

CRM 433 Independent Study in Criminal Justice 1 TO 3

Prereq.: CRM 322 (with a grade of C-or higher). 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. On demand.

CRM 435 Supervised Field Studies in Criminal Justice I 3

Prereq.: CRM 322 (with a grade of C-or higher), senior status and permission of internship coordinator. Internship placement in a criminal justice setting under faculty direction and supervision. Corresponding class meetings and assignments are also required. Students must arrange for placement by contacting the internship director semester in advance. Fall, Spring, Summer.

CRM 450 Drugs and Society 3

Prereq.: CRM 322 (with a grade of C-or higher). For graduate students, admission to the M.S. Criminal Justice Program and in good standing; or permission of the department chair. 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. Majors only. Irregular. [GR]

CRM 460 Sexual Predators 3

Prereq.: CRM 322 (with a grade of C-or higher). Traces sexually aggressive behavior from its etiology to its manifestation in offending 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. Irregular.

CRM 475 Controlling Anger and Aggression 3

Prereq.: CRM 322 (with a grade of C-or higher). For graduate students admission to the M.S. Criminal Justice Program and in good standing; or permission of department chair. Multi-disciplinary overview of theory and research on anger and aggression. Topics include the emotion of anger, theories of aggression, and intervention strategies. Majors only. Irregular. [GR]

CRM 478 Current Topics in Criminal Justice 1 TO 3

Prereq.: CRM 322 (with a grade of C-or higher). 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. Irregular.

Criminal Justice

500s

CJ 501 Proseminar on the Nature of Crime 4

Prereq.: Admission to the Criminal Justice Program or permission of department chair. Societal, legal, and cultural definitions of criminal behavior, theories of crime causation, and society's reaction to violation of law. Courses required as special condition for admission to the program must be completed or taken concurrently. Fall.

CJ 510 Proseminar on Law and Social Control 3

Prereq.: Admission to the Criminal Justice program or permission of department chair. Law as a means of social control, including history and philosophy of law, the interrelationship between law and other social institutions, such as the economy and the polity, 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. Spring.

CJ 520 Proseminar on the Administration of Justice 3

Prereq.: Admission to the Criminal Justice program or permission of department chair. Critical analysis of the purpose and efficacy of those institutions which comprise the criminal justice system. Includes an exploration of discretion, ethics, and cultural diversity in criminal justice. Courses required as special condition for admission to the program must be completed or taken concurrently. Fall.

CJ 525 Program Planning and Evaluation 3

Prereq.: CJ 501 or 510 or 520; admission to the M.S. Criminal Justice Program and in good standing; or permission of the department chair. Planning and evaluating programs which encourage pro-social behavior of convicted offenders, with emphasis on programs in correctional institutions. Program areas include education, vocational training, substance abuse treatment, parenting, and anger management. Spring.

CJ 530 Offender Profiles 3

Prereq.: CJ 501 or 510 or 520 and admission to the M.S. Criminal Justice Program and in good standing; or permission of the department chair. Provides students with the background and practical knowledge to identify different types of mental illness and personality styles most often encountered among offenders, including sociopathy, poor impulse control, addictive personality, and poor management of anger and aggression. Fall.

CJ 533 Research Methods in Criminal Justice 4

Prereq.: Admission to the Criminal Justice program or permission of department chair. Examines methods of scientific inquiry as used in criminal justice. Topics include experimental and non-experimental design, survey research, evaluation research, scaling, sampling and coding. Courses required as special condition for admission to the program must be completed or taken concurrently. Spring.

CJ 534 Quantitative Analysis in Criminal Justice Research 4

Prereq.: CJ 533 and admission to the M.S. Criminal Justice Program and in good standing; or permission of the department chair. Analysis of quantitative criminal justice data using computer applications. Spring.

CJ 535 Correctional Counseling 3

Prereq.: CJ 501 or 510 or 520 and admission to the M.S. Criminal Justice Program and in good standing; or permission of the department chair. Overview of techniques of counseling as applied to the criminal/juvenile offender. Treatment issues focus on relapse prevention, group treatment, cognitive distortions, and negative imagery. Also included are typologies and evaluation of risk levels. Irregular.

CJ 539 Delinquency and Control 3

Prereq.: CJ 501 or 510 or 520 and admission to the M.S. Criminal Justice Program and in good standing; or permission of department chair. Study of juvenile delinquency from theoretical, conceptual, and legal perspectives. Attention given to nature and extent of delinquency and suspected causes of youthful misbehavior. Policy issues, control initiatives, and relevant research are critically analyzed. Irregular.

CJ 560 Sexual Offending 3

Prereq.: CJ 501 or CJ 510 or CJ 520 and admission to the Criminal Justice Graduate Program and in good standing or permission of department chair. Explores theories of sex offending, subtypes of sex offenders, assessment practices with sex offenders, models of sex offender treatment, and criminal justice strategies to reduce recidivism. Irregular.

CJ 573 Managing Criminal Justice Employees 3

Prereq.: CJ 501 or 510 or 520; admission to the Criminal Justice Program and in good standing; or permission of the department chair. Analysis of methods and strategies for managing human resources in criminal justice organizations. Topics include recruitment and selection, job analysis and classification, performance appraisal, training and development, employee unions, and workplace trends in criminal justice agencies. Irregular.

CJ 575 Developing Criminal Justice Organizations 3

Prereq.: CJ 501 or 510 or 520 and admission to the M.S. Criminal Justice Program and in good standing; or permission of department chair. Development, implementation and assessment of planned change in criminal justice organizations and system affiliates. Emphasis on the action research model, including assessment of organizational needs, determination of goals; program design, implementation, and evaluation within the context of both paramilitary and non-paramilitary structures. Spring.

CJ 577 Advanced Independent Reading and Research in Criminal Justice 1-3

Prereq.: Admission to the M.S. Criminal Justice Program or permission of department chair. 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. On demand.

CJ 578 Special Topics in Criminal Justice 3

Prereq.: Admission to the M.S. Criminal Justice Program or permission of department chair. Study of a specialized area of research or theory in criminal justice. May be repeated with different topics for up to 6 credits. Irregular.

CJ 580 Public Policy in the Criminal Justice System 3

Prereq.: CJ 501 or 510 or 520 and admission to the M.S. Criminal Justice Program and in good standing; or permission of department chair. Survey of the major theoretical and empirical studies of public policy as they relate to criminal justice agencies, including policy analysis models; typologies of policy outcomes; agenda setting; and policy formulation, implementation and impact. Irregular.

CJ 597 Agency Collaborative Project 3

Prereq.: CJ 533, completion of 21 credits of approved graduate study, admission to the M.S. Criminal Justice Program and in good standing. Preparation of a research project (Plan C) within a criminal justice agency under the supervision of an agency and faculty advisor. The research 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.

CJ 599 Thesis 3

Prereq.: CJ 533, completion of 21 credits of approved graduate study (or permission of thesis advisor), and a 3.00 overall GPA. Preparation of the thesis under the supervision of a thesis advisor. On demand.

Dance

Note: DAN 151-157 and 377 are general activity courses and are open to all students.

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

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. Fall.

DAN 152 Beginning Ballet 1

Introduces fundamentals, historical background and terminology of ballet. Application of barre exercises, basic positions, and beginning center floor work will be developed. May be repeated for a maximum of 2 credits with permission of instructor. Spring.

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. Irregular.

200s

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.

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. Irregular. Study Area I [1]

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. Fall.

DAN 236 Principles of Choreography 2

Prereq.: DAN 235. 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. Fall.

DAN 252 Intermediate Ballet 1

Attention will be given to a full ballet barre with more complex adagio and allegro work. Turns will be emphasized. May be repeated for a maximum of 2 credits with permission of instructor. Spring.

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. Irregular.

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. Open only to Athletic Training and Exercise Science students.

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. Irregular. Study Area I [1]

300s

DAN 377 Modern Dance & Theory 1

Prereq.: DAN 151 or DAN 272 or permission of department chair. 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. May be repeated for a maximum of 3 credits with 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. Study Area I [1]

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"**DAN 477 Dance Methods 3**

Prereq.: DAN 272, DAN 377, and admission to the professional program in Physical Education or permission of instructor. Explore appropriate methods for teaching K-12 dance. Gain an understanding of student and discipline-centered teaching styles, effective classroom management, and teaching practice. Professionals from dance and physical education will be involved. Irregular.

DAN 480 Project: Dance 1 TO 3

Prereq.: Permission of instructor. Individual projects in choreography, research, or production under the guidance of dance/theatre staff. Irregular. [GR]

Design (Graphic/Information)

Note: Students enrolled in the following courses will be assessed a \$65 Design Lab Fee: DES 222, 225, 322, 325, 326, 425, 436, 438, 439, 465, 498, 499.

Contact the department at 860-832-2557 for additional information.

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

DES 100 Introduction to Graphic/Information Design 3

Overview of the principles, practices, and purposes of the field of graphic/information design. Not recommended for majors. Irregular. Study Area I

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. Fall. Study Area I

200s

DES 222 Graphic/Information Design I 3

Prereq.: ART 130 (with a grade of C- or higher). 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.

DES 225 History & Design of Typography 3

Prereq.: DES 222 (C- or higher). Exploration of the history of letterforms including exercise in design and application in contemporary use. Majors only. Fall.

300s

DES 322 Graphic/Information Design II 3

Prereq.: DES 222 (grade of B or higher) and DES 225 (C- or higher) and either ART 230 or 224 (with a grade of C- or higher). 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.

DES 325 Digital Imaging / Motion Graphics I 3

Prereq.: DES 322 (with a grade of C- or higher) admission to BA Graphic/Information Design or permission of instructor. 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. Fall.

DES 326 Digital Imaging / Motion Graphics II 3

Prereq.: DES 325 (with a grade of C- or higher). 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. Spring.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

DES 419 History of Design 3

Prereq.: ART 110 or 112 or 113 (with grades of C- or higher). History and philosophy of design function and aesthetics. Topics include graphic design, industrial design, and architectural design. NOTE: A grade of C or better is needed for graduate students to count this course as a prerequisite. [] [GR]

DES 425 Three-Dimensional Imaging for Graphic/Information Design 3

Prereq.: DES 325 (C- or higher). 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. Spring.

DES 436 Graphic/Information Design III 3

Prereq.: ART 224 and DES 322 (both with grades of C- or higher). 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. [GR]

DES 437 Design Internship 3

Prereq.: DES 326 and DES 436 (grade of C- or higher) and permission of instructor. Internship with professional graphic/information design organization. Open to majors only.

DES 438 Graphic/Information Design IV 3

Prereq.: DES 436 (with grade of C- or higher). 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. [GR]

DES 439 Central Design 3

Prereq.: DES 326 and DES 436 (both with grades of C- or higher) and successful Central Design portfolio review; permission of instructor. Graphic/information design practice. Features real project and production situations with simulation of a real world graphic/information design atmosphere. Open to majors only. [GR]

DES 465 Topics in Graphic/Information Design 3

Prereq.: Permission of instructor. Selected topics in graphic/information design. May be repeated with different topics for a maximum of six credits. Open to majors only. [GR]

DES 498 Independent Study in Graphic/Information Design 1 TO 3

Prereq.: Permission of instructor. Special independent work to meet individual interest in areas not covered by regular curriculum. May include interdisciplinary information design projects. May be repeated with different topics for a maximum of 6 credits. Open to majors only. On demand. [GR]

DES 499 Computer Applications for Graphic/Information Design 3

Prereq.: DES 326 (with a grade of C- or higher) and DES 425 (with a grade of C- or higher) or permission of instructor. 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. [GR]

500s

DES 501 Graphic/Information Design Theory I 3

Prereq.: Admission to graduate program in Information Design or permission of program coordinator. Critical analysis of the purpose and evolution of graphic/information design theory, integrity, and computer application. Includes problem solving. Fall.

DES 502 Graphic/Information Design Theory II 3

Prereq.: DES 501 (with a grade of C or higher) and admission to graduate program in Information Design. Continuation of DES 501. Additional theory and applications. Technology, economic, and ethical issues will be explored. Spring.

DES 503 Graphic/Information Design Practice I 3

Prereq.: DES 502 (with a grade of C or higher). Applied design research and practice in graphic/information design. Emphasis on creativity, practical problem solving, technical proficiency, and presentation. Fall.

DES 504 Graphic/Information Design Practice II 3

Prereq.: DES 503 (with a grade of C or higher). Continuation of DES 503. Additional research and practice, portfolio, and presentation development. Spring.

DES 520 Advanced History of Design 3

Prereq.: DES 419 (with a grade of C or higher) or permission of instructor. 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.

DES 537 Advanced Design Internship 3

Prereq.: DES 503 (with a grade of C or higher), portfolio review, and permission of instructor. Internship with professional graphic/information design organization. On demand.

DES 597 Research Project (Plan C) 3

Prereq.: DES 503, 598 (both with grades of C or higher), completion of 21 credits of planned program, and a 3.00 overall GPA. 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.

DES 598 Research Methods in Design 3

Prereq.: DES 503, 520 (both with grade of C or higher and student in good standing) or permission of instructor. 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. Fall.

Earth Sciences

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

ESCI 100 Search in Earth Science 3

Examination of various topics, contemporary issues and problems in earth sciences. Three hours of lecture per week. Cannot be used to meet requirements for majors or minors in earth science. No credit given to students having take ESCI 100 or ESCI 101 with the same topic. Course may be repeated one time with a different topic. Irregular. Study Area IV

ESCI 101 Search in Earth Science with Laboratory 3

Examination of various topics, contemporary issues and problems in earth sciences. Two lectures and one, two-hour lab per week. Cannot be used to meet requirements for majors or minors in earth science. No credit given to students having taken ESCI 100 or ESCI 101 with the same topic. Course may be repeated one time with a different topic. Irregular. Study Area IV

ESCI 110 Introduction to the Earth 3

Prereq.: No more than 5 credits in Earth Science. Descriptive introduction to the astronomical, geological, and meteorological studies of the earth that allow an understanding of the earth as a physical environment. No credit given students with credit in ESCI 111. May not be applied to a major or minor in Earth Sciences. Study Area IV

ESCI 117 Introduction to the Solar System 3

Prereq.: MATH 099 or equivalent. An introductory course in descriptive astronomy focusing on the solar system, including coordinate systems, the Earth-Moon system, light and telescopes, and the structure of the solar system. No credit will be given to Physics or Earth Sciences majors or to students with credit for ESCI 178. Study Area IV

ESCI 118 Introduction to Stars and Galaxies 3

Prereq.: MATH 099 or equivalent. An introductory course in descriptive astronomy focusing on stars and galaxies, including stellar evolution, galaxies, and the origin and fate of the universe. No credit given to Physics or Earth Sciences majors or to students with credit for ESCI 179. Study Area IV

ESCI 121 Physical Geology 4

Investigation of the major features of the earth and its materials, and the interaction of the geologic processes active on the surface and in the interior of the earth. Topics include volcanoes, rivers, glaciers, earthquakes, desert and coastal processes. Three lectures and one, three-hour lab per week. One or more field trips. CSUS Common Course. Study Area IV

ESCI 122 Historical Geology 4

Prereq.: ESCI 121. Earth history, emphasizing earth's changing geographic pattern through time, history and development of life, climates of past as revealed by study of stratified rocks of earth's crust. Three lectures and one three-hour laboratory period per week. Spring. Study Area IV

ESCI 129 Introduction to Meteorology 4

Prereq.: MATH 099 or placement exam. Introductory course dealing with atmospheric composition, structure, and basic motions. The nature of high and low pressure systems, severe weather, how the National Weather Service works. Three lectures and one two-hour laboratory per week. Study Area IV

ESCI 178 Planetary Astronomy 4

Prereq.: MATH 101 or placement exam. Study of the members of the solar system, their motions, and compositions. Topics will include physical laws of motion and radiation, comparative planetology, the origin and structure of the solar system. Three lectures and one two-hour laboratory per week. No credit given to students with credit for ESCI 117. Fall. Study Area IV

ESCI 179 Stellar Astronomy 4

Prereq.: MATH 101 or placement exam. Study of stars as separate bodies and members of clusters and galaxies. Topics will include properties of stars, stellar evolution, galaxies, and cosmology. Emphasis will be placed on methods astronomers use to study stars. Three lectures and one two-hour laboratory per week. No credit given to students with credit for ESCI 118. Spring. Study Area IV

200s

ESCI 221 Mineralogy 4

Prereq.: ESCI 121 and CHEM 161 and CHEM 162 Study of minerals, their formation, occurrence, properties, composition, and classification. Topics include crystal chemistry, internal crystal structures, optical and other physical properties, identification of crystal forms and mineral specimens, and an introduction to petrology. Three lectures and one three-hour laboratory per week. One or more one-day field trips. Fall. (O)

ESCI 223 Stratigraphy and Sedimentology 4

Prereq.: ESCI 122. Study of the processes and patterns of sedimentation as well as the spatial and temporal distribution of strata. Both ancient and modern depositional environments will be investigated. Three, one-hour lectures; one, three-hour lab; and one or more one-day field trips. Spring. (E)

ESCI 278 Observational Astronomy 4

Theory and practice of observational astronomy. Topics include solar and lunar observation, naked eye observation, and coordinate systems, telescope usage and design. Two lectures and two two-hour labs per week. Fall. Study Area IV

ESCI 290 Field Methods in Geology 2

Prereq.: ESCI 122. Methods and equipment used in field geology, including use of a Brunton compass, outcrop description and sketching, basic mapping techniques, sampling methods, notebook maintenance, use of global positioning system (GPS) technology, geologic maps and cross sections, 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 required. NOTE: Required of all sophomore majors in Earth Science Geology specialization. Fall.

300s

ESCI 321 Structural Geology 4

Prereq: ESCI 122 and ESCI 221. Study of the geometry and origin of rock structures that are products of earth deformation. These include folds and faults, as well as microstructures. Emphasis will be placed on recognition and interpretation of structures through field and laboratory studies. Three lectures and one three-hour laboratory per week. One or more one-day field trips are required. Fall. (O)

ESCI 322 Igneous and Metamorphic Petrology 4

Prereq: ESCI 122 and ESCI 221. 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 analysis of rocks will be emphasized in the laboratory. One or more one-day field trips. Spring. (O)

ESCI 330 Astrophysics 3

Prereq.: MATH 221, and PHYS 122 or PHYS 126; or permission of instructor. Overview of astrophysical concepts, including electromagnetic radiation, stellar structure and evolution, binary systems, galactic rotation and evolution and cosmology. Spring. (E)

ESCI 335 Physical Oceanography 3

Prereq.: CHEM 161 and 162, and PHYS 121. Introduction to physical properties and chemical composition of seawater, ocean currents and ocean circulation, and the physical characteristics of the seafloor. Also covered is the interrelationship of the ocean with atmospheric circulation and world climate. Three lectures per week. Spring. (O) [GR]

ESCI 360 Research Methods in the Earth Sciences 1

Prereq.: Junior standing and Earth Science major. Investigation of the process of research, from the scientific method through writing a scientific proposal. Research results presented by written report, oral or poster presentation. Spring.

ESCI 378 Comparative Planetology 3

Prereq.: ESCI 121 or ESCI 178. Study of the different natures of planets and large satellites of the solar system with the goal of better understanding the origin and history of the earth. Spring. (E)

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"**ESCI 424 Geomorphology 4**

Prereq.: ESCI 121; for graduate students permission of department chair. Scientific study of landforms on the earth's surface. A systematic analysis of a wide variety of landforms, with an emphasis on the processes that form them. Tectonic and climate controls of geomorphic systems are considered as are the impacts of human activities. Three, one-hour lectures, and one three-hour laboratory per week. One or more one-day field trips. Fall. (O) [GR]

ESCI 425 Glacial and Quaternary Geology 3

Prereq.: ESCI 121. Examination of the role of glaciers in Earth's climate system with a focus on the Quaternary period; the mechanics of glaciers and their role in large-scale geomorphic change; and the characteristics of the Pleistocene glacial deposits of southern New England. One or more one-day field trips. Spring. (O)

ESCI 431 Introduction to Hydrogeology 4

Prereq.: ESCI 121, MATH 152 and CHEM 161 and 162; or permission of department chair. Overview of hydrologic and hydrological factors controlling the occurrences and dynamics of groundwater. Groundwater chemistry, quality, and contamination will also be covered. Three lectures and one three-hour laboratory per week. One or one-day field trips. Spring. (O) [GR]

ESCI 442 Weather Analysis and Forecasting 4

Prereq.: ESCI 462 and MATH 152 or permission of instructor. Basics of analysis and forecasting. National Weather Service (NWS) codes and

interpretation, graphical analysis techniques, NWS facsimile products, applications of thickness and thermal wind equations, thermodynamic diagrams and their usefulness, cross-sectional analysis, tilt of pressure systems, quasi-geostrophic theory, performance characteristics of NWS prediction models. Three lecture hours and a three-hour laboratory per week. Fall. (O) [GR]

ESCI 450 Environmental Geology 3

Prereq.: ESCI 121 or permission of instructor. Geological factors that control or affect human habitat avoiding, or compensating for geological hazards. Applied geology from an environmental perspective that focuses on interactions between humans and Earth surface processes. Study of natural hazards such as river flooding, landslides and debris flows, earthquakes, volcanic eruptions, coastal hazards. Surface and ground water use and pollution are also covered. Fall. (E) [GR]

ESCI 452 Independent Study in Earth Science 1 TO 4

Prereq.: Approved plan of study on arrangement with supervising instructor and approval of department chair. 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. [GR]

ESCI 460 Senior Project 1 TO 3

Prereq.: ESCI 360, senior standing as an earth science major, and written permission of both project advisor and department chair. 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. The Senior Project may span only one semester earning one to three credits, or two separate semesters for a maximum of six credits. Fall, Spring.

ESCI 461 Physical Meteorology 3

Prereq.: ESCI 129, PHYS 121 or 125 (may be taken concurrently), or permission of instructor. Examination of the physical basis of the earth's atmosphere. Structure, composition, gas laws, atmospheric thermodynamics and hydrostatics, atmospheric stability, solar radiation, and the energy budget of the earth. Three lecture hours per week. Fall. (E) [GR]

ESCI 462 Dynamic Meteorology 3

Prereq.: ESCI 461, MATH 126 or 221 (may be taken concurrently). Continuation of ESCI 461, with emphasis on dynamic processes of the earth's atmosphere. Equations of motion, geostrophic and gradient winds, thickness and thermal wind, circulation and vorticity, mechanism and influences of pressure changes. Three lecture hours per week. Spring. (O) [GR]

ESCI 478 Planetary Image Analysis 3

Prereq.: PHYS 126. Theory and application of image analysis to determine the geologic history of solar system objects from spacecraft datasets. Spring. (O)

ESCI 480 Internship in Earth Sciences 1 TO 3

Prereq.: Senior standing and permission of the student's advisor. Students serving in the program will serve as interns, obtaining outside industrial and/or research experiences in an environment directly related to their specialization. Internship[s] may be in any area of astronomy, earth science, geology, meteorology, or planetary science. Projects will be supervised by one or more department members. Written report or poster presentation required. On demand.

ESCI 490 Topics in Earth Science 3-4

Selected studies in earth science which are not offered presently in the curriculum of the department. Course may be repeated with different topics. [GR]

500s

ESCI 518 Topics in Astronomy 3

Prereq.: Prior permission of instructor. Topics will vary each time course is offered. Combination of lecture, discussion, and student seminar presentations. May be taken more than once for credit under different topics.

ESCI 519 Topics in Geology 3

Prereq.: Prior permission of instructor. Topics will vary each time course is offered. Combination of lecture, discussion, and student seminar presentations. May be taken more than once for credit under different topics.

ESCI 598 Research in Earth Science 3

Prereq.: Admission to the M.S. program in Natural Sciences, and 15 credits in planned program of Earth Science, and permission of instructor. Course on theory and practice of conducting research in astronomy, geology, meteorology. Includes study of professional literature, evaluation of data-gathering techniques. Application of statistical methods to data; formation of multiple working hypotheses and verification of hypotheses. Classic problems in earth sciences are studied. On demand.

ESCI 599 Thesis 3

Prereq.: ESCI 598, permission of the thesis advisor and a 3.00 overall GPA. Preparation of the thesis under the supervision of the thesis advisor.

Economics

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

200s

ECON 200 Principles of Economics I 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. CSUS Common Course. Study Area II

ECON 201 Principles of Economics II 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. CSUS Common Course. Study Area II

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. Study Area II

300s

ECON 300 Macroeconomics 3

Prereq.: ECON 200, 201. Theoretical analysis of determination of national income and economic growth. CSUS Common Course. Fall.

ECON 305 Microeconomics 3

Prereq.: ECON 200, 201. 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. Spring.

ECON 308 Political Economy 3

Prereq.: ECON 200 and ECON 201. Critical examination of the history and evolution of U.S. capitalism. Traditional and alternative approaches, with an emphasis on class analysis and current controversies in economic theory and policy making. Fall.

ECON 310 Mathematical Economics I 3

Prereq.: ECON 200, 201, MATH 125 or MATH 152, or permission of instructor. Applications in economics of functions, differential calculus, maxima and minima, Lagrange multipliers, matrices, and determinants. Fall.

ECON 311 Mathematical Economics II 3

Prereq.: ECON 310. A continuation of ECON 310. Examination of economic problems in a dynamic framework. The use of integrals, differential equations, and difference equations will be discussed as applied to economics. A brief introduction to linear programming and game theory is included.

ECON 398 Topics in Economics 3

Prereq.: ECON 200 and 201, or permission of instructor. 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.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

ECON 420 Urban Economics 3

Prereq.: ECON 200, 201. 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. [GR]

ECON 430 International Economics 3

Prereq.: ECON 200, 201. 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. [I] [GR]

ECON 435 Economic Development 3

Prereq.: ECON 200. Problems of accelerating development in developing countries and maintaining development in prosperous countries. From

view points of theory, history, and policy, this course attempts to explain forces that lead to economic development. [I] [GR]

ECON 445 Labor Economics 3

Prereq.: ECON 200, 201. 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. [GR]

ECON 450 Money, Credit, and Banking 3

Prereq.: ECON 200. Money and its functions, including structure of the American banking system, with emphasis on monetary theory and policy. [GR]

ECON 455 Public Finance 3

Prereq.: ECON 200, 201. 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. [GR]

ECON 460 Economic Forecasting 3

Prereq.: ECON 200, 201 and STAT 104 or equivalent. 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. [GR]

ECON 462 Industrial Organization 3

Prereq.: ECON 201. 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. [GR]

ECON 465 Government and Business 3

Prereq.: ECON 201. Role of government in the mixed economy, with special emphasis on antitrust laws, regulation and deregulation, social legislation, and public enterprise. [GR]

ECON 470 Managerial Economics 3

Prereq.: ECON 201. 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. [GR]

ECON 475 History of Economic Thought 3

Prereq.: ECON 200, 201. Evolution of economic thought from Ancient Greece to current doctrines. [GR]

ECON 485 Econometrics 3

Prereq.: ECON 200, 201 and STAT 104 or equivalent. Application of statistical methods to economics. Emphasis is placed on statistical inference, regression analysis, and real-world applications using the computer. Spring. (O) [GR]

ECON 498 Advanced Topics in Economics 3

Prereq.: ECON 200 and 201, or permission of instructor. 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. [GR]

ECON 499 Independent Study in Economics 1 TO 3

Prereq.: Permission of instructor. 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. [GR]

Education

See also Education-Elementary, Education-Secondary, Education-Teacher, Educational Foundations, Educational Technology, Reading, Special Education, Technology Education, and Vocational-Technical Education

1. Jump to level:
2. [400s](#)
3. [500s](#)

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

ED 498 Individual Study Project 1 TO 6

Prereq.: Permission of Department Chair. 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.

500s

ED 501 Probe in Education 1 TO 3

Prereq.: Permission of faculty advisor. In-service experience designed to meet the specific needs of school personnel.

ED 511 Principles of Curriculum Development 3

Examination of selected programs including stated objectives, organizational patterns, curriculum materials, and instructional strategies. This examination will utilize various models of decision making.

ED 515 Professional Ethics and Law for Teachers 3

Prereq.: EDT 540, EDL 555, ED 598. Ethical and legal basis of local, state, and national policies dealing with classroom practices and student rights, with emphasis on professional responsibility for meeting the diverse needs of students.

ED 517 Evaluation 3

Introduction to the fundamental principles of measurement and evaluation. Emphasis will be placed on the construction of classroom achievement tests, analyzing test results, and on interpreting standardized test scores.

ED 520 Instructional Programs for Diverse Learners 3

Prereq.: EDT 540, EDL 555, ED 598. 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.

ED 523 Collaboration, Coaching, and Instructional Leadership 3

Prereq.: EDT 540, EDL 555, ED 598, or permission of the Department Chair. Knowledge about adult learning, collaboration, and effective group processes to facilitate professional development and shared accountability for student learning. Supporting colleague growth as coach, critical friend, or team leader.

ED 524 leadership and the Dynamics of Organizational Change 3

Prereq.: EDT 540, EDL 555, ED 598, or permission of the Department Chair. 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.

ED 540 Educational Motivation and the Learning Process 3

Multidisciplinary approach to understanding of underachievement and resistance to learning. Emphasis on innovative ways of effecting learning by means of sociological, psychological, and educational advances in practice and theory.

ED 545 Integration of Methods of Research and Assessment 6

Prereq.: Admission to the full-year post-baccalaureate certification program and a 3.00 overall GPA. 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.

ED 591 Curriculum, Instruction, and Assessment I 3

Prereq.: ED 598, EDT 540, EDL 555, ED 515, ED 520, EDL 523. Principles of standards-based elementary and secondary curriculum development, implementation, and curricular evaluation. Development of formative and summative evaluations to monitor student progress. Serves as capstone

Plan E. Fall.

ED 592 Curriculum, Instruction, and Assessment II 3

Prereq.: ED 591. Continuation of ED. Spring.

ED 598 Research and Data for School Improvement 3

Research based approach with emphasis on design and execution of school-based collaborative inquiry. Analyzing data from formative and summative assessments to improve decisions about instruction, practice, and student learning.

ED 599 Thesis 3

Prereq.: PSY 512 (or equivalent) or permission of instructor; completion of 18-24 credits; and a 3.00 overall GPA. Preparation of the thesis under the supervision of the thesis advisor.

Education—Early Childhood

EDEC 551 Programs and Curricula in Early Childhood Education 3

Prereq.: Matriculation in the M.S. program. Analysis of contemporary early childhood program models and practices including their historical and philosophical foundations. Includes an examination of criteria for establishing and evaluating contemporary early childhood programs. On-site observations and interaction with young children required. Fall. (O)

EDEC 552 Programs and Curricula in Early Childhood Education II 3

Prereq.: EDEC 551 and matriculation in the M.S. program. Study of the implementation of developmentally appropriate curricula for children, ages three to eight. Emphasis on integrated curricula, learning centers, effective management, and active parent involvement. On-site observations and interaction with young children required. Spring. (O)

EDEC 553 Family, School and Community Partnerships in Early Childhood Education 3

Prereq.: Matriculation in the M.S. program. In-depth exploration of impact of family and community on the education of young children. Study of school-child-family relationships which foster healthy development. Examination of comprehensive community and governmental support systems for children and families. Fall. (E)

EDEC 554 Observation and Assessment in Early Childhood Education 3

Prereq.: EDEC 552 and matriculation in M.S. program. Study of appropriate assessment of young children's development and progress and their relationship to child-centered curricula and home-school communication. Strategies for assessing children's cognitive/language, social/emotional, and psycho-motor development. Play assessment and student portfolios are also included. Spring. (E)

EDEC 561 Administration in Early Childhood Education 3

Prereq.: EDEC 552. Policies, procedures, and leadership responsibilities for the management of early childhood education programs. Topics include implementation of goals, budgeting and financial management, and meeting standards for a State of CT Child Day Care license. Summer.

Education-Elementary

1. Jump to level:
2. [300s](#)
3. [400s](#)
4. [500s](#)

300s

EDEL 322 Effective Elementary Teaching 3

Prereq.: Admission to the Professional Program of Teacher Education, EDTE 315. Taken concurrently with EDTE 320. Emphasis on use of standards, development and alignment of objectives, daily and long-range plans, instructional strategies, assessment strategies and reflection on practice. Students develop and implement lessons.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

EDEL 415 Elementary Social Studies Methods 1

Prereq.: Admission to the Professional Program of Teacher Education; EDEL 322 and EDTE 320. Taken concurrently with EDTE 420. Introduction to Introduction to content and process of elementary social studies. Students examine curricular goals and materials, research and construct integrative, developmentally appropriate social studies lessons, and implement lesson in field setting. 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.

EDEL 430 Elementary Education Student Teaching 1 TO 9

Prereq.: Permission of the Director of the Office of Field Experiences. 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. 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.

EDEL 485 Creating Classroom Community (K-8) 3

Examination of the purposes, processes, and strategies of varied approaches to building community in elementary education and kindergarten through grade eight classrooms. Irregular. [GR]

500s

EDEL 508 Current Trends in Elementary Education 3

Prereq.: Matriculation into M.S. program in Elementary Education. Current trends in Elementary School Curriculum, with emphasis on issues, models, and processes. Local and state projects will be examined. Not applicable to provisional, Intermediate Administrator/Supervisor certification. Fall.

EDEL 509 Education and the Development of Cultural Understanding 3

Prereq.: Matriculation into M.S. program in Education. Study of attitudes, values, and expectations of educators as related to cultural diversity. Strategies presented to develop respect of students for cultural pluralism. Research related to the reduction of racial, ethnic, and sex stereotyping and biases is surveyed. Spring.

EDEL 512 Assessment of Learning 3

Prereq.: EDEL 508. Study of current assessment theory and practices, with emphasis on designing data-driven classroom instruction based on a variety of formal and informal assessments. Spring.

EDEL 529 Analysis of Teaching 3

Prereq.: Acceptance to Elementary Education M.S. program and successful completion of 18 credits in planned program. Analysis of instructional practices and their effects on learners. Diverse perspectives are analyzed, including selected conceptual frameworks, effective teaching, literature, research, and wisdom of practice. Spring.

EDEL 537 Social Studies Methods (1-6) 3

Prereq.: Teacher certification or permission of instructor. Examines social studies as taught in elementary classrooms, considering both content and process. Approaching material from multiple perspectives, students will design developmentally-appropriate instruction. Fall.

EDEL 591 Designing Action Research in Elementary and Early Childhood Education 3

Prereq.: Matriculation in either Elementary or Early Childhood, M.S., completion of 21 credits in planned program including ED 598, Plan C designation, and a 3.00 GPA. Students design action research projects having implications for the education of young learners in their own professional settings. Course outcomes include individual proposals specifying problem statement, theoretical framework, resource review, local context description, strategy, and evaluation design. Fall.

EDEL 592 Implementing and Documenting Action Research in Elementary and Early Childhood Education 3

Prereq.: EDEL 591, and a 3.00 GPA. Students implement strategies proposed in EDEL 591. The final report documents findings and conclusions drawn from collected data and personal insights into their intervention. Presentation supplements the written report. Spring.

Education-Secondary

Note: Student teaching courses (EDSC 412, 414, 415, 417, 419, 420, 421, 428, 429, 435) may not be repeated without the permission of the director of the Office of Field Experiences, as well as the chairs of the student's major department and of Teacher Education.

1. Jump to level:
2. [400s](#)
3. [500s](#)

400s

EDSC 412 Student Teaching, TESOL, All Levels 12

Prereq.: ENG 496; admission to the Professional Program and permission of the Director of the Office of Field Experiences. 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. On demand.

EDSC 414 Preliminary Student Teaching (Technology Education) 6

Prereq.: Admission to the Professional Program in Teacher Education and permission of the Director of the Office of Field Experiences. 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. CT law requires fingerprinting and a criminal background check for the filed experiences in this class. Fingerprinting must be completed prior to the beginning of class.

EDSC 415 Student Teaching (Technology Education) 6

Prereq.: Admission to the Professional Program in Teacher Education and permission of the Director of the Office of Field Experiences. 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. CT law requires fingerprinting and a criminal background check for the filed experiences in this class. Fingerprinting must be completed prior to the beginning of class.

EDSC 417 Student Teaching (Elementary P.E.) 6

Prereq.: Admission to the Professional Program in Teacher Education and permission of the Director of the Office of Field Experiences. 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. CT law requires fingerprinting and a criminal background check for the filed experiences in this class. Fingerprinting must be completed prior to the beginning of class.

EDSC 419 Student Teaching (Secondary School P.E.) 6

Prereq.: Admission to the Professional Program in Teacher Education and permission of the Director of the Office of Field Experiences. 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. CT law requires fingerprinting and a criminal background check for the filed experiences in this class. Fingerprinting must be completed prior to the beginning of class.

EDSC 420 Student Teaching - Elementary Music Education 4.5

Prereq.: Admission to the Professional Program for Teacher Education and permission of the Director of the Office of Field Experiences. 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. CT law requires fingerprinting and a criminal background check for the filed experiences in this class. Fingerprinting must be completed prior to the beginning of class.

EDSC 421 Student Teaching - Secondary Music Education 4.5

Prereq.: Admission to the Professional Program for Teacher Education and permission of the Director of the Office of Field Experiences. 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. CT law requires fingerprinting and a criminal background check for the filed experiences in this class. Fingerprinting must be completed prior to the beginning of class.

EDSC 425 Principles of Secondary Education 3

Prereq.: EDTE 314, or EDTE 316 or EDTE 317; admission to the Professional Program in Teacher Education. General methods of instruction including curriculum planning, assessment, classroom management and the responsibilities of the teacher with a focus on the 7-12 classroom. Thirty hours of content area major field experience is required for teacher candidates. Sciences, English, Mathematics, Modern Languages, and Business Education. CT law requires fingerprinting and a criminal background check for the filed experiences in this class. Fingerprinting must be completed prior to the beginning of class.

EDSC 428 Student Teaching - Elementary Art 5

Prereq.: Admission to the Professional Program of Teacher Education and permission of Director of the Office of Field Experiences. 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. 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.

EDSC 429 Student Teaching - Secondary Art 5

Prereq.: Admission to the Professional Program of Teacher Education and permission of Director of the Office of Field Experiences. 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. 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.

EDSC 435 Secondary Education Student Teaching 3 TO 9

Prereq.: Admission to the Professional Program in Teacher Education and permission of the Director of the Office of Field Experiences. 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. 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.

500s

EDSC 505 Innovations in Secondary Education 3

Examination of current areas of research in secondary education, including restructuring of high schools, alternatives to tracking, innovations in various subject areas and interdisciplinary studies, team teaching, and grouping practices. Fall. (E)

EDSC 556 Instructional Theory and Practice 3

Prereq.: Admission to an M.S. program. Advanced study of the theoretical bases of instruction, focusing on the analysis of instructional models and their use in the secondary school classroom. Spring. (O)

EDSC 582 Supervision of Secondary School Teaching 3

Prereq.: Permission of content area department chair and assistant dean of Education and Professional Studies. Supervised teaching experience for graduate students who possess a Durational Shortage Area Permit from the State of Connecticut, signed by the EPS assistant dean. Not to be credited towards master's degree. To meet teacher certification program requirements, student must enroll in two sequential semesters and earn at least a C in each semester.

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. Spring. (E)

Education-Teacher

1. Jump to level:
2. [300s](#)
3. [400s](#)
4. [500s](#)

200s

EDTE 210 Education & Teacher Leadership in Diverse Learning Communities 4

Exploration of teaching, diversity, and the roles teachers play as leaders in diverse educational learning communities. Inquiry-based approach includes participant-observation, case analysis, examination of beliefs and research on learning and teaching. Field experience required. Taken concurrently with EDT 210.

300s

EDTE 314 Applied Learning Theories (K-12 Programs) 3

Prereq.: Acceptance to Pre-professional or Pre-Certification programs in music education, technology education, or art education. Coreq.: MUS 310, or ART 301, or PE 299 or TE 399. Examination of principles pertinent to teaching and learning. Emphasizes the use of educational theory and research related to K-12 classroom practices, learning communities, and learners' developmental needs with special emphasis on elementary level. 20 hours of field experience in assigned settings required. Fall.

EDTE 315 Principles of Learning: Elementary 4

Prereq.: Admission to the Professional Program. 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. CT law requires fingerprinting and a criminal background check for the filed experiences in this class. Fingerprinting must be completed prior to the beginning of class. CT law requires fingerprinting and a criminal background check for the filed experiences in this class. Fingerprinting must be completed prior to the beginning of class.

EDTE 316 Principles of Learning (Sec/K-12) 4

Prereq.: Admission to the Profession Program in Secondary or K-12 Education. 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 level. 30 hours of certification/age-specific field experience in assigned setting(s) required. CT law requires fingerprinting and a criminal background check for the filed experiences in this class. Fingerprinting must be completed prior to the beginning of class. CT law requires fingerprinting and a criminal background check for the filed experiences in this class. Fingerprinting must be completed prior to the beginning of class.

EDTE 320 Practicum in Elementary Education I 1

Prereq.: Admission to the Professional Program of Teacher Education, EDTE 315. Taken concurrently with EDEL 322 and RDG 316. Forty-five hours of on-site experience (two visits per week during regular school hours). Emphasizes classroom observation and teaching experience in an assigned public school setting appropriate to certification level. Includes related seminar. May be repeated for a maximum of two credits with permission of department chair. CT law requires fingerprinting and a criminal background check for the filed experiences in this class. Fingerprinting must be completed prior to the beginning of class. CT law requires fingerprinting and a criminal background check for the filed experiences in this class. Fingerprinting must be completed prior to the beginning of class.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

EDTE 420 Practicum in Elementary Education II 1 TO 2

Prereq.: Admission to the Professional Program of Teacher Education; EDTE 320. Taken concurrently with EDEL 415 and RDG 412 in elementary education. Forty-five to 60 hours of on-site experience (two visits per week during regular school hours). Emphasizes teaching experience in an assigned public school setting appropriate to certification level. Includes related seminar. May be repeated for a maximum of two credits with permission of department chair. CT law requires fingerprinting and a criminal background check for the filed experiences in this class. Fingerprinting must be completed prior to the beginning of class. CT law requires fingerprinting and a criminal background check for the filed experiences in this class. Fingerprinting must be completed prior to the beginning of class.

EDTE 430 Topic Seminar in Leadership and Learning Communities 1

Prereq.: Admission to the Professional Program; concurrent with student teaching. 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.

EDTE 498 Individual Study Project 1 TO 3

Prereq.: Permission of department chair. Guided individual study of problems of special interest. May be repeated for up to 3 credits. Open only to advanced students. may not be substituted for professional education program requirements. On demand.

500s

EDTE 502 Focus on Diversity in Education 3

Prereq.: Admission to M.S. Program in Early Childhood Education, Elementary Education, or Educational Studies/Secondary - Strand 2 (Secondary Curriculum and Instructional Issues). Study of diversity in educational settings and practices, with emphasis on processes of inquiry, reflection, collaboration and critical analysis. This course is a prerequisite to all other courses in early childhood, elementary and secondary education. May be taken concurrently with other courses with permission of advisor. Fall, spring, summer.

EDTE 598 Introduction to Research in Education 3

Prereq.: Admission to a masters program in education. Examination of basic concepts related to quantitative and qualitative research that helps educators develop knowledge and skills for interpreting and analyzing educational research.

Educational Foundations

1. Jump to level:
2. [400s](#)
3. [500s](#)
4. [700s](#)

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

EDF 415 Educational Foundations 3

Prereq.: Admission to the Professional Program. 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.

500s

EDF 500 Contemporary Educational Issues 3

Contemporary educational issues and the ways they are affected by social, political, and economic forces of society.

EDF 516 School and Society 3

Prereq.: Matriculation into M.S. program. 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. Fall, Spring, Summer.

EDF 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. Fall. (O)

EDF 525 History of American Education 3

Prereq.: Admission to a Master's program. Study of the ideas, policies, practices, and social movements that have historically influenced and shaped the development of education in the United States. Fall.

EDF 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. Irregular.

EDF 528 Comparative and International Education 3

Prereq.: Admission to a Master's program. 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. Fall.

EDF 535 Special Topics in Educational Foundations 3

Prereq.: Admission to Master's program. Inquiry into special topics in educational foundations. Examples include school violence, gender and education, multicultural education, national standards, and testing. Fall.

EDF 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. Spring.

EDF 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. Summer.

EDF 597 Supervised Readings in History and Philosophy of Education 1 TO 3

Selected supervised readings in the history and philosophy of education by faculty in collaboration with a student's interests and professional needs. May be repeated for a maximum of three credits. On demand.

700s

EDF 700 The Purposes of Education in America 3

Prereq.: Admission to the Ed. D. program. 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. Summer.

Educational Leadership

1. Jump to level:
2. [500s](#)
3. [600s](#)
4. [700s](#)

500s

EDL 513 Supervision 3

Prereq.: Admission to an M.S. program or permission of department chair. Study of major problems confronting supervisors in improving instruction: interpreting educational objectives to staff and public, coordinating education programs, teacher-supervisor relations, evaluating instruction, and supervision of student teachers. Summer.

EDL 514 Administration 3

Prereq.: Admission to an M.S program or permission of department chair. Study of leader's roles in developing programs in education. Major areas include: obligation toward learners, staff, boards of education, and parents; administrative organization, curriculum development, and stimulating research.

EDL 551 Curriculum Leadership 3

Prereq.: ED 511 and graduate matriculation. Study of curriculum leadership with special emphasis on curriculum processes, curriculum management, decision making, and current trends in the field. Fall, Summer.

EDL 552 Topics in Educational Leadership 3

Prereq.: Permission of department chair. Comprehensive inquiry into a specific area of educational leadership. It may be repeated once with different content. Irregular.

EDL 553 Internship in Student Development 1 TO 3

Prereq.: Permission of instructor. A supervised internship concerning leadership activities in institutions of higher education. Students initiate and complete an action plan and professional portfolio.

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.

EDL 590 Leaders as Learners: Educational Leadership and Self-Assessment 3

Prereq.: Master's degree, three years teaching experience, application to the Sixth Year Certificate program; or permission of department chair. 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. Spring, Summer.

EDL 594 Teacher Leadership Field Experience I 3

Prereq.: ED 592. Open only to students accepted into the Teacher Leadership Specialization. Part of a year-long supervised teacher leadership internship. Students initiate action plans that document collaborative curricula. Instructional and organizational change strategies promoting equitable outcomes for all students. Fall.

EDL 595 Teacher Leadership Field Experience 3

Prereq.: 594. Continuation of EDL 594. Spring.

600s

EDL 606 Leadership in Teaching and Learning II 3

Prereq.: EDL 605. Continuation of EDL 605. Includes a second 35-hour on-site field experience in an urban public school (Sixth-Year Certificate students) or research component. Spring.

EDL 610 School Leadership I 3

Prereq.: Admission to the Sixth-Year Certificate program. Emphasis on enhancing students' repertoire of knowledge, skills and attitudes in identifying educational problems, and making informed decisions. Required 35-hour on-site field experience in a rural public school setting. Fall.

EDL 611 School Leadership II 3

Prereq.: EDL 610. Continuation of EDL 610. Includes a second 35-hour on-site field experience in a rural public school setting. Spring.

EDL 615 Understanding External Environments of School Leadership I 3

Prereq.: Admission to the Sixth-Year Certificate program. Knowledge and skills for political and community leadership, including policy development, resource allocation, ethical and legal obligations, risk management, and contract negotiation. Required 35-hour on-site field experience in a suburban public school setting. Fall.

EDL 616 Understanding External Environments of School Leadership II 3

Prereq.: EDL 615. Continuation of EDL 615. Includes a second 35 hour on-site field experience in a suburban public school setting. Spring.

EDL 618 Understanding the Political and Ethical Environment of Educational Leadership 3

Prereq.: 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. Knowledge and skills for political and ethical leadership, including ethical and legal decision making, policy development, fiscal management, and contract negotiations. Summer.

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.

EDL 652 Advanced Topics in Educational Leadership 1 TO 6

Prereq.: Admission to the Sixth-Year Certificate or Ed.D. program, and permission of instructor. Seminar addressing a specific topic in organizational leadership for educational settings. May be repeated for a total of 6 credits. Irregular.

EDL 656 Leadership and Supervision in Teaching and Learning 3

Prereq.: 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. Focuses on strategic leadership skills of using instructional leadership, supervision, communication and technology to improve teaching and learning. Summer.

EDL 681 The Superintendency I: Leading District Operations 3

Prereq.: Admission to Ed.D or Sixth-Year program; or chair's permission based on meeting requirements for Intermediate Administration Certification. The work of the superintendent from an internal perspective. Operational skills and understandings necessary to manage and coordinate the organizational structures and resources of the district to ensure learning for all students. Fall.

EDL 682 The Superintendency II: Board & Public Relations 3

Prereq.: EDL 681 or permission of chair, based on meeting requirements for Intermediate Administration Certification. The work of the superintendent from an external perspective. Creating effective relationships with the board of education the public.

EDL 690 Internship in Educational Leadership I 2

Prereq.: Admission to the Sixth-Year Certificate program, and completion of 18 credits in planned program or permission of instructor. 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. Fall, Summer.

EDL 691 Internship in Educational Leadership II 2

Prereq.: EDL 690. 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. Spring, Summer.

EDL 692 Internship in Educational Leadership III 2

Prereq.: EDL 691. Part three of a year-long supervised administrative internship. Students complete actions plans, and submit building leadership and district leadership portfolios. Spring, Summer.

EDL 695 Internship: The Superintendency I 3

Prereq.: Admission to Ed.D., or Sixth-Year Certificate program; 092 cert.; EDL 681/682 and/or permission of department chair. 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. Fall.

EDL 696 Internship: The Superintendency II 3

Prereq.: EDL 695. 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. Spring.

EDL 697 Readings and Conference 1 TO 3

Prereq.: Admission to the Sixth-Year Certificate program and permission of Department Chair. 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. Irregular.

700s

EDL 701 Leading Organizational Change I: Theory 3

Prereq.: Admission to the Ed.D. program. 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. Summer.

EDL 702 Leading Organizational Change II: Program Development & Evaluation 3

Prereq.: EDL 701. 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. Summer.

EDL 705 Leadership to Promote Effective Teaching & Learning 1 TO 4

Prereq.: Admission to Ed.D. program. 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. Fall, spring, summer.

EDL 710 Inquiry Seminar I: The Study of Human & Organizational Learning 2

Prereq.: Admission to the Ed.D. program. Educational research ethics and the relationship between research and the purposes of schooling. Students refine information-gathering skills and plan a field study to describe human and/or organizational learning (to be completed during the academic year). Summer.

EDL 711 Inquiry Seminar II: Quantitative and Qualitative Research I 3

Prereq.: EDL 710. Quantitative and qualitative methods for educational research with emphasis on case studies, quasi-experimental design, and instrumentation. Preparation of an integrative literature review and proposal for a field study about student or organizational learning. Fall.

EDL 712 Inquiry Seminar III: Quantitative and Qualitative Research II 3

Prereq.: EDL 711. Continuation of EDL 711, with emphasis on methods of analysis such as qualitative coding and applied statistics. Completion of a written report and formal presentation of the year-one field study. Spring.

EDL 713 Inquiry Seminar IV: Study of Organizational Change 2

Prereq.: EDL 712. Application of research methodologies to studies of the change process. Students develop a conceptual framework, an integrative review of the literature, and an inquiry plan for a study of organizational and cultural change. Summer.

EDL 714 Inquiry Seminar V: Advanced Research Design 3

Prereq.: EDL 713. Advanced topics in research study such as randomized field experiments, interrupted time series, and interaction analysis. Matching design and method to contexts, questions and researcher intentions are discussed. Students begin developing dissertation topics. Fall.

EDL 715 Inquiry Seminar VI: The Dissertation Proposal 3

Prereq.: EDL 714. Students complete the leadership portfolio requirement and prepare the dissertation proposal, including the literature review, methods, and instrumentation. Continued study of advanced research methods. Spring.

EDL 716 Inquiry Seminar VII: Dissertation I 2

Prereq.: EDL 715. Defense of the dissertation proposal. Students work through the summer with their dissertation advisor and committee members both individually and in small group tutorials. Summer.

EDL 717 Inquiry Seminar VIII: Dissertation II 5

Prereq.: EDL 716. 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. Fall.

EDL 718 Inquiry Seminar IX: Dissertation III 5

Prereq.: EDL 717. 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. Spring.

EDL 719 Inquiry Seminar X: Dissertation IV 1

Prereq.: EDL 718. Required continuation of EDL 718 for students who have not completed their dissertations or received approval to enroll in EDL 720. May be repeated for up to six credits over three calendar years.

EDL 720 Inquiry Seminar XI: Disseminating Research Findings 2

Prereq.: EDL 718 and permission of doctoral program coordinator. Students defend their completed dissertations and present their findings during professional development workshops for educational leaders. Preparation of conference proposals and articles for publication. Summer.

Educational Opportunity Program

EOP 101 E.O.P Student Success Seminar 1

Prereq.: Open to E.O.P Freshmen only. Helps students acclimate to the campus environment during their first year, first semester. Enhances students' personal, academic, and social development skills to cope with the demands of college life. Speakers discuss academic skills, coping skills, financial aid, and scholarship tips. Fall.

Educational Technology

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

200s

EDT 210 Introduction to Educational Technology 1

Prepares potential educators 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.

300s

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.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

EDT 415 Developing Instructional Materials 1

Prereq.: EDT 210. Design, utilization skills and production techniques are further developed as students design, implement and evaluate an instructional multimedia program within a Web 2.0 framework (web development, video, podcast).

EDT 490 Instructional Computing 3

Examination and application of computers and other related technologies to various teaching situations with emphasis on developing skills in developing and evaluating instructional software programs. [GR]

500s

EDT 500 Instructional Design and Evaluation I 3

Prereq.: Permission of instructor. 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. Fall.

EDT 501 Message Design and Production 3

Prereq.: Permission of instructor. 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. Fall.

EDT 510 Design Tools 3

Prereq.: Admission to the EDT program or permission of instructor. 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. Summer.

EDT 512 Computer-Based Instruction 3

Prereq.: EDT 500, 501 or permission of instructor. Application of computer-based strategies for instruction, including interactivity, adaptivity, feedback, branching, and evaluation, with emphasis on screen design, developing flow charts and storyboarding. Spring.

EDT 514 Integrating Technology in the Classroom Curriculum 3

Prereq.: Admission to the EDT program or permission of instructor. Issues and strategies related to integrating technology in the curriculum. Instruction will be delivered both online (Blackboard Vista) and on campus. Theoretical basis and a practical skills orientation for leading technology integration effort. Summer, winter.

EDT 521 Interactive Multimedia for Instruction I 3

Prereq.: EDT 512. Application of multimedia principles emphasizing screen design, branching, instructional, and media strategies, using flow charts, storyboards, and evaluation techniques. Spring.

EDT 522 Instructional Design and Evaluation II 3

Prereq.: EDT 500. Examination and application of cognitive theories and new instructional design concepts, such as needs assessment and media strategies. Fall.

EDT 531 Interactive Multimedia for Instruction II 3

Prereq.: EDT 521. 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. Summer.

EDT 532 Distance Learning and Networking I 3

Prereq.: Matriculation or permission of instructor. Analysis of distance learning and networking, including hands-on experiences to design, produce, evaluate, and manage students' own distance learning and networking programs. Spring.

EDT 533 Distance Learning & Networking II 3

Prereq.: EDT 532. This course is the second in the distance education sequence and continues the work started in EDT 532. Attention will be paid to developing advanced distance learning solutions involving Internet, off-line materials and interactive instructional movies. Students will create distance education instruction for clients. Summer.

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.

EDT 597 Final Project 3

Prereq.: Permission of EDT advisor; completion of 24 credits in planned program; and an overall GPA of 3.00. Culminating experience. Students develop an instructional project that demonstrates acquired skills in design, production, and evaluation in Educational Technology. Summer.

EDT 598 Inquiry in Educational Technology 3

Prereq.: Admission to the EDT program or permission of instructor. 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. Summer, winter.

700s

EDT 700 Topics in Leadership for Technology in Schools 1 TO 3

Prereq.: Admission to the Ed.D. program. 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. Summer.

Electro-Mechanical Technology

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

EMEC 114 Introduction to Energy Processing 3

Survey of energy conversion systems, including aspects of energy transmission and control employed by industry to increase its value and usefulness. Laboratory experiments include development and use of various energy systems. Open to all students. Three hours lecture and two hours laboratory, course meets five hours per week.

300s

EMEC 303 Electro-Mechanical Converters 3

Prereq.: TC 213 or CET 223 or PHYS 122. Analysis of DC and AC single and three-phase motors and generators with focus on performance characteristics and their function in control systems. Three hours lecture and two hours laboratory, course meets five hours per week. Fall.

EMEC 323 Mechatronics 3

Prereq.: TE 213 or CET 223 or PHYS 122. Application of embedded microprocessor control systems in machines and mechanical devices. Topics include microprocessor and PLC software control program interface with electrical/electro-mechanical devices. Experiences with laboratory examples and applications. Three hours lecture and two hours laboratory, course meets five hours per week. Fall.

EMEC 324 Fluid Power Systems 3

A study of the design and fabrication, diagnosis, and repair of fluid power systems, including hydraulics, pneumatics, and fluids. Three hours lecture and two hours laboratory, course meets five hours per week.

EMEC 333 Data Acquisition & Control 3

Prereq.: TE 213 or CET 223 or PHYS 122. An examination of digital electronic and microprocessor-based techniques for data acquisition and control. Interfacing, signal processing, and computer communications are included. Three hours lecture and two hours laboratory, course meets five hours per week. Spring.

EMEC 334 Mechanisms for Automation 3

Prereq.: TE 213. A study of the design and fabrication, diagnosis, and repair of mechanical power systems, including mechanical transmission and control components. Three hours lecture and two hours laboratory, course meets five hours per week. Spring.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

EMEC 463 Programmable Logic Controllers 3

A study of programmable sequence controllers and programmable logic controllers for motion and process control. The use of ladder logic is included. Three hours lecture and two hours laboratory, course meets five hours per week. Spring. [GR]

Engineering

1. Jump to level:
2. [200s](#)
3. [400s](#)

100s

ENGR 150 Introduction to Engineering 3

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.

200s

ENGR 240 Spreadsheet and Engineering Problem Solving Tools 3

Prereq.: ENGR 150 (C- or higher) and MATH 116 or 119 or higher; or permission of instructor. 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.

ENGR 251 Engineering Mechanics I - Statics 3

Prereq.: ENGR 150 (C- or higher) and PHYS 125 (C- or higher) and MATH 221 (may be taken concurrently). 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. Fall.

ENGR 252 Engineering Mechanics II - Dynamics 3

Prereq.: ENGR 251 (C- or higher) and ENGR 240. Engineering vector mechanics of non-equilibrium conditions (dynamics), covering the kinematics of motion and kinetics of particles and rigid bodies. Spring.

ENGR 257 Mechanics of Materials 3

Prereq.: ENGR 251 (C- or higher). The analysis of simple and combined stress, torsion, flexure, and deflection of beams, continuous and restrained beams, combines axial and bending loads, and columns. Spring.

ENGR 290 Engineering Technical Writing and Presentation 3

Prereq.: ENG 110. 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 lecture and two hours laboratory, course meets four hours per week. Skill Area I

ENGR 291 Engineering Diversity 3

Prereq.: ENGR 150 (C- or higher) or permission of instructor. Analysis of engineering diversity including legal, ethical, and equity consequences in engineering as influenced by the expansion of the global economy. Cultural, racial, and gender issues are emphasized, as well as regional differences. Fall, Summer. Study Area III [D]

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

ENGR 490 Fundamentals of Engineering (FE) 3

Prereq.: ET or CE, or ME senior standing or permission of instructor. 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. Spring.

Engineering Technology

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

200s

ET 233 Electrical Circuit Analysis 3

Prereq.: PHYS122, MATH 152 or 125. Analysis of electrical circuit components incorporating passive and active elements. Topics include laws and theorems applied to DC, AC, three-phase, diodes, and operational amplifier circuits; transient and steady state response; phasors, frequency response, and resonance. Spring.

ET 241 Applied Statics and Strength of Materials 3

Prereq.: PHYS 111 or PHYS 112, and MATH 115 or MATH 119 or MATH 121 or MATH 125. 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 Engineering Technology. Fall. Study Area IV

ET 251 Applied Mechanics I - Statics 3

Prereq.: ENGR 150; and PHYS 121 or PHYS 125; and MATH 136 (may be taken concurrently) or MATH 152. 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.

ET 252 Applied Mechanics II - Dynamics 3

Prereq.: ET 251. Introduction to kinematics of motion and kinetics of particles and rigid bodies.

300s

ET 300 Ergonomics 3

A study of the man/machine relationship necessary to achieve maximum productivity and job satisfaction. Emphasis will be placed on the physical work environment with considerations given to health and safety criteria.

ET 354 Applied Fluid Mechanics 3

Prereq.: ET 251. 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. Two hours lecture and two hours laboratory, course meets four hours per week. Fall.

ET 357 Strength of Materials 3

Prereq.: ET 251 or ENGR 251; and PHYS 121 or PHYS 125; and MATH 136 (may be taken concurrently) or MATH 152. The study of simple and combined stress, torsion, flexure, and deflection of beams, continuous and restrained beams, combined axial and bending loads, and columns. Computer applications. Not intended for engineering students.

ET 361 Engineering Technology Instrumentation 3

Prereq: STAT 104, ET 357. 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 hours lecture and two hours laboratory, course meets four hours per week. Fall.

ET 399 Engineering Economy 3

Prereq.: MATH 125 or MATH 135 or MATH 152. Economic analysis of financing technical or engineering projects and determining costs and justification of improvements as related to the construction and industrial infrastructure facilities. Fall, Spring, Summer. Study Area II

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

ET 495 Topics in Engineering Technology 3

Prereq.: ENGR 257 or ET 357; and permission of instructor. 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.

500s

ET 500 Topics in Engineering Technology 3

Prereq.: Admission to the MSET graduate program or permission of instructor. Selected topics in engineering/technical applications. Opportunity to acquire knowledge of new and emerging technologies. Not for independent study. May be taken as a different topic more than once for credit. Link course with ET 495. No credit given to students with previous credit on the same topic for ET 495. Irregular.

ET 501 Independent Study in Engineering Technology 3

Prereq.: Permission of instructor. 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. On demand.

ET 568 CAE Applied Finite Element Analysis 3

Prereq.: ET 357 and 464, or permission of instructor. Application of the finite element method to structural problems. Spring.

ET 592 Research and Development of Experiments 3

Prereq.: Matriculation in MSET program and completion of 15 credits of approved graduate study. Concepts and procedures for obtaining, evaluating, and reporting existing and measured data. Fall.

ET 598 Research in Engineering Technology 3

Prereq.: ET 592, permission of project advisor, and a 3.00 overall GPA. Technical laboratory project conducted under the supervision of project advisor. Written and oral defense of project required. On demand.

ET 599 Thesis 3

Prereq.: ET 592, permission of thesis advisor, and a 3.00 overall GPA. Preparation of thesis under supervision of advisor. Written and oral defense of research required. On demand.

Engineering Technology-Civil

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

ETC 122 Introduction to CAD for AEC I 3

Concepts of computer-aided drafting and design applied to engineering drawings and schematics for the architectural, civil, construction, electrical, and mechanical disciplines. Laboratory course utilizing AutoCAD application software. Three hours lecture and two hours laboratory, course meets five hours per week. Fall.

300s

ETC 353 Introduction to Engineering Surveying 3

Prereq.: MATH 115 or 119. 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. Three hours lecture and two hours laboratory, course meets five hours per week. Fall.

ETC 397 Structural Analysis 3

Prereq.: ET 357. Analysis of statically determined structures; influence lines, deflection analysis of trusses, beams and frames; introduction to indeterminate structural analysis using consistent deformation principles and moment distribution; computer applications.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

ETC 405 Applied Structural Systems 3

Prereq.: ET 241 or ET 251, and CM 356; or permission of instructor. 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. Spring. [GR]

ETC 451 Soil Mechanics & Foundations 3

Prereq.: ET 357. Fundamentals of soil behavior and its use as a construction material. Principles of effective strength, permeability, shear strength, and consolidation. Application to construction problems in shallow and deep foundations, slope stability, retaining structures and excavation drainage. Lecture/lab required. Fall. [GR]

ETC 454 Introduction to Transportation Engineering 3

Prereq.: ETC 353. Study of the planning, design, environmental concerns addressing, construction and maintenance of transportation projects using new and rehabilitated highway and bridge projects as focus points for lecture and laboratory work. Lecture/lab required. Fall. [GR]

ETC 457 Advanced Surveying 3

Prereq.: ETC 353 and MATH 125. 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.

ETC 458 GPS Mapping for GIS 3

Prereq.: ETC 353 or GEOG 378 or permission of instructor. Use of the Global Positioning System (GPS) to collect information for use in a Geographic Information System (GIS). Includes integration of vector and raster data sets with GPS data. Hands-on use of equipment is emphasized. [GR]

ETC 470 Structural Steel Design 3

Prereq.: ETC 356 and ET 397. An introduction to the analysis of steel structures using classical and computer methods. Application of design, fabrication, and construction in structural steel using standard specifications. Topics on beams, columns, trusses, and frames. Fall. [GR]

ETC 471 Reinforced Concrete Structures 3

Prereq.: ET 357 and ETC 397. Applications of design and construction in reinforced concrete and timber structures. Topics on beams, columns, slabs, footings, retaining walls, formwork, and pre-stressed concrete fundamentals. Spring. [GR]

ETC 472 Timber Structures 3

Prereq.: ETC 397. A study of the physical properties of wood used in structures and architecture. Influence on strength of moisture content, species, and preservation treatments are emphasized. Design and construction applications in bridges and buildings. Spring. [GR]

ETC 475 Hydrology & Storm Drainage 3

Prereq.: ETC 122 and ET 252 and 354; or permission of instructor. Engineering topics pertaining to the hydrological cycle. Computational techniques and the use of application software for analysis of rainfall and runoff. Design skills for stormwater mitigation will be applied to course project. Lecture/lab required. Spring. [GR]

ETC 476 Environmental Technology 3

Prereq.: CHEM 111 or CHEM 161 and 162 or CHEM 121 and MATH 115 or 119. Environmental effects on air, water, and land from construction activities. Case studies with discussion of corrective action. Fall. [GR]

ETC 497 Civil Technical Practice and Senior Project Research 2

Prereq.: ETC 353 or CM 353; ETC 397. First of a two-course sequence. Students work in teams in an environment appropriate to a professional Civil ET setting. Teams propose and develop 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. Fall.

ETC 498 Civil ET Senior Project (Capstone) 2

Prereq.: ETC 497. Second of two-course capstone sequence completing senior team project in engineering technology. Project teamwork, engineering methodology, and oral and written communication skills emphasized. Oral and written presentations required. Projects may originate from student, instructor, and/or industrial partner. Students must register to take the fall or spring NCEES FE exam. Spring.

500s

ETC 550 Global Positioning Systems Applications 3

Prereq.: ET 457. 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. Fall.

ETC 556 Architectural and Civil Engineering Technology Computer Aided Design 3

Prereq.: Admission to MSET or MSTM, or permission of E.T. department chair. MicroStation CAD software in practical projects applications. Introduction to 3D design and solid modeling. Irregular.

ETC 571 Design and Construction of Concrete Structures 3

Prereq.: Admission to the MSET program or permission of instructor. Design and construction aspects of concrete structures with reference to buildings and short-span bridges. Case studies construction failures. Computer methods of analysis and design. Fall. (O)

ETC 573 Foundation Analysis and Design 3

Prereq.: Admission to the MSET program or permission of instructor. 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. On demand.

ETC 574 Ground Improvement Techniques 3

Prereq.: Admission to the MSET program or permission of instructor. Principles of mechanical and chemical soil stabilizations, surcharging, dewatering, and deep dynamic compaction. On demand.

ETC 575 Earth and Earth Supported Structures 3

Prereq.: Admission to the MSET program or permission of instructor. Principles and methods for design and construction of flexible retaining structures, braced excavations, slurry walls, cellular cofferdams, and earth slopes. On demand.

ETC 577 Engineering Technology Project Administration 3

Examination of principles and practices of project administration. Topics include planning, budgeting, permitting, programming, personnel, legal, public involvement, tort liability, emergency handling, and dealing with federal and state government requirements. Fall.

ETC 578 Value Engineering for AEC 3

Prereq.: ET 399 or permission of department chair. 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. On demand.

Engineering Technology-Mechanical/Manufacturing

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

200s

ETM 256 Materials Science 3

Prereq.: MATH 115 or 119 or 121 and CHEM 111 or CHEM 161 and 162 or CHEM 121. Analysis of the structure of and engineering properties of ceramic, metallic, polymeric, elastomeric, and composite materials with relation to design and processing. Fall.

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. Fall, Spring, Summer.

300s

ETM 340 Geometric Dimensioning & Tolerancing 3

Prereq.: MFG 121 or MFG 216 or permission of instructor. Interpretation, application, and verification of GDT aspects of engineering designs per the latest ANSI Y14.5. Calculations with toleranced dimensions. Concepts of datums, material condition modifiers, functional gaging, fits, true position, combined tolerances, and runout. []

ETM 351 Mechanical Systems in Buildings 3

Prereq.: MATH 115 and MATH 125: or MATH 119; or MATH 121; or permission of instructor. 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. Irregular.

ETM 356 Materials Analysis 0 TO 3

Prereq.: CHEM 161, 162; ENGR 251 or ET 251 (either may be taken concurrently). 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. Fall.

ETM 358 Applied Thermodynamics 3

Prereq.: CHEM 161 and 162; MATH 136 or 152; and PHYS 121 or 125. Application of heat transfer, thermodynamics, and fluid mechanic principles to thermal system design based on engineering fundamentals of conduction, convection, and radiation heat transfer properties.

ETM 360 Computer Aided Planning (CAP) 3

Prereq.: STAT 104; ET 240 or CS 213. 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.

ETM 367 Machine Design 3

Prereq.: ET 252 and ET 357. Study of kinematics of gear trains and three-dimensional stress analysis of power transmission elements. Topics include fasteners, bearings, springs, permanent connection, stress concentrations, notch sensitivity, and failure prevention. Fall.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

ETM 422 Computer Systems and Integration 3

Prereq.: CET 113 or permission of instructor. 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 troubleshooting computer systems. Irregular.

ETM 423 Applied Feedback Control Systems 3

Prereq.: MATH 136 or MATH 221 and CET 236. Applied study of dynamic mechatronic feedback control systems. Topics include modeling of dynamic systems, dynamic response, feedback mechanisms, digital control, and design methods. Spring.

ETM 454 Applied Heat Transfer 3

Prereq.: ET 354 and ETM 358 or permission of instructor. 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. Irregular. [GR]

ETM 460 Computer Aided Design and Manufacturing (CAD/CAM) 3

Prereq.: ETM 260 or permission of instructor. Applied parametric solid modeling for design, drawing, assembly, mass property analysis, and manufacturing tool path simulation utilizing integrated CAD/CAM software. Emphasis on the design and manufacture of products. Two hours lecture and two hours laboratory, course meets four hours per week. Irregular.

ETM 461 Composites and Plastics Manufacturing Processes 3

Prereq.: ETM 256 or ETM 356, CHEM 111 or CHEM 161 and CHEM 162 or CHEM 121. 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. Spring. [GR]

ETM 462 Manufacturing Process Planning and Estimating 3

Prereq.: MFG 121 and MFG 216 and ETM 340 or permission of instructor. 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. [GR]

ETM 463 Plastics and Composite Tool Design 3

Prereq.: ETM 260 and ETM 461 or permission of instructor. Principles for design of molds and tooling for the production of plastic and composite products. Irregular.

ETM 464 CAD Solid Modeling and Design 3

Prereq.: ETM 260 and ETM 340; or permission of instructor. 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. Spring. [GR]

ETM 466 Design for Manufacture 3

Prereq.: ETM 260 and ETM 340 or permission of instructor. 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. [GR]

ETM 467 Applied Finite Element Analysis 3

Prereq.: ENGR 257 (C- or higher) or ET 357 (C- or higher) or permission of instructor. Application of the finite element method to structural engineering problems. Study of truss, beam, plane stress, plane strain, shell, and solid continuum finite elements; mesh generation; proper element density and element interfacing; and composite modeling problems. Two hours lecture and two hours laboratory, course meets four hours per week. [GR]

ETM 468 Composite Design & Analysis 3

Prereq.: ET 357; and ETM 256 or ETM 356; or permission of instructor. 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. Irregular.

ETM 497 Engineering Technology Senior Project Research 2

Prereq.: ET 361 (may be taken concurrently). 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. Fall.

ETM 498 Engineering Technology Senior Project (Capstone) 2

Prereq.: For Manufacturing Engineering Technology: ETM 497, ETM 462; ETM 466 (may be taken concurrently). For Mechanical Engineering Technology: ETM 497, ETM 367; ETM 467 (may be taken concurrently). 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. Spring.

500s

ETM 510 Engineering Optimization 3

Prereq.: Admission to MSET program or permission of instructor. 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. Irregular.

ETM 517 Automated Assembly and Manufacturing Cell Design 3

Prereq.: Admission to MSET or MSTM, or permission of Engineering department chair. Manufacturing center level programming and programming execution of different automated work cells. CNC mill programming, inventory control and automated assembly at the center level. Design of several work cells to work concurrently on product manufacturing. Fall. (E)

ETM 523 Contemporary Engineering Materials 3

Prereq.: Admission to the MSET or MSTM, or permission of Engineering department chair. 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. Spring. (E)

ETM 534 Concepts of Group Technology 3

Prereq.: Permission of instructor. 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. Spring.

ETM 540 Advanced Geometric Dimensioning & Tolerancing 3

Prereq.: STAT 104, ET 340; department chair. Advanced concepts and applications of ANSI and ISO GD&T standards. Analysis and calculations of tolerance distribution, fits, part interchangeability, combined tolerances, gage tolerances, measurement uncertainty budget, geometrical deviations measurements, statistical tolerancing, and the six-sigma design concept. Irregular.

ETM 542 Production Cost Estimates 3

Prereq.: ET 360 and 497, or permission of instructor. Principles and methods for evaluating costs and times crucial to engineering designs, tooling and production, with application of these principles to case studies and basic engineering design problems. Spring.

ETM 560 Computer Aided Manufacturing 3

Prereq.: Admission to the MSET or MSTM graduate program. Applied parametric solid modeling for manufacturing. Topics include cutter location source data generation, tool path simulation, machine data file generation, post processing and CNC program verification. Spring. (O)

ETM 563 Plastics Mold Engineering and Design 3

Prereq.: Admission to the MSET or MSTM graduate program. 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. Irregular.

ETM 569 Composite Design and Analysis 3

Prereq.: Admission to the MSET graduate program or permission of instructor. 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. Irregular.

ETM 572 Optimizing Engineering Productivity 3

Objective analytical techniques, modified with concepts of participative decision-making by the workforce, to illustrate the development of modern manufacturing processes in an engineering/technological workplace. Spring.

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. Fall.

English

Note: **General Prerequisite:** ENG 110 or an equivalent is a prerequisite for all other English courses, except ENG 099, ESL 108, ESL 109. Students majoring in English or Journalism or minoring in English, Journalism, Cinema Studies, Writing, or Creative Writing must earn a grade of C- or better in ENG 110 before taking additional ENG, CINE, or JRN courses.

ENG 298 is a prerequisite for all 300-level literature courses.

ENG 398 is a prerequisite for all 400-level literature courses (this does not include 491 or 492).

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

ENG 099 Remedial English 3

Focus on improvement of basic writing skills 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 ENG 099 must pass the course with a C- or better before successful completion of 30 hours of coursework. NOTE: Letter grade will affect GPA as if ENG 099 were a three credit course, but these credits will not count toward the number of credits required for graduation. Fall, Spring, Summer.

100s

ENG 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. ENG 110 or an acceptable equivalent is required of all students at CCSU. Skill Area I

Enrollment Policies: A score of 450 on the writing or critical reading portion of the SAT (or 21 on the ACT) is needed to enroll in ENG 110; otherwise, the student will be required to complete ENG 099 (Remedial English) prior to taking ENG 110. Students whose first or native language is not English should see the English Department Chair about alternatives to ENG 099. Students who have not completed their ENG 110 requirement prior to earning 61 credits are required to take both ENG 110 and 202.

200s

ENG 202 Intermediate Composition 3

Prereq.: ENG 110 or permission of department chair. 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. Skill Area I

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. Study Area I [I] [L]

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. Study Area I [I] [L]

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. Study Area I [L]

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. Study Area I [L]

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. Study Area I [L]

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. Study Area I [L]

ENG 212 African-American Literature 3

Survey of African-American writers from the eighteenth through twentieth centuries. Does not count toward the English major. Cross listed with AFAM 212. No credit given to students with credit for AFAM 212. Study Area I [L]

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. Study Area I [L]

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. Study Area I [L]

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. Cross listed with WGSS 215. No credit given to students with credit for WGSS 215 or WS 215. Study Area I [L]

ENG 220 Shakespeare 3

Selected tragedies, comedies, and history plays. Study Area I [L]

ENG 250 Contemporary Literature 3

Modern fiction, plays, and poetry in relation to modern life. Does not count toward the English major. Study Area I [L]

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. Study Area I [L]

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. Study Area I [L]

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. Study Area I [L]

ENG 270 Dramatic Enactment 3

Prereq.: ENG 110 or equivalent; restricted to English Elementary Education or pre-Elementary Education majors, except by permission of instructor. Introduction to the theory and applications of creative drama as an interpretive tool and a response to literature. (E)

ENG 274 Storytelling 3

Prereq.: ENG 110 or equivalent; restricted to English Elementary Education or pre-Elementary Education majors, except by permission of instructor. Study of the history, art, and technique of storytelling. Discussion of the skills involved in order to develop the student's competency in this oral tradition. Designed to enable the student to build a personal repertoire of stories for performance. (O)

ENG 298 Introduction to Literary Studies 3

Prereq.: ENG 110 (C- or higher) or equivalent. 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.

300s

ENG 310 Close Reading the Sentence 3

Prereq.: ENG 298, or permission of instructor for non-majors. 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. Irregular.

ENG 332 Medieval English Literature 3

Prereq.: ENG 298, or permission of instructor for non-majors. Old English and Middle English literature, exclusive of Chaucer, from the eighth through the 14th centuries. Most material read in translation.

ENG 333 The English Renaissance 3

Prereq.: ENG 298, or permission of instructor for non-majors. 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.

ENG 334 Seventeenth-Century Poetry & Prose 3

Prereq.: ENG 298, or permission of instructor for non-majors. British poetry and prose of the earlier 17th century, including Donne, Herbert, Marvell, Bacon, Burton, and Browne.

ENG 335 Restoration & Eighteenth-Century Literature 3

Prereq.: ENG 298, or permission of instructor for non-majors. British poetry, prose and drama from 1660 to 1798, including such writers as Dryden, Congreve, Addison, Swift, Pope, Fielding, Gay, Johnson, Goldsmith, and Sheridan.

ENG 336 The Romantic Age 3

Prereq.: ENG 298, or permission of instructor for non-majors. British Literature from Blake to 1832, including Wordsworth, Coleridge, Byron, Shelley, and Keats.

ENG 337 The Victorian Age 3

Prereq.: ENG 298, or permission of instructor for non-majors. Poetry and non-fiction prose from 1832 to 1900, including poetry of Tennyson, Browning and Arnold and prose of Carlyle, Mill, Newman, and Ruskin.

ENG 339 Modern British Literature 3

Prereq.: ENG 298, or permission of instructor for non-majors. 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.

ENG 340 Early American Literature 3

Prereq.: ENG 298, or permission of instructor for non-majors. 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.

ENG 341 The American Renaissance 3

Prereq.: ENG 298, or permission of instructor for non-majors. Prose and poetry of American romantic authors in the 19th century. Special emphasis on Poe, Hawthorne, Melville, Thoreau, Emerson, Whitman; contemporary ideologies. Cross listed with AMS 341. No credit given to students with credit for AMS 341.

ENG 342 American Realism & Naturalism 3

Prereq.: ENG 298, or permission of instructor for non-majors. Study of the period after the Civil War to about 1915, including such writers as Dickinson, Twain, James, Wharton, Crane, and Dreiser.

ENG 343 Modern American Literature 3

Prereq.: ENG 298, or permission of instructor for non-majors. Major American writers in the period between World War I and World War II; the ideological and social influences which shaped their art.

ENG 344 Contemporary American Literature 3

Prereq.: ENG 298, or permission of instructor for non-majors. Study of major American writers from WWII to the present, focusing on historical, cultural, and aesthetic movements of the time. Irregular.

ENG 345 Modern African-American Literature 3

Prereq.: ENG 298, or permission of instructor for non-majors. Study of selected writers, beginning with the Harlem Renaissance. 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

Prereq.: ENG 298, or permission of instructor for non-majors. Important U.S. Latino/a literary works in prose, poetry, drama, and essay. Cross-listed with LTN 347. No credit may be received by students who have received credit for LTN 347. Spring. Study Area I [I] [L]

ENG 348 Explorations of American Literature 3

Prereq.: ENG 298, or permission of instructor for non-majors. 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.

ENG 358 Explorations of British Literature 3

Prereq.: ENG 298, or permission of instructor for non-majors. 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.

ENG 360 The Bible as Literature: Old Testament 3

Prereq.: ENG 298, or permission of instructor for non-majors. Major books of Old Testament important to literature, their literary qualities, and their historical and cultural backgrounds. (E)

ENG 361 The Bible as Literature: The New Testament 3

Prereq.: ENG 298, or permission of instructor for non-majors. Major books of New Testament important to literature, their literary qualities and their historical and cultural backgrounds. Part of Apocrypha. (E)

ENG 362 Greek and Roman Literature 3

Prereq.: ENG 298, or permission of instructor for non-majors. Such major Greek and Roman writers as Homer, the Greek dramatists, Plato, Thucydides, Lucretius, and Virgil. No credit given to students who have taken ENG 363 or 364.

ENG 363 Greek Literature 3

Prereq.: ENG 298, or permission of instructor for non-majors. 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. [I]

ENG 364 Latin Literature 3

Prereq.: ENG 298, or permission of instructor for non-majors. 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. [I]

ENG 365 The Modern European Novel 3

Prereq.: ENG 298, or permission of instructor for non-majors. Representative works by such writers as Flaubert, Tolstoy, Dostoyevsky, Proust, Kafka, and Camus. [I]

ENG 367 Global Novel 3

Prereq.: ENG 298, or permission of instructor for non-majors. Explores the globalization of the novel genre since World War II, with emphasis on adaptations of the novel form in non-Anglo-European traditions. Irregular. [I]

ENG 370 Creative Nonfiction I 3

Prereq.: ENG 110. 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.

ENG 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.

ENG 372 Creative Writing: Fiction II 3

Prereq: ENG 371 or permission of instructor. 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.

ENG 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.

ENG 374 Creative Writing: Poetry II 3

Prereq.: ENG 373 or permission of instructor. Presupposes proficiency in vocabulary, poetry writing techniques, workshop methods. Students must already have a considerable body of work, and generate new work. Irregular.

ENG 375 Creative Nonfiction II 3

Prereq.: ENG 370. 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. Irregular.

ENG 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. Spring.

ENG 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. Irregular.

ENG 378 Creative Writing: Special Topics 3

Prereq.: One 300 level creative writing course or permission of instructor. Specific creative writing genres taught on a rotating basis. May be repeated with different topics for a maximum of 6 credits.

ENG 382 Travel Writing 3

Prereq.: ENG 235 or 236 or permission of instructor. 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.

ENG 388 Explorations of World Literature 3

Prereq.: ENG 298, or permission of instructor for non-majors. 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.

ENG 398 Topics in Literary Theory and Research 3

Prereq.: ENG 298. 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.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

ENG 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. [GR]

ENG 402 Advanced Composition & Technology in the English Classroom 3

Prereq.: ENG 110 and acceptance in the Professional Program of Teacher Education; or permission of instructor. 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.

ENG 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. [GR]

ENG 404 Fiction for Teachers 3

Secondary English Education majors only. Students are treated as practicing writers who are training to become teachers of literature and writing. Students engage in writing workshops and closely study the elements of fiction, en route to understanding the pedagogy of the teaching of writing. Spring, Summer.

ENG 405 Poetry for Teachers 3

Secondary English Education majors only. Students are treated as practicing poets who will read and discuss traditional and contemporary poetry en route to understanding the pedagogy of teaching poetry in the secondary schools. Summer, Fall.

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. Spring, Summer.

ENG 420 Teaching English in Secondary Schools 4

Prereq.: ENG 402 and acceptance into the Professional Program of Teacher Education. 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. 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.

ENG 435 Student Teaching Seminar 1

Prereq.: ENG 420, EDSC 435 (taken concurrently). Discussion of issues that arise in the student teaching placements. Emphasis on improving individual classroom practices.

ENG 445 American Drama 3

Prereq.: ENG 398, or permission of instructor for non-majors. Development of American drama and its contribution to literature. Irregular. [GR]

ENG 448 Advanced Studies in American Literature 3

Prereq.: ENG 398, or permission of instructor for non-majors. 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. Cross listed with AMS 448. No credit given to students with credit for AMS 448. [GR]

ENG 449 Major American Authors 3

Prereq.: ENG 398, or permission of instructor for non-majors. 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. [GR] [D]

ENG 450 Chaucer 3

Prereq.: ENG 398, or permission of instructor for non-majors. Readings in Chaucer, with special emphasis on *The Canterbury Tales* and *Troilus and Criseyde*. Irregular. [GR]

ENG 451 Milton 3

Prereq.: ENG 398, or permission of instructor for non-majors. Readings in Milton's prose and poetry, with emphasis upon *Paradise Lost* and *Samson Agonistes*. Irregular. [GR]

ENG 458 Advanced Studies in British Literature 3

Prereq.: ENG 398, or permission of instructor for non-majors. 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. [GR]

ENG 460 Shakespeare and Film 3

Prereq.: ENG 398, or permission of instructor for non-majors. 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. Cross-listed with CINE 460. No credit may be received by students who have received credit for CINE 460. Spring. (O)

ENG 461 Shakespeare: Major Comedies 3

Prereq.: ENG 398, or permission of instructor for non-majors. Close analysis of major comedies and pertinent critical problems. Fall. [GR]

ENG 462 Shakespeare: Major Tragedies 3

Prereq.: ENG 398, or permission of instructor for non-majors. Close analysis of major tragedies and pertinent critical problems. Spring. [GR]

ENG 463 Elizabethan & Jacobean Drama 3

Prereq.: ENG 398, or permission of instructor for non-majors. Major dramatists from Kyd to Ford, excluding Shakespeare. Irregular. [GR]

ENG 464 Restoration and 18th-Century Drama 3

Prereq.: ENG 398, or permission of instructor for non-majors. English drama from 1660 to 1800, primarily comedy. Readings from the works of such dramatists as Wycherly, Etherege, Dryden, Congreve, Vanbrugh, Farquhar, Steele, Gay, Fielding, and Sheridan. Irregular. [GR]

ENG 465 Global Cinema 3

Prereq.: ENG 398, or permission of instructor for non-majors. 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. Cross-listed with CINE 465. No credit may be received by students who have received credit for CINE 465. Irregular. [I]

ENG 466 American Cinema in the 60s and 70s 3

Prereq.: ENG 398, or permission of instructor for non-majors. 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. Cross-listed with CINE 466. No credit may be received by students who have received credit for CINE 466. Spring. (O)

ENG 467 Hitchcock 3

Prereq.: ENG 110. 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 Žižek. Cross-listed with CINE 467. No credit given to students with credit for CINE 467. Irregular.

ENG 470 The Victorian Novel 3

Prereq.: ENG 398, or permission of instructor for non-majors. Representative Victorian novelists with special emphasis on Trollope, Eliot, Dickens, Thackeray, and Hardy. Irregular. [GR]

ENG 474 Contemporary American Novel 3

Prereq.: ENG 398, or permission of instructor for non-majors. American novels which have come to prominence since World War II and the changing cultural environment which they reflect. Irregular. [GR]

ENG 475 The British Novel to 1832 3

Prereq.: ENG 398, or permission of instructor for non-majors. Form and content of the novel with readings selected from Behn, DeFoe, Richardson, Fielding, Sterne, Smollett, Johnson, Burney, Walpole, Austen, and Scott. Irregular. [GR]

ENG 476 The Modern British Novel 3

Prereq.: ENG 398, or permission of instructor for non-majors. Form and content of the novel with readings selected from Joyce, Woolf, Ford, Conrad, Lawrence, Huxley, Forster, Greene, Waugh, and others. Irregular. [GR]

ENG 477 Modern British Poetry 3

Prereq.: ENG 398, or permission of instructor for non-majors. Major works of Hardy, Hopkins, Yeats, D.H. Lawrence, Owen, Sassoon, Auden, Dylan Thomas, Larkin, Hughes, and others. Irregular. [GR]

ENG 478 Modern American Poetry 3

Prereq.: ENG 398, or permission of instructor for non-majors. The study of important American poets from Dickinson to the present. Irregular. [GR]

ENG 480 Modern Irish Literature 3

Prereq.: ENG 398, or permission of instructor for non-majors. 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. Irregular. [GR]

ENG 481 Digital Literary Studies 3

Prereq.: ENG 398, or permission of instructor for non-majors. Survey of theoretical and applied approaches to digital work in literary and cultural studies. Irregular.

ENG 483 Advanced Creative Nonfiction 3

Prereq.: ENG 375. 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. Fall.

ENG 484 Advanced Fiction Workshop 3

Prereq.: ENG 372 or permission of instructor. 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. Irregular.

ENG 485 Advanced Poetry Workshop 3

Prereq.: ENG 374 or permission of instructor. 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. Irregular.

ENG 486 World Literature and Film 3

Prereq.: ENG 398, or permission of instructor for non-majors. 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. Spring. [GR]

ENG 487 20th-Century British Drama 3

Prereq.: ENG 398, or permission of instructor for non-majors. 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. Irregular. [GR]

ENG 488 Advanced Studies in World Literature 3

Prereq.: ENG 398, or permission of instructor for non-majors. of Graduate standing. 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. [GR]

ENG 489 Studies in Film Adaptation 3

Prereq.: ENG 398, or permission of instructor for non-majors. 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. Cross listed with CINE 489. Irregular.

ENG 490 Individual Guided Reading 1 TO 3

Prereq.: Permission of chair. 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.

ENG 491 Children's Literature 3

Prereq.: ENG 110 or equivalent; junior or senior standing required; restricted to English Elementary Education or pre-Elementary Education majors, except by permission of instructor. 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. [GR]

ENG 492 Literature for Young Adults 3

Prereq.: ENG 110 or equivalent; junior or senior standing required; restricted to English (Elementary and Secondary) Education majors, except by permission of instructor. 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. [GR]

ENG 494 Creative Writing: Independent Study 3

Prereq.: Permission of department chair. 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. Irregular.

ENG 495 Internship 1 TO 6

Prereq.: ENG 110 or equivalent, junior or senior standing, and permission of faculty advisor and department chair. 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.

500s

ENG 500 Seminar in American Literature 3

Prereq.: Admission or conditional admission to a degree program in English or permission of instructor. Designed to give student seminar experience in selected area of English studies. May be repeated with different topics for up to 6 credits. Fall.

ENG 501 Seminar in British Literature 3

Prereq.: Admission or conditional admission to a degree program in English or permission of instructor. Designed to give student seminar experience in selected area of English studies. May be repeated with different topics for up to 6 credits. Spring.

ENG 530 Topics in Literary Periods 3

Prereq.: Admission to degree program in English or permission of instructor. 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. Irregular.

ENG 540 Topics in Literature and Theory 3

Prereq.: ENG 598 or permission of instructor. 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. Spring.

ENG 583 Teaching Writing across the Curriculum I 6

Prereq.: Acceptance to the Central Connecticut Writing Project (CCWP). 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. Cross listed as RDG 583. Summer.

ENG 584 Teaching Writing across the Curriculum II 3

Prereq.: ENG 583. A continuation of ENG 583 which will also include the completion of a professional writing piece. Summer.

ENG 590 Graduate Tutorial: Individual Guided Reading 3

Prereq.: Permission of department chair. 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.

ENG 598 Research in English 3

Prereq.: Admission or conditional admission to a degree program in English or permission of instructor. Research skills in literature. Introduces the techniques and resources of literary research through an examination of the theory, history, and practice of literary criticism. Fall.

ENG 599 Thesis 3

Prereq.: 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. Preparation of the thesis under the supervision of the thesis advisor. On demand.

English as a Second Language

1. Jump to level:
2. [200s](#)

100s

ESL 108 English as a Second Language: Writing I 3

Intermediate to advanced writing in English for students whose native language is not English. Transition to academic writing. Grammar review. Skill Area I

ESL 109 English as a Second Language: Writing II 3

Advanced writing in English for students whose native language is not English. Academic writing. Skill Area I

200s

ESL 201 Advanced Study in English as a Second Language 3

Prereq.: ENG 110 or permission of instructor. Selected aspects of advanced English for learners of English as second language. May be repeated with different topics for a maximum of 6 credits. Irregular. Skill Area I

Entrepreneurship

Note: Enrollment in 300- and 400-level entrepreneurship courses requires admission to the upper-division of the Business School (including meeting specific GPA requirements and completion of eight Business School pre-major courses with grades of at least C- in all eight courses). Certain courses (ENT 301, ENT 305, and ENT 320) may be taken as part of a pre-approved minor in business with a management concentration.

300s

ENT 301 Entrepreneurship and New Venture Creation 3

Prereq.: MKT 295 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. 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.

ENT 305 Financing Entrepreneurial Ventures 3

Prereq.: ENT 301 with a grade of at least C-; 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. Combines the analysis and evaluation of methods used to fund entrepreneurial ventures with the creation of a business plan for a new enterprise. Fall.

ENT 320 Managing a Growing Business 3

Prereq.: ENT 301 with grade of at least C-; MGT 295 with a grade of at least C-; 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. 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. Spring.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

ENT 499 Field Study in Entrepreneurship 3

Prereq.: ENT 301 with grade of at least C-; ENT 305 with grade of at least C-; grades of at least C- in the eight pre-major courses; and meeting upper-division Business School GPA requirements. 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. Spring.

Exercise Science

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

EXS 110 Concepts in Health and Fitness 3

Emphasis on health-related fitness and general health issues that affect individuals and communities. Students will learn skills necessary for health-related fitness evaluation, fitness prescription, and health promotion initiatives. Open to exercise science and athletic training majors only.

EXS 112 Introduction to Athletic Training 2

Acquaints student with the academic and clinical requirements by CAATE accreditation BOC certification as an entry-level athletic trainer and state licensure. Introduces risk management, injury prevention, medical conditions and disabilities, principles of athletic related injuries. Fall.

EXS 113 Introduction to 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. Open to exercise science majors only. Fall.

200s

EXS 207 Anatomy and Physiology in Exercise Science I 4

Prereq.: BIO 111 or BIO 121 or BMS 102 or BMS 111 (any with C- or higher). Open to exercise science, athletic training, and pre-nursing majors only. Explores human structure and function of the musculoskeletal, integumentary, articular, nervous, and immune systems related to exercise. Three hours of lecture and one three-hour laboratory per week.

EXS 208 Anatomy and Physiology in Exercise Science II 4

Prereq.: BIO 111 or BIO 121 or BMS 102 or BMS 111; CHEM 111, or CHEM 150, or CHEM 161 and 162 (any with C- or higher). Open to exercise science, athletic training, and nursing majors only. Explores human structure and function of the cardiovascular, respiratory, digestive, urinary, reproductive, and endocrine systems related to exercise. Three hours of lecture and one, three-hour laboratory per week.

EXS 210 Personal and Community Health 2

Individual health problems of college students as well as optimum health patterns for the school, community, and home. Open to physical education majors only.

EXS 213 Anatomy and Physiology in Human Performance I 3

Prereq.: BIO 111 or BIO 121 or BMS 111 (any with C- or higher). Systemic approach to human body. Emphasis on structure, function and histology of skeletal, integumentary, articular, muscular, and nervous systems. Laboratory topics: movement analysis, growth and development, simulated dissections and applications. Open to physical education majors only.

EXS 214 Anatomy and Physiology in Human Performance II 3

Prereq.: EXS 213, and CHEM 111 or CHEM 150, or CHEM 161 and 162 (any with a grade of C- or higher). Systemic approach to human body. Emphasis on structure and function of cardiovascular, respiratory, digestive, urinary, reproductive, and endocrine systems. Laboratory topics: disease, exercise considerations and applied data analysis. Open to physical education majors only.

EXS 215 Physiological Aspects of the Human Performance of the Aging 3

Prereq.: EXS 208. Stresses physiological responses of exercise and the psychological rationale for lifelong physical activities for the aged. Fall.

EXS 216 Kinesiology 3

Prereq.: PHYS 111; EXS 214, or EXS 207 and 208 (any with C- or higher). 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.

EXS 217 Care and Treatment of Athletic Injuries 3

Prereq.: EXS 207 or EXS 213 (any with C- or higher) and EXS 112 or EXS 113 (any with C- or higher). Covers risk management, injury prevention, medical conditions and disabilities, acute care of injuries and illnesses. Students perform prevention/protective strapping, fitting protective equipment and devising special padding. Includes 50 hours observation for athletic training majors. Open to exercise science and athletic training majors only.

EXS 218 Scientific Basis for Athletic Training 4

Prereq.: EXS 217 (C- or higher). Focus on concepts, theories, and techniques necessary for orthopedic clinical examination, diagnosis of athletic injuries, orthopedic screening and posture assessment. Basic understanding of mechanism and pathology of injury will be emphasized. Includes

one one-hour laboratory.

EXS 240 Therapeutic Modalities in Athletic Training 4

Prereq.: EXS 217 (C- or higher). 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. Spring.

EXS 275 Training for Sport Performance 3

Prereq.: EXS 207 (C- or higher). 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.

EXS 280 Leadership in Exercise & Wellness 3

Prereq.: EXS 110 (C- or higher). 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. Open to exercise science majors only.

300s

EXS 307 Human Nutrition 3

Prereq.: CHEM 111 or CHEM 150, or CHEM 161 and 162 (any with grade of C- or higher). 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 physical education, exercise science, and athletic training majors only.

EXS 311 Stress Management 3

Prereq.: PSY 112. 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.

EXS 315 Practicum in Athletic Training I 2

Prereq.: EXS 217, admission to the Professional Program in Athletic Training, and current EMT-B Certification (State of CT or National Registry). 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.

EXS 316 Practicum in Athletic Training II 2

Prereq.: EXS 218; EXS 315; admission to the Professional Program in Athletic Training, and current EMT-B Certification (State of CT or National Registry). 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.

EXS 317 Therapeutics in Athletic Training 4

Prereq.: EXS 217 (C- or higher). Introduction to the theories and techniques of manual muscle testing, muscle length testing, goniometry, and isokinetic testing. Emphasizing planning, implementing, documenting progress of therapeutic exercise programs for the rehabilitation and reconditioning of injuries and illnesses. Included one one-hour laboratory. Fall.

EXS 319 Practicum in Athletic Training III 2

Prereq.: EXS 316 and EXS 317 and admission to the Professional Program in Athletic Training, and current EMT-B Certification (State of CT or National Registry). 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.

EXS 331 Measurement and Evaluation in Exercise Science 3

Prereq.: STAT 104. Methods of measurement and evaluation in exercise science. Emphasis on research methodology including choosing tests, calibrating equipment, testing administration, calculating statistics and evaluating results. Spring.

EXS 332 Psychological Aspects of Sport 3

Psychological aspects of sport participation are reviewed with emphasis on coach and player issues. Topics will include burn out, stress management, arousal, and motivation. Course aims to broaden student background in these topics and the interpersonal relationships between coaches and players at the adolescent and youth sport levels. Spring.

EXS 376 Theories of Strength Training and Conditioning 2

Prereq.: EXS 207, 208, and 275. 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 or by permission of instructor. Spring.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

EXS 408 Physiology of Sport and Exercise 3

Prereq.: EXS 207, 208, 307 (all with grades of C- or higher); admission to the Professional Program in either Athletic Training or Exercise Science. 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.

EXS 409 Clinical Exercise Physiology 3

Prereq.: EXS 408 (C- or higher) and acceptance into the Professional Program in Exercise Science. 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. Fall.

EXS 410 Exercise Physiology 3

Prereq.: EXS 214 (C- or higher) and acceptance into the Professional Program in Physical Education or acceptance to M.S., Physical Education. Physiological factors which affect human performance in physical education and athletics. Acute and chronic effects of exercise on the respiratory, circulatory and muscular systems. Required laboratory class taken in conjunction with lecture to give students the opportunity to gain knowledge of basic scientific and field tests in exercise physiology. Two hours of lecture and one two-hour laboratory per week. Open to physical education majors only. [GR]

EXS 413 Organization and Administration of Athletic Training 3

Prereq.: CS 115 and admission to the Professional Program in Athletic Training. Theories and skills to develop, administer, and manage facilities/venues that provide health care to athletic populations. Emphasizes organizing pre-participation physicals, drug testing, medical documentation, human resources, facility design, budgeting, legal, and public relations issues. Spring (O).

EXS 415 Fitness Assessment and Exercise Prescription 3

Prereq.: EXS 307 and EXS 408 and admission to the Professional Program in either Athletic Training or Exercise Science or acceptance to M.S., Physical Education. 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. [GR]

EXS 416 Graded Exercise Testing 3

Prereq.: EXS 408; admission to the Professional Program in Exercise Science. 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. Spring.

EXS 421 Pharmacology in Sports Medicine 3

Prereq.: EXS 307 and admission to the Professional Program in Athletic Training or Exercise Science. Basic principles of pharmacology, pharmacokinetics, commonly prescribed therapeutic medications in the physically active population, and legal issues. Common prescription and non-prescription medications, routes of administration, indication and contraindications, precautions, and adverse reactions. Spring.

EXS 425 Implementation and Evaluation of Health Promotion Programs 3

Prereq.: EXS 307, EXS 408; admission to the Professional Program in Exercise Science or acceptance to M.S., Physical Education. Comprehensive planning framework for health promotion programs in the U.S., which includes identification of health needs of the population, determining how to change health behaviors, marketing programs, and evaluating health benefits to the individual and organizations. Fall. [GR]

EXS 445 Internship in Athletic Training 6

Prereq.: EXS 319 and EXS 440, and admission to the Professional Program in Athletic Training and current EMT-B Certification (State of CT or National Registry). Minimum 320 hours of off-site clinical experience directly supervised by an Athletic Clinical Instructor. May occur in a sports medicine or corporate wellness clinic, secondary school, or university setting. Includes weekends, unusual hours, holidays.

EXS 450 Practicum in Exercise Science 3

Prereq.: EXS 415; admission to the Professional Program in Exercise Science or to the M.S. in Physical Education. 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. Fall, Spring, Summer. [GR]

EXS 470 Internship in Exercise and Health Promotion 6

Prereq.: EXS 450; admission to the Professional Program in Exercise Science or to the M.S. in Physical Education. Off-campus practical experience. Includes wellness/health promotion, corporate fitness, YMCA, strength and conditioning, sports medicine, and cardiac rehabilitation. Offers opportunities to apply fundamental concepts. Current CPR and first aid certification required. Fall, spring, summer. [GR]

500s

EXS 507 Human Perspective in Sport 3

Prereq.: Admission to M.S. in Physical Education. 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. Spring. (O)

EXS 515 Sport, Physical Activity, 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. Spring. (E)

EXS 519 Sport Biomechanics 3

Prereq.: EXS 216 or permission of instructor. 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. Fall. (E)

EXS 522 Physical Activity and Health 3

Prereq.: EXS 522 or permission of instructor. 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. Spring. (O)

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. Summer. (E)

EXS 530 Nutrition for Health, Fitness, and Sport Performance 3

Prereq.: Permission of instructor. 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. Summer. (O)

EXS 590 Independent Study / Topics in Exercise Science or Sports Medicine 3

Prereq.: Admission to the M.S. in Physical Education with approved planned program, or permission of instructor. 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. Irregular.

EXS 592 Advanced Physiology of Sport & Exercise 3

Prereq.: Permission of instructor. 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 the physiology of the skeletal, muscle, cardiorespiratory, endocrine and renal systems. Fall. (O)

Finance

Note: Enrollment in 300- and 400-level finance courses requires admission to the School of Business or permission of the department chair.

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

200s

FIN 295 Managerial Finance 3

Prereq.: AC 211; one of the following: MATH 123, 124, 125, 135, 152, or 221; and one of the following: STAT 200, 104, 215, 314, or 315; all with grades of C- or higher. Basic course in business finance. Topics include the financial environment, analysis of financial statement, valuation of corporate stocks and bonds, and capital investment decisions.

300s

FIN 301 Intermediate Managerial Finance 3

Prereq.: FIN 295 (C- or higher). 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.

FIN 310 Principles of Investments 3

Prereq.: FIN 295 (C- or higher). 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.

FIN 320 Financial Markets and Institutions 3

Prereq.: FIN 295 (C- or higher). The role, functions, and operations of capital markets, banks, and other financial intermediaries in modern, global economies.

FIN 321 Insurance 3

Prereq.: FIN 295 (C- or higher). 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.

FIN 330 International Finance 3

Prereq.: FIN 295 (C- or higher). 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. [I]

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

FIN 400 Advanced Managerial Finance 3

Prereq.: FIN 301, 310 and 320 (all with C- or higher). An advanced course in financial management of the business firm. Utilizes a case study approach to stress the application of financial management theories. Topics include asset management, investment decisions, and financial structure of the firm. [GR]

FIN 410 Securities Analysis 3

Prereq.: FIN 301, 310 and 320 (all with C- or higher). An advanced course in investments with emphasis on security analysis and portfolio management practices. Topics include financial statement analysis, use of derivatives, and special techniques employed in forecasting, timing, and the development of investment strategies. [GR]

FIN 411 Financial Statement Analysis 3

Prereq.: FIN 301, 310 and 320 (all with C- or higher). Examines how financial reports can be used by investors and financial analysts to make better economic decisions. Topics include: financial ratios, reported earnings, corporate performance, cash flow analysis to evaluate financial health of a company.

FIN 420 Bank Management 3

Prereq.: FIN 301, 310 and 320 (all with C- or higher). 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.

FIN 422 Risk Management 3

Prereq.: FIN 301, FIN 310, FIN 320, and FIN 321 (all with C- or higher); or permission of instructor. 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.

FIN 425 Financial Derivatives 3

Prereq.: FIN 301, 310 and 320 (all with C- or higher); for graduate students, permission of department chair. Valuation of financial derivatives, including options and futures, applications to portfolio, and corporate risk management. Fall. [GR]

FIN 490 Independent Study in Finance 1 TO 3

Prereq.: FIN 301, 310 and 320 (all with C- or higher). 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. [GR]

FIN 496 Practicum in Finance 1 TO 6

Prereq.: Permission of instructor. Students work on a real world project under the direct supervision of a faculty adviser. Projects may be sponsored by a host organization. Student performance is monitored and evaluated in relation to conditions set forth in an approved Project Plan. May be repeated for a maximum of 6 credits. [GR]

FIN 498 Finance Seminar 3

Prereq.: Permission of instructor. Course content varies. [GR]

FIN 499 CFA Seminar 3

Prereq.: FIN 310 and 410 (both with C- or higher); or permission of instructor. 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. Spring. [GR]

Fine Arts

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"**FA 412 Fine Arts Across the Curriculum 3**

Prereq.: Admission to the Professional Program in Teacher Education. 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. 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.

FA 490 Integrating the Fine Arts for the Young Learner 3

Prereq.: Permission of department chair in Art, Music, or Theatre. Study of the aesthetic experience, its importance for children, and its interrelationship with empirical knowledge. Music, the visual arts, and movement will be investigated, with an emphasis on discovering resources and developing techniques for integrating each. Summer. [GR]

First Year Experience

100s

FYE 101 First Year Experience 1

Prereq.: First-year, first-time status. 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.

300s

FYE 301 Peer Leadership Seminar 2

Prereq.: Permission of First Year Experience Faculty Director. 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 six credits. Fall.

First Year Seminar

100s

FYS 101 First Year Seminar - Arts and Humanities 2 TO 4

Prereq.: First-year, first-time status. Series of topical seminars in Arts and Humanities for incoming first-year students. Topics will vary by semester according to interests of faculty teaching each semester. Fall. Study Area I

FYS 102 First Year Seminar - Social Sciences 2 TO 4

Prereq.: First-year, first-time status. Series of topical seminars in Social Sciences for incoming first-year students. Topics will vary by semester according to interests of faculty teaching each semester. Fall. Study Area II

FYS 103 First Year Seminar - Behavioral Sciences 2 TO 4

Prereq.: First-year, first-time status. 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. Fall. Study Area III

FYS 104 First Year Seminar - Natural Sciences 2 TO 4

Prereq.: First-year, first-time status. 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. Fall. Study Area IV

FYS 105 First Year Seminar - Communication Skills 2 TO 4

Prereq.: First-year, first-time status. 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. Fall. Skill Area I

FYS 106 First Year Seminar - Mathematics and Computer Science 2 TO 4

Prereq.: First-year, first-time status. Series of topical seminars in Mathematics and Computer Science for incoming first-year students. Topics will vary by semester according to interests of faculty teaching each semester. Fall. Skill Area II

French

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

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. Skill Area III

FR 112 Elementary French II 3

Prereq.: FR 111 or equivalent (normally, two years high school study). 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. Skill Area III

FR 125 Intermediate French I 3

Prereq.: Three years of high school French or one year of college French or equivalent. 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. Skill Area I [I]

FR 126 Intermediate French II 3

Prereq.: FR 125 or equivalent. 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. Skill Area I [I]

200s

FR 225 Intermediate French III 3

Prereq.: FR 125 or 126 or French placement exam. Taught in French. Extensive use of technology and French language films, with emphasis on development of listening, speaking and writing skills. Fall. Skill Area I [I]

FR 226 Intermediate French IV 3

Prereq.: FR 126 or FR 225 or French placement exam. Taught in French. Improvement of the reading and writing of French through the use of contemporary texts, narratives, plays, and poems. Spring. Skill Area I [I]

300s

FR 304 Introduction to French Literature 3

Prereq.: FR 225 or FR 226 (either may be taken concurrently) or permission of instructor. Taught in French. Introduction to selected literary works and discussion of literary genres and important aspects of French literary history. Fall. Study Area II [L]

FR 305 Introduction to Francophone Literature 3

Prereq.: FR 225 or 226 (either may be taken concurrently) or permission of instructor. Introduction to literature written in French from Francophone countries other than France. Spring. Study Area I [I] [L]

FR 315 Aspects of French History & Culture 3

Prereq.: FR 225 or 226 or permission of instructor. Taught in English; majors/minors read and write in French. Topics include the most important features of French history, with emphasis on major artistic achievements and physical and political geography. Fall. (E) Study Area II [I]

FR 316 Contemporary France 3

Prereq.: FR 225 or FR 226 or FR 315. Taught in French. Politics, social structures, and cultural life of France today. France in relation to Western Europe and in a broader international framework. Spring. (O) Study Area II [I]

FR 335 Advanced French for Oral Expression 3

Prereq.: FR 225. Taught in French. Development of grammar and idiom for oral proficiency through discussion of readings, films, and other documents. Fall. (E) [I]

FR 336 Advanced French Composition 3

Prereq.: FR 226. Taught in French. Advanced training in the use of French based on readings, translation, and composition. Spring. (O) [I]

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

FR 441 Advanced Oral Practice 3

Prereq.: Permission of instructor. Open only to non-native speakers of French. Taught in French. Development of fluency in oral self-expression. Speech analysis to improve pronunciation and intonation. Irregular. (O) [I]

500s

Geography

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

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. Spring. Study Area II

GEOG 110 Introduction to Geography 3

Basic patterns of physical environment and relationship of human patterns to them are explained. CSUS Common Course. Study Area II

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. Study Area II [I]

GEOG 130 Introduction to Geography Information Science 3

Introduction to basic within the fields of cartography, geodesy, spatial statistics, remote sensing, and geographic information systems. Study Area II

200s

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. Study Area II [I]

GEOG 223 Geography of the Popular Music Industry 3

Examines the growth of the popular music industry and its impact on the spatial/locational nature of society. Basic human geographic concepts such as migration, diffusion regional identity, and place are discussed. Spring. Study Area II

GEOG 241 Introduction to Planning 3

Introduction to the principles and practice of planning at various spatial scales-regional, metropolitan, urban, and neighborhood. Cross listed with AMS 241. No credit given to students with credit for AMS 241. Study Area II

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. Spring. Study Area II [I]

GEOG 256 Maps & Map Reading 3

Conferences and practical exercises in the use and interpretation of a variety of map types. Emphasis on the topographic map. Map sources will be discussed.

GEOG 266 Air Photo Interpretation 3

Conferences and practical exercises in uses and interpretation of aerial photographs. Fall.

GEOG 270 Geography of Hazards 3

Prereq.: ESCL 110 or GEOG 110. 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. Spring. Study Area II

GEOG 272 Physical Geography 3

Prereq.: GEOG 110 or permission of instructor. Analysis of the landforms at the earth's surface, their distribution, genesis, and relationships to the other natural phenomena. Spring. Study Area IV

GEOG 275 Soils and Vegetation 3

Analysis of major soil groups and vegetation zones and their relationship to other geographic factors, including land use and rural or urban planning. Field experiences are part of this course. Study Area IV

GEOG 276 Elementary Cartography 3

Instruction and practice in the fundamentals of map construction, design, symbolization, and reproduction; emphasis on the use of cartographic drafting instruments, mediums, and materials.

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. Study Area II [I]

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. Spring. Study Area II [I]

300s

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. Fall.

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. Irregular. Study Area II

GEOG 374 Climatology 3

Prereq.: GEOG 110 or ESCI 110, or permission of instructor. 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. Spring.

GEOG 378 Geographic Information Systems 3

Prereq.: GEOG 130 or GEOG 256 or 276, or permission of instructor. Introduction to raster and vector geographic information systems, with a focus on application areas in natural resource management, urban and regional planning, and business.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"**GEOG 414 Teaching Methods in Geography 3**

Prereq.: Admission to the Professional Program. Concepts, methods, and materials for teaching geography. Middle-level certification students selecting the Complementary Subject Matter Area in geography will enroll for two credits; all others will enroll for three credits. Fall.

GEOG 420 Internship in Planning 3

Prereq.: Permission of the department chair. Restricted to students who are pursuing a specialization in planning. Participants will serve as interns in a municipal, regional, state, or private planning agency under the supervision of a geography faculty member. On demand.

GEOG 430 Internship in Geography 3

Prereq.: Permission of the department chair. 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. On demand.

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. [GR]

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. Cross listed with LAS 434. No credit given to students with credit for LAS 434. Fall. [I] [GR]

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. Fall. (O) [I] [GR]

GEOG 436 South America 3

A survey of the countries of South America with emphasis on people, places, and problems. Cross listed with IS 436 and LAS 436. No credit given to students with credit for IS 436 or LAS 436. Spring. [I] [GR]

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. Fall. (E) [I] [GR]

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. Spring. [GR]

GEOG 440 Rural Land Planning 3

Land use patterns and the planning process in agriculture, transportation, recreation, industry, population, and settlement in rural areas. Case studies and field work emphasizing the impact of urbanization on rural Connecticut. Fall. (O) [GR]

GEOG 441 Community & Regional Planning 3

Prereq.: GEOG 241 or permission of instructor. Philosophies, theories, and principles involved in planning of regions and urban areas. Fall. (E)

GEOG 442 Field Methods in Geography 3

Prereq.: 3 credits in Geography or permission of instructor. 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.

GEOG 445 Environmental Planning 3

Prereq.: GEOG 110 or permission of instructor. 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. Spring.

GEOG 446 Sub-Saharan Africa 3

Relationships between physical environment and human development in Africa south of the Sahara. Spring. (E) [I] [GR]

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. Fall. (E) [I] [GR]

GEOG 450 Tourism Planning 3

Prereq.: GEOG 290, 291 or permission of chair. 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. Fall.

GEOG 451 Tourism Development in Southern New England 3

Prereq.: GEOG 290 or 291 or permission of instructor or department chair. 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. Spring. (E) [GR]

GEOG 452 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. Spring. [I] [GR]

GEOG 453 Recreation and Resort Planning 3

Prereq.: GEOG 450 or permission of instructor or department chair. Study of the supply, location, distribution, use, planning, management, and impact of recreation facilities in both urban and rural situations. Spring. [GR]

GEOG 454 Geography of Tourism Marketing 3

Prereq.: GEOG 290 and MKT 295 or permission of instructor. 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. Fall. [GR]

GEOG 455 New Directions in Tourism 3

Prereq.: GEOG 450 or permission of instructor or department chair. 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. Spring. [GR]

GEOG 459 Field Studies in Regional Geography 3 TO 6

Prereq.: Permission of instructor. 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. Winter, Summer. [I]

GEOG 466 Remote Sensing 3

Prereq.: GEOG 266 or GEOG 378. Computer analysis and interpretation of satellite remote sensing data for inventorying, mapping, and monitoring earth's resources. Spring. (O)

GEOG 469 Readings in Geography 1 TO 3

Prereq.: Permission of instructor. Directed independent studies in geography. May be taken more than once for credit. On demand.

GEOG 470 Geography of Health & Disease 3

Prereq.: GEOG 220 or permission of instructor. 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. Spring. (O)

GEOG 471 Topics in Human Geography 3

Prereq.: GEOG 220 or permission of instructor. Selected topics in human geography. May be repeated with different topics for a maximum of 6 credits. Cross listed with MKT 471. No credit given to students with credit for MKT 471. On demand.

GEOG 472 Topics in Physical Geography 3

Prereq.: GEOG 272 or 275 or 374 or permission of instructor. 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. Fall.

GEOG 473 Geography of Natural Resources 3

Prereq.: GEOG 110 or permission of instructor. 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. Spring. (O) [GR]

GEOG 475 Energy Resources and Climate Change 3

Prereq.: GEOG 272 or GEOG 374 or ESCI 129 or permission of instructor. 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. Spring.

GEOG 476 Advanced Cartography 3

Prereq.: GEOG 256 or 276 or permission of instructor. Advanced design and production of maps using cartographic/GIS and graphic software. Use of statistical packages to process data for cartographic purposes. No knowledge of computer programming required. Spring.

GEOG 478 GIS Design and Implementation 3

Prereq.: GEOG 378 or permission of instructor. 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. Fall.

GEOG 479 Geographic Information Systems Applications 3

Prereq.: GEOG 378. 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. Spring. (E)

GEOG 480 Topics in GIS 3

Prereq.: GEOG 378 or permission of instructor. Selective topics in Geographic Information Science. May be repeated with different topics for a maximum of 6 credits. Irregular.

GEOG 481 Topics in Regional Geography 3

Selected topics in regional geography. May be repeated with different topics for a maximum of 6 credits. Irregular.

GEOG 483 Topics in Planning 3

Prereq.: GEOG 241 or permission of instructor. Selected topics in planning. May be repeated with different topics for a maximum of 6 credits. On demand.

500s

GEOG 500 Graduate Studies in Geography 3

Prereq.: Permission of advisor. History and philosophy of geographic thought with emphasis on current research trends in physical and human geography. Fall.

GEOG 514 Studies in Systematic Geography 3

Prereq.: Permission of advisor and instructor. 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. On demand.

GEOG 516 Studies in Regional Geography 3

Prereq.: Permission of advisor and instructor. Advanced study in one of regional specialties of the department. May be taken more than once for credit. On demand.

GEOG 518 Studies in Geographical Techniques 3

Prereq.: Permission of advisor and instructor. 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. On demand.

GEOG 530 Graduate Internship in Geography 3

Prereq.: Two graduate courses in geography and permission of advisor. 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. On demand.

GEOG 542 Graduate Field Methods in Geography 3

Prereq.: 3 credits of graduate study or permission of instructor. Advanced field research in physical and human geography. Team and individual research projects. This is a bridge course with GEOG 442. Fall. (O)

GEOG 544 The Geography of World Economic Development 3

Prereq.: GEOG 500 or IS 570 or permission of instructor. Spatial patterns of world economic development with consideration of contemporary changes in selected developing countries. Spring.

GEOG 559 Advanced Field Studies in Regional Geography 3 OR 6

Prereq.: Permission of graduate advisor. On-site group studies in regional geography. Normally involves travel outside the United States. Summer.

GEOG 569 Graduate Readings in Geography 1 TO 3

Prereq.: Permission of instructor. Directed graduate level independent studies in geography. May be taken more than once for a maximum of 6 credits. On demand.

GEOG 578 Internet GIS and Mapping 3

Prereq.: Planned program of study in M.S. Geography or permission of instructor. Principles and practices of interactive mapping and GIS data distribution across the World Wide Web. Fall. (O)

GEOG 595 Special Project in Geography (Plan C) 3

Prereq.: GEOG 598, permission of graduate advisor, and a 3.00 overall GPA. 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. On demand.

GEOG 597 Geography Capstone Seminar (Plan B) 3

Prereq.: GEOG 598, completion of 21 credits in the M.S. program in geography, and permission of graduate advisor. Directed readings seminar for Geography graduate students taking the comprehensive exam (Plan B). Comprehensive exam will be taken following completion of the course. Spring.

GEOG 598 Research in Geography 3

Prereq.: GEOG 500, and 15 additional graduate credits in geography. Designed to familiarize student with techniques and resources associated with research in field of geography. Practical application. Fall.

GEOG 599 Thesis (Plan A) 3

Prereq.: GEOG 598, permission of graduate advisor, and a 3.00 overall GPA. Preparation of the thesis under the supervision of the thesis advisor. Spring.

German

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

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. Skill Area III

GER 112 Elementary German II 3

Prereq.: GER 111 or equivalent (normally, two years high school study). 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. Skill Area III

GER 125 Intermediate German I 3

Prereq.: One year of college German or equivalent. 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. Fall. Skill Area I [I]

GER 126 Intermediate German II 3

Prereq.: GER 125 or equivalent. 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. Spring. Skill Area I [I]

200s

GER 225 Intermediate German III 3

Prereq.: GER 125 or 126 or permission of instructor. Designed to help students improve speaking skills through the discussion of contemporary texts. Further study of grammar. Fall. Skill Area I [I]

GER 226 Intermediate German IV 3

Prereq.: GER 125 or 126 or permission of instructor. Designed to help students improve writing skills by means of frequent composition in German. Further study of grammar. Spring. Skill Area I [I]

300s

GER 304 Introduction to German Literature I 3

Prereq.: GER 225 or 226 (either may be taken concurrently). Introduction to major works in German literature from its beginning to 1800. Fall. Study Area I [I] [L]

GER 305 Introduction to German Literature II 3

Prereq.: GER 225 or GER 226 (either may be taken concurrently). Introduction to major works of German literature since 1800. Spring. Study Area I [I] [L]

GER 315 German Civilization to 1800 3

Prereq.: GER 225 or GER 226 (either may be taken concurrently). Taught in German. Cultural development of Germany from its beginnings to 1800. Fall. Study Area II [I]

GER 316 German Civilization from 1800 to Present 3

Prereq.: GER 225 or GER 226 (either may be taken concurrently). Taught in German. Cultural development of Germany from 1800 to the present. Spring. Study Area II [I]

GER 335 Advanced German for Oral Expression 3

Prereq.: GER 225. Additional practice for student development of oral proficiency in German through discussion of readings, films and other authentic materials. On demand. [I]

GER 336 Advanced German Composition 3

Prereq.: GER 226. Additional practice in idiomatic usage and verbal fluency. Spring. [I]

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

GER 441 Advanced Oral Practice 3

Prereq.: Permission of instructor. Taught in German. Further developmetn of oral proficiency for the advanced student. On demand. [I]

Graphics Technology

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

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 five hours per week. Skill Area IV. Fall.

200s

GRT 212 Graphic Arts Processes (3)

A course designed to provide the student with a basic working knowledge of the printing industry. Printing, duplicating, and copying processes are included. (Lab). Three hours lecture and two hours laboratory, course meets five hours per week. Skill Area IV. Fall.

GRT 222 2D Animation for Graphics Technology (3)

Prereq.: GRT 112 or permission of department chair. 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 five hours per week. Spring.

GRT 232 Introduction to 3D Animation Technology (3)

Prereq.: ETM and GRT 112 or MFG 121 or ETC 122. 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 five hours per week. Spring. (E)

GRT 242 Introduction to Graphic Design & Color (3)

Prereq.: GRT112 or 212 or permission of instructor. Introduction to the use of graphics elements and color. Topics include production design for brochures, packaging, and web; includes theory and practice of process color printing. Two hours lecture and two hours laboratory, course meets five hours per week. Fall.

300s

GRT 332 Advanced 3D Modeling & Animation Technology (3)

Prereq.: GRT 232. 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 five hours per week. Irregular. (O)

GRT 342 Screen Printing & Post-Press Operation (3)

Fundamental operations and related information in post-press printing operation. Copy preparation, screen and stencil systems, printing techniques, ink and substrate compatibility, and finishing processes. Includes the study of layout and hand binding. Three hours lecture and two hours laboratory, course meets five hours per week. Spring.

GRT 352 Color Management & Analysis (3)

Prereq.: GRT 112 and 242. 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 two hour laboratory, course meets four hours per week. Spring.

GRT 362 Estimating & Scheduling for Graphics Technology (3)

Prereq.: GRT 212 or permission of department chair. 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 five hours per week. Spring.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

GRT 402 Topics in Graphics Technology (1 to 3)

Prereq.: Permission of department chair. 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. On demand. [GR]

GRT 405 Applied Topics in Graphics Technology (3)

Prereq.: Permission of department chair. 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. Three hours lecture and two hours laboratory, course meets five hours per week. On demand. [GR]

GRT 411 Instructional Methods in Animation Graphics (3)

Prereq.: CET 113 or MFG 121 or ETC 122 or permission of chair; for graduate students, admission to the M.S. Technology Education program. Using animation software, digitizing equipment, and paint/draw programs to produce two- and three-dimensional presentations, slide shows, and videotapes. Three hours lecture and two hours laboratory, course meets five hours per week. Irregular.

GRT 432 Customization & Development in Animation Technology (3)

Prereq.: GRT 332. Advanced imaging, development, and documentation of 3D animation models. Two hours lecture and two hours laboratory, course meets five hours per week. Spring. (O)

GRT 442 Print Production 3

Prereq.: GRT 212. Applied study of pre-production, production, and post-production in the printing industry. Three hours lecture and two hours laboratory, course meets five hours per week. Spring. [GR]

GRT 462 Advanced Graphic Arts Techniques (3)

Prereq.: GRT 442. Integrated experience of advanced instruction in both flexo, offset and digital printing. Experiences will include advanced color work and direct to press operations. Cultural and historical aspects of graphic arts and industrial visitations. Three hours lecture and two hours laboratory, course meets five hours per week. Fall. [GR]

GRT 472 Digital & Film Photography (3)

Principles of conventional and digital camera techniques. Includes camera handling, exposure, composition, developing, printing, and editing. Darkroom plans and equipment listings will be evaluated. Field trips to selected photography studios. Three hours lecture and two hours laboratory, course meets five hours per week. Open to all students. Fall. [GR]

History

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

HIST 100 Search in History 3

Introduction to intellectual processes and value systems in history. Titles and themes may vary from section to section. Study Area II

HIST 121 World Civilization I 3

World civilization to the 17th century. Study Area II []

HIST 122 World Civilization II 3

World civilization from the 17th century. Study Area II []

HIST 161 American History to 1877 3

Political, economic, social, and cultural development to 1877. No credit given to students w ho have credit for HIST 261. CSUS Common Course. Study Area II

HIST 162 American History from 1877 to present 3

Political, economic, social, and cultural development since 1877. No credit given to students w ho have credit for HIST 262. CSUS Common Course. Study Area II

200s

HIST 231 Ancient Mediterranean World 3

Cultures of ancient Near East and Mediterranean. Study Area II []

HIST 232 Medieval Europe 3

European history and institutions from the fall of Rome to 1300. Study Area II []

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. Study Area II []

HIST 234 Modern Europe 3

European history from the 18th century to the present. Study Area II []

HIST 251 East Asia to 1800 3

Political, cultural, economic, and social history of East Asian countries. Note: No credit will be given to students w ho have credit for HIST 351. Fall. (O) Study Area II []

HIST 252 East Asia since 1800 3

Continuation of HIST 251, w ith additional emphasis on contemporary, foreign, and colonial politics related to East Asia. NOTE: No credit given to students w ho have credit for HIST 352. Spring. (O) Study Area II []

HIST 253 History of the South Pacific 3

Begins w ith the history of the Tahitians, Haw aiians, and Maori, and Australian aborigines before contact w ith Europe, examining their oral traditions. Also examines exploration and cultural contact betw een the peoples of Polynesia and Australia and Anglo-Europeans. Fall. (O) Study Area II

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. Irregular. Study Area II

HIST 277 History of Christianity I 3

Christianity from its origins to 1450 A.D. Jew ish origins, literature, central doctrines, and institutional development. Consideration of its influence on secular life and institutions. NOTE: No credit given to student w ho have credit for HIST 377. Fall. (O) Study Area II []

HIST 278 History of Christianity II 3

Christianity from 1450 A.D. to present. Continuation of Christianity I. NOTE: No credit given to students w ho have credit for HIST 378. Spring. (O) Study Area II []

HIST 281 History of Latin America to 1823 3

Social, economic, political, and cultural development of Latin American countries to 1823. NOTE: No credit given to students with credit for HIST 381. Cross listed with LAS 281 and 381. No credit given to with credit for LAS 281 or 381. Fall. (O) Study Area II [I]

HIST 282 History of Latin America since 1823 3

Social, economic, political, and cultural development of Latin American countries since 1823. No credit given to students with credit for HIST 382. Cross listed with LAS 282. No credit given to students with credit for LAS 282 or 382. Spring. (O) Study Area II [I]

HIST 291 Modern Middle East 3

Historical developments in the 20th century with a special emphasis on political, social, and economic conflicts. NOTE: No credit will be given to students with credit for HIST 472. Fall. Study Area II [I]

HIST 292 History of Judaism 3

Analysis of major themes in the historical development of Judaism from ancient times to the present. NOTE: No credit will be given to students with credit for HIST 473. Spring. Study Area II [I]

300s

HIST 301 The Historical Imagination 3

NOTE: History minors must request a major override from the department chair prior to registration. Prereq.: A minimum of 6 credit hours in History. 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 and minors only.

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. Spring.

HIST 305 Connecticut and the Nation 3

Connecticut history from pre-colonial period to the present day within the national context. Irregular.

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. Cross-listed with LTN 316. No credit may be received by students who have received credit for LTN 316. Fall.

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. Cross-listed with LTN 317. No credit may be received by students who have received credit for LTN 317. Spring.

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. Cross-listed with LTN 319. No credit may be received by students who have received credit for LTN 319. Fall.

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. Fall.

HIST 322 Political History of the United States, 1877 to Present 3

Focuses on the growth of political parties in the United States. Examines the contrasting economic, social, and foreign policy views of the parties, with special attention devoted to the intersection of ideology and partisanship. Spring.

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. Fall. (O)

HIST 324 Native Americans of the West, 1500-Present 3

Examines North America's indigenous peoples living west of the Mississippi River at the time of the European contact, from the Central American region to the Northwest. Explores the history of Aztec civilizations, Southwestern tribes, Plains Indians and Northwest tribes. Spring. (O)

HIST 325 Anglo-American Legal and Constitutional History, 1550-1789 3

Legal ideas, statutes and cases that revolutionized England and its colonies from the Tudor period to the United States Constitution. Fall. (E)

HIST 326 Anglo-American Legal and Constitutional History, 1789-Present 3

Analyzes the change from formalism to substantive due process, landmark legal cases, and the emergence of new legal theories in England, North America, and Australia. Allows the United States' legal system to be viewed in a comparative context. Spring. (E)

HIST 327 History of American Consumer Culture 3

Examines the development of consumer society in the United States and its relationship to economics, politics, and culture. Paying attention to the dynamics of race, class, and gender, this course explores the experiences of ordinary Americans as they have embraced, shaped, and resisted materialism in their lives. Possible topics include the rise of department and chain stores, advertising, mass-production, the leisure industry, suburbanization, consumer boycotts, and globalization. Spring.

HIST 328 History of American Foreign Relations 3

Study of the United States in the world from 1776 to the present through examination of domestic, international, diplomatic, and military influences. Fall.

HIST 329 History of Working America 3

Origins and development of the American working class from the colonial period to the present. Spring.

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. Cross listed with WGSS 330. Fall.

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. Cross listed with WGSS 331. Spring.

HIST 332 History of Schooling in America 3

History of schooling in the United States, with emphasis upon the 19th and 20th centuries. Irregular.

HIST 334 Women of Medieval Europe 3

Surveys social, political, and economic opportunities for medieval European women and the various ways in which women were represented in contemporary texts. Also considers changing ideologies of the function of marriage, the role of family, and the construction of gender roles in medieval culture from c. 400-1400. Cross listed with WGSS 334. No credit given to students with credit for WGSS 334. Fall. []

HIST 335 Women, Marriage, and Family in Early Modern Europe 3

Impact of social, economic, and ideological change on gender roles and family structure in European society during the Renaissance, Reformation, and post-Reformation periods, 1400-1700. Cross listed with WGSS 335. Spring.

HIST 341 English History to 1715 3

Forces contributing to the growth of English civilization and development of Great Britain. Fall. []

HIST 342 English History since 1715 3

Continuation of HIST 341. Spring. []

HIST 343 Modern Ireland: 1690-Present 3

Introduction to political, social, and economic history of modern Ireland, with special focus on nationalism, the impact of the Great Famine, the achievement of independence, and the ongoing conflict in the north. Spring. []

HIST 344 History of Modern Germany 3

German history from 1871 to the present. Fall. (O) []

HIST 347 History of Russia I 3

History of Russia from the ninth century to 1861. Fall. []

HIST 348 History of Russia II 3

History of Russia from 1861 to the present. []

HIST 353 History of Modern China 3

China during the late Ch'ing, Republican and Communist periods. No credit given to students with credit for HIST 453. Spring. (E) []

HIST 354 History of Modern Japan 3

Japan during the 19th and 20th centuries. NOTE: No credit given to students who have credit for HIST 454. Fall. (E) []

HIST 356 History of East Central Europe since 1919 3

Social and political institutions of the Successor states in the Danubian area from 1919. Spring. (O) []

HIST 369 African-American History 3

Survey of African-American life from the slave trade through the 1970s. Fall. (E)

HIST 373 The African Diaspora in the Caribbean since 1500 3

The plantation system, capitalism and slavery, the decolonization process in general, gender relations, structural adjustment and debt, outstanding leaders and role models in Afro-Caribbean communities and cultural norms and values. Irregular. []

HIST 375 History of Africa to 1800 3

Examination of economic, social, and political developments in Africa to the end of the 18th century. Spring. Study Area II []

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. Spring. Study Area II [I]

HIST 379 History of Poland: from the Piasts to Partition, 966-1795 3

The medieval Kingdom, the Polish Lithuanian Commonwealth, and the Partitions. Fall. (O) [I]

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. Fall. (E) [I]

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. Irregular.

HIST 384 Portugal in Brazil 3

History of Portugal as it relates to the Portuguese Seaborne empire and Brazil. Topics include the medieval period, the colonization of Brazil and conquest of indigenous populations by the Portuguese; the introduction of sugar and African slavery to Brazil; the Portuguese colonial government, and Brazilian independence. Fall.

HIST 395 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. Irregular.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"**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. Irregular.

HIST 404 American Material Culture 3

Prereq.: HIST 301 or permission of instructor. Studies material culture of artifacts such as, household utensils, furniture, buildings, and landscapes, throughout American history. Linked to HIST 504. Fall.

HIST 405 Local History and Community Development 3

Prereq.: HIST 301 or permission of instructor. 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. Linked with HIST 505. Irregular.

HIST 411 Atlantic World, 1500-1880 3

Prereq.: HIST 301 or permission of instructor. 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. Fall.

HIST 412 The Transformation of Crime and Punishment 3

Prereq.: HIST 301 or permission of instructor. Explores major changes over time in the legal history of crime and punishment in England, Australasia, and Europe between 1600 and 1975. Spring. (O)

HIST 413 Myth, Law, and History 3

Prereq.: HIST 301 or permission of instructor. Introduces students to a variety of readings in the mythological and historical beginnings of law and allows students to analyze how law and history have intersected in both the legal and historical worlds. Topics can include the Mosaic law, Anglo-American law, and the history of legal literature from cases to novels. Spring. (E)

HIST 414 The Progressive Watershed 3

Prereq.: HIST 301 or permission of instructor. Focuses upon significant American political, economic and social developments in the late nineteenth and early twentieth centuries. The Progressive era will receive major attention. Irregular.

HIST 415 The Cold War in the United States and Europe 3

Prereq.: HIST 301 or permission of instructor. Examines the origins, conduct, and consequences of the Cold War from American and European international perspectives. Topics include diplomatic, military, social, and cultural developments. Irregular.

HIST 416 The Vietnam Wars, Home and Abroad 3

Prereq.: HIST 301 or permission of instructor. 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. Irregular.

HIST 420 Imperialism 3

Prereq.: HIST 301 or permission of instructor. Explores the nature and experience of imperialism in a variety of countries and a number of time periods. Irregular.

HIST 421 Britain at the Turn of the 20th Century 3

Prereq.: HIST 301 or permission of instructor. Cultural, intellectual, social, and political history of Britain from 1880 to 1914. Irregular. [I]

HIST 431 Ancient Northeast Africa 3

Prereq.: HIST 301 or permission of instructor. Aspects of the history and legacies of ancient northeast Africa with focus upon Nubia, Egypt, and Aksum. Irregular.

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. Fall. (O)

HIST 433 History of Ancient Greece 3

Prereq.: HIST 301 or permission of instructor. Greek institutions from the Mycenaean period to the accession of Constantine. Fall.

HIST 434 History of Ancient Rome 3

Prereq.: HIST 301 permission of instructor. Roman institutions from the regal period to the reign of Constantine. Spring.

HIST 435 History of Early Medieval Europe 3

Prereq.: HIST 301 or permission of instructor. The Late Roman empire to the 11th century. Spring. (E)

HIST 436 History of Later Medieval Europe 3

Prereq.: HIST 301 or permission of instructor. The Crusades to the Great Schism. Spring. (O)

HIST 441 Renaissance & Reformation 3

Prereq.: HIST 301 or permission of instructor. History of Europe during the Age of Transition and the Era of the Religious Wars, 1300-1648. Fall. (E)

HIST 442 Absolutism and Enlightenment in Europe 3

Prereq.: HIST 301 or permission of instructor. Social, economic, political, and cultural forces of the period in relation to formation of modern society and government. Spring. (E)

HIST 443 Revolution and Reformation in Europe 3

Prereq.: HIST 301 or permission of instructor. Political, economic, and social institutions in relation to rise of liberalism, nationalism, socialism, and imperialism. Fall.

HIST 444 Mass Politics and Total War in Europe 3

Prereq.: HIST 301 or permission of instructor. National and international problems of European states. Spring.

HIST 445 European Ideas & Culture, 1750-1918 3

Prereq.: HIST 301 or permission of instructor. Main currents of European thought and culture from 1750 to 1918. Irregular.

HIST 446 Ideas and Culture in Europe, 1918-Present 3

Prereq.: HIST 301 or permission of instructor. Main currents of European thought and culture from 1918 to the present. Irregular.

HIST 447 History of the Soviet Union 3

Prereq.: HIST 301 or permission of instructor. Study of the rise and fall of Soviet Communism, 1917-1991. Irregular.

HIST 448 Stalin and Stalinism 3

Prereq.: HIST 301 or permission of instructor. Historical study of Stalin and Stalinism stressing multidisciplinary perspectives, considered in the light of the collapse of the Soviet Union. Irregular.

HIST 451 World War I in Europe and the United States 3

Prereq.: HIST 301 or permission of instructor. Explores the First World War with an emphasis on Europe and the United States. Irregular.

HIST 452 World War II in Europe 3

Prereq.: HIST 301 or permission of instructor. Explores the Second World War in Europe. Irregular. [I]

HIST 455 Historical Representation in Latin America 3

Prereq.: HIST 301 or permission of instructor. Throughout the twentieth century, intellectuals and artists have addressed historical and political issues in their work. This course studies that phenomena through historical documents, historical monographs, literary and artistic works using the methodology of the social history of ideas. Irregular.

HIST 458 United States Sectionalism: The Clash of Cultures 3

Prereq.: HIST 301 or permission of instructor. Clash of Northern and Southern culture over the issues of slavery from 1787 to 1861. Emphasis on the attempt to quell sectional disputes through political compromise, the rise of abolitionism, and the creation of a Slave Power. Spring.

HIST 460 African Enslavement in the Americas 3

Prereq.: HIST 301 or permission of instructor. Comparative history of slavery in Latin America, the Caribbean, and the United States from 1492-1888. Fall. (O)

HIST 465 Economic History of the United States 3

Prereq.: HIST 301 or permission of instructor. American economy from its agricultural beginnings through stages of its commercial, industrial, and financial growth.

HIST 469 African Americans in the 20th Century 3

Prereq.: HIST 301 or permission of instructor. Political, economic, social, and cultural developments in Black America since 1900. Cross listed with AFAM 469. No credit given to students with credit for AFAM 469. Fall. (O)

HIST 470 Topics in Middle-Eastern History 3

Prereq.: HIST 301 or permission of instructor. Focuses upon one specific topic of modern Middle-Eastern history. The topic chosen will vary but will be within the time period of the twentieth and twenty-first centuries. Possible topics (among others) are: U.S. policy (or the lack of it) in the Middle East, Israel and Palestine, oil and the Gulf, the post-Saddam Hussein era in Iraq, religious extremism in the Middle East and the Gulf states. Irregular.

HIST 474 History of the Arab-Israeli Conflict 3

Prereq.: HIST 301 or permission of instructor. History of the Arab-Israeli conflict from the time of Israel's creation as a modern nation-state until the present. Spring.

HIST 476 African History through Film 3

Prereq.: HIST 301 or permission of instructor. Africa's past and present are viewed through a series of movies and intensive scholarly discussion of selected topics and themes. Readings are derived from current scholarly research on the various issues discussed. Irregular.

HIST 481 The Jews of Poland 3

Prereq.: HIST 301 or permission of instructor. Topics include immigration and settlement, community development and rights and privileges before 1795, modernization, nationalism, anti-Semitism, independence, Polish-Jewish relations during the holocaust, exodus and marginalization in communist Poland, and the new Polish Jews. Fall. (E)

HIST 482 The Polish-American Immigrant and Ethnic Community 3

Prereq.: SOC 110 or SOC 212 or HIST 301 or permission of instructor. Explores the processes of migration and resettlement of Polish immigrants and their descendants in America with a focus on economic, political, and social factors. Cross-listed with SOC 480; no credit given to students with credit for SOC 480. Irregular.

HIST 490 Senior Seminar 3

Prereq.: 24 credits in history including HIST 301 and 6 credits at the 400 level. Senior seminar. Undergraduate history majors only.

HIST 492 Public History Intern Experience 3 OR 4

Prereq.: Permission of instructor. 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. Spring.

HIST 493 Directed Readings in History 3

Prereq.: HIST 301 and 6 credits in 400-level history courses; or permission of Department Chair. 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. On demand.

HIST 494 Directed Readings in Non-Western History 3

Prereq.: HIST 301 and 6 credits of 400-level history courses; or permission of instructor. 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. On demand.

HIST 495 Advanced Topics in History 3

Prereq.: Admission to the M.A. in History or the M.A. in Public History, and permission of Department Chair. Must be cross-listed with a 400-level History course (may not be cross-listed with HIST 403, 404, 405, 490, 492, 493, or 494). May be repeated with different topics for a maximum of six credits. [GR]

HIST 497 Topics in History 3

Prereq.: HIST 301 or permission of instructor. 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.

HIST 498 Historical Field Studies Abroad 3

Prereq.: Permission of instructor. 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. Irregular.

HIST 499 Historical Field Studies in the US 3

Prereq.: Permission of instructor. Classroom and historical field study of themes in US history. Normally involves travel outside of Connecticut.

May be taken two times with different topics. Irregular.

500s

HIST 501 The Professional Historian 3

Prereq.: Acceptance into the MA program in history or public history, or permission of department chair. Focus on major professional trends in history at both the academic and public history level, with a special focus on writing, research, and analysis of historical arguments and theories. Special conditions: This is a mandatory course for all MA history and MA in public history graduate students. It should be taken within the first year of acceptance to the MA history and MA in public history program. Spring.

HIST 504 American Material Culture 3

Prereq.: Acceptance into MA program in history or public history, or permission of department chair. 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. Fall.

HIST 505 Local History and Community Development 3

Prereq.: Acceptance into MA program in history or public history, or permission of department chair. 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. Irregular.

HIST 510 Seminar in Public History 3

Exploration of development, methodologies, and employment opportunities of the field public history. Fall.

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. Spring.

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. Summer.

HIST 521 Public History Internship 3

Prereq.: Completion of at least 21 credits in the student's planned program of study or permission of instructor. Hands-on experience in the practice of Public History. Students will work for private and public agencies utilizing their skills acquired in coursework. On demand.

HIST 540 Seminar in European History 3 OR 6

Selected problems in historical research. Irregular.

HIST 545 History of South Africa since 1900 3

Focus on South Africa since 1900 with emphasis on the rise and fall of apartheid and multifaceted dimensions of the liberation struggle and the process of democratization. Irregular.

HIST 560 Seminar in American History 3 OR 6

Selected problems in historical research. Irregular.

HIST 563 The Age of Jackson 3

Investigates the major events, figures, and political struggles of the Jacksonian Period. Irregular.

HIST 565 Seminar in 17th- and 18th-Century America 3

Topics in 17th- and 18th-century American history. Irregular.

HIST 566 Civil War and Reconstruction in the United States 3

Prereq.: Acceptance into the MA program in history or public history, or permission of department chair. Topics and themes of the Civil War and Reconstruction eras in the United States. Irregular.

HIST 571 History of Sex, Gender, and Health in Modern United States 3

Examines historical issues concerning the relationship among sex, gender, and modern medicine. Looks at sex as a subject of scientific study, and gender as an analytic category. Explores men's and women's interactions with the health sector, the social and gender construction of disease, and the politics of women's health. Irregular.

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. Irregular.

HIST 583 Seminar in Latin American History 3

Prereq.: Permission of instructor. Selected historical, political, social, cultural, or economic topics. Irregular.

HIST 585 Modern World History 3

Explores the historical formation of the modern world with an emphasis on the processes that produced an interconnected globe: trade, war, imperialism, and decolonization, and globalization.

HIST 590 Teaching American History 3

Prereq.: Acceptance into the History is Central Teaching American History grant project; permission of program director. Covers one of the major themes of the grant, either social movements, social change: the story of American freedom; technology and industry: changing economy; changing society, or American ideals in a changing nation. Students will explore the newest historiography on the theme and to discover new and effective methods to teach American history. Students will produce lesson plans and historiographic papers, participate in primary source research, and discuss a variety of readings. Summer.

HIST 593 Directed Study in History 3

Prereq.: Permission of graduate advisor and instructor. Selected readings and project appropriate to student's major field. Open only to students in M.S. program. Irregular.

HIST 595 Public History Research Project (Plan C) 3

Prereq.: Permission of instructor; completion of 18 credits; and a 3.00 overall GPA. 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. Spring.

HIST 596 Directed Advanced Readings in History 3

Prereq.: Permission of department chair. Selected readings appropriate to student's program. May be repeated once. On demand.

HIST 599 Thesis (Plan A) 6

Prereq.: Permission of advisor and completion of 18 credits and a 3.00 overall GPA. Preparation of thesis under the supervision of the thesis advisor and second reader.

Honors

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

HON 110 Western Culture I 4

Prereq.: Honors Program participant. Introduction to western culture including its foundation in the ancient world. Spring. Study Area I

HON 120 Science & Society I 4

Prereq.: Honors Program participant. Satisfies non-laboratory requirement of Study Area IV. Selected topics from the natural sciences and their relation to society. Spring. Study Area IV

HON 130 World Cultures I 4

Prereq.: Honors Program participant. Introduction to the study of world cultures. Fall. Study Area II [I]

HON 140 Writing & Research I 4

Prereq.: Honors Program participant. Principles of critical thinking and persuasive writing, with applications to written and oral presentations. Fall. Skill Area I

200s

HON 210 Western Culture II: Topics in Western Culture 4

Prereq.: Honors Program participant. Selected topics in western culture including discussion of historical contexts. Fall. Study Area I

HON 220 Science and Society II: Social Sciences and Society 4

Prereq.: Honors Program participant. Selected topics from the social sciences and their relation to society. Spring. Study Area III

HON 230 World Cultures II: Topics in World Cultures 4

Prereq.: Honors Program participant. Selected topics from world cultures. Fall. Study Area II [I]

HON 250 Western/World Culture III: Comparative Topics 4

Prereq.: Honors Program participant. Selected topics in comparative cultures from western and world perspectives. Spring. Study Area III [I]

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

HON 440 Writing & Research II 1

Prereq.: Honors Program participant or permission of Program Director. Methodology of thesis writing and presentation of thesis proposal. Fall. Study Area I

HON 441 Writing & Research III: Honors Thesis 2

Prereq.: Honors Program participant or permission of Program Director. Independent research developed from previous Honors Program courses. Spring. Skill Area I

HON 442 Writing & Research IV: Thesis Workshop 1

Prereq.: Member of Honors Program or permission of program director, and HON 441 (taken concurrently). Problems and solutions in thesis writing. Spring. Study Area II

HON 450 Special Project 1 TO 3

Prereq.: HON 441 or permission of program director. 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.

Humanities

1. Jump to level:
2. [200s](#)
3. [300s](#)

100s

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. Study Area I

200s

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. Cross-listed with IS 230. No credit given to students with credits for IS 230 focusing on the same topic. Study Area I. [I]

HUM 250 Topics in European Literature 3

Prereq.: ENG 110. A literary figure, movement or theme in European Literature studied in translation. Topic may vary from semester to semester. On demand. Study Area I [I] [L]

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. Cross-listed with CINE 270. No credit may be received by students who have received credit for CINE 270. Irregular. Study Area I. [I].

300s

300-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY.

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. Cross-listed with IS 330. No credit will be given to students with credits for IS 330 on the same topic. Study Area I. [I]

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. Cross-listed with IS 360. No credit will be given to students with credit for IS 360 focusing on the same topic. Study Area I. [I]

Intensive English Language Program

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

IELP 101 Pre-EAP (English for Academic Purposes) Listening and Speaking 0

Prereq.: IELP placement test. Sixteen-week/160 hour pre-academic introduction to listening, speaking, and grammar skills for non-native speakers of English. In this course, which will be divided into two, eight-week sessions, students will develop the basic communication and survival skills necessary to begin studying English for academic purposes.

IELP 102 Pre-EAP (English for Academic Purposes) Reading and Writing 0

Prereq.: IELP placement test. Sixteen-week/160 hour pre-academic introduction to reading, writing, and grammar skills for non-native speakers of English. In this course, which is divided into two, eight-week sessions, students will develop the basic communication and survival skills necessary to begin studying English for academic purposes.

IELP 110 IELP - English Conversation I 0

Conversation in English for IELP.

IELP 111 IELP-English Conversation II 0

Level II English conversation for IELP.

IELP 150 University Prep Program 0

Prereq.: IELP placement test. Advanced academic English for non-native speakers. Classes emphasize university-level essays, extensive reading, and formal speaking.

IELP 199 Transition 3

Prereq.: Acceptable IELP placement test results or permission of instructor. Ten hour per week integrated language skills course for advanced ESL students. Emphasis on expository and argument writing, academic reading skills, focused discussion, formal debate, and familiarization with methods of research documentation.

200s

IELP 201 Intensive English Lang & American Culture II: Listening and Speaking 0

Eight-week highly interactive program which includes 20 hours of classroom instruction per week of Level II English language listening and speaking. Student activities and several field trips are also included.

IELP 202 Intensive English Language & American Culture II: Reading and Writing 0

Eight-week highly interactive program which includes 20 hours of classroom instruction per week of Level II English language reading and writing. Student activities and several field trips are also included.

IELP 205 English for Specific Purposes 1 TO 3

Special purpose course designed to meet the needs of selected groups of non-native English speakers. Focuses on developing communicative competence in a specific field or workplace environment. May be repeated.

300s

IELP 301 Intensive English Language & American Culture III: Listening and Speaking 0

Eight-week highly interactive program which includes 20 hours of classroom instruction per week of Level III English language listening and speaking. Student activities and several field trips are also included.

IELP 302 Intensive English Language & American Culture III: Reading and Writing 0

Eight-week highly interactive program which includes 20 hours of classroom instruction per week of Level III English language reading and writing. Student activities and several field trips are also included.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

IELP 401 Intensive English Language & American Culture IV: Listening and Speaking 0

Eight-week highly interactive program which includes 20 hours of classroom instruction per week of Level IV English language listening and speaking. Student activities and several field trips are also included.

IELP 402 Intensive English Language & American Culture IV: Reading and Writing 0

Eight-week highly interactive program which includes 20 hours of classroom instruction per week of Level IV English language reading and writing. Student activities and several field trips are also included.

IELP 451 Intensive English Language & American Culture V: Listening and Speaking 0

Prereq.: IELP 401 or permission of instructor. Eight-week highly interactive class which includes 10 hours of classroom instruction per week of Level V English language listening and speaking. Student activities and several field trips are also included.

IELP 452 Intensive English Language & American Culture V: Reading and Writing 0

Prereq.: IELP 402 or permission of instructor. Eight-week highly interactive class which includes 10 hours of classroom instruction per week of Level V English language reading and writing. Student activities and several field trips are also included.

IELP 460 TOEFL Preparation 0

TOEFL skills and strategies. Practice TOEFL exams are administered regularly.

IELP 499 Graduate Transition 0

Prereq.: Acceptable IELP placement test results or permission of instructor; graduate student status.

Ten hour per week non-credit integrated language skills course for advanced ESL students. Emphasis on expository and argument writing, academic reading skills, focused discussion, formal debate, and familiarization with methods of research documentation.

Interdisciplinary

ID 102 Master Student 1

Prereq.: Freshman standing or permission of instructor. 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. Fall.

Interdisciplinary Sciences

ISCI 104 Science Connections 3

Interdisciplinary emphasis on science in the context of everyday experience. Promotes general scientific literacy and skills relevant to scientific inquiry. For non-science majors. Two lectures and one two-hour laboratory per week. Fall. Study Area IV

ISCI 118 Women's Contributions to Science 3

Prereq.: MATH 099 or permission of instructor. Exploration of discoveries made by women scientists, including their methodology, consequences, and the social constraints placed upon them. Two lectures and one, two-hour laboratory period per week. Study Area IV

International Studies

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

200s

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. Spring. Study Area II [I]

IS 226 Intercultural Sensitivity 3

Exploration of customs of the world's major societies, with an emphasis on those customs pertinent to cross-cultural understanding and the conduct of international relationships. Fall. Study Area III [I]

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. 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. On demand. Study Area I [I]

IS 240 Caribbean Cultural Patterns 3

Prereq.: Permission of instructor or program coordinator when course is offered in Spanish. Multi-disciplinary study of the people who inhabit the islands and margins of the Caribbean Sea, with a focus upon their problems and accomplishments. This course may be taught in Spanish. Irregular. Study Area II [I]

IS 245 Puerto Rico 3

Prereq.: Permission of instructor or program coordinator when course is offered in Spanish. 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. Irregular. Study Area II [I]

300s

300-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY.

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. Cross-listed with HUM 330. No credit will be given to students with credits for IS 330 on the same topic. Irregular. Study Area I [I]

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. Cross-listed with HUM 360. No credit will be given to students with credit for HUM 360 focusing on the same topic. Irregular. Study Area I [I]

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

IS 436 Geography of South America 3

Cross listed with GEOG 436 and LAS 436. See GEOG 436 for detailed description. No credit given to students with credit for GEOG 436 or LAS 436. Spring.

IS 450 Internship in International Studies 3

Students will work under faculty supervision in an international environment related to their academic track or planned program. Written reports are required. On demand. [GR]

IS 470 Topics in International Studies 3

Prereq.: Permission of instructor. Topics in International Studies.

IS 475 International Studies Senior Project 3

Prereq.: Senior standing and declared IS major. 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. On demand.

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. [I]

500s

IS 501 Advanced Studies in International Studies 3

Linked course with Interdisciplinary Studies.

IS 570 Modern World Issues 3

Examination of contemporary world problems such as population, underdevelopment, ecological degradation, war and diplomacy, and cultural extinction.

IS 571 International Diversity and Integration 3

Study of the institutions and attitudes involved in international integration. Factors which influence this process such as ethnic and cultural diversity will be considered. Fall.

IS 590 Graduate Field Study Abroad 3 OR 6

Course taught abroad. May be repeated for a maximum of 6 credits.

IS 595 Special Project in International Studies 3

Prereq.: IS 598, permission of instructor, and a 3.00 overall GPA. 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. On demand.

IS 596 Independent Studies 3

Prereq.: Permission of advisor. 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. On demand.

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.

IS 598 Research in International Studies 3

Prereq.: Permission of advisor. Designed to familiarize students with the techniques and resources associated with research in their specialization. Opportunity for practical applications will be provided. On demand.

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.

Italian

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

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. Skill Area III

ITAL 112 Elementary Italian II 3

Prereq.: ITAL 111 or equivalent (normally, two years high school study). 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. Skill Area III

ITAL 118 Intensive Elementary Italian 6

Open only to students with one year or less of Italian at the high school level. Only three credits may be applied toward the International requirement. No credit to students who have received credit for ITAL 111 and/or ITAL 112. Intensive Italian language course designed to bring students to intermediate skills in one semester. Six classroom hours per week. Skill Area III

ITAL 123 Basic Italian Review 3

Prereq.: Three years of Italian in high school or equivalent preparation. Refresher course designed to reinforce basic listening, reading, speaking, and writing abilities in Italian. No credit will be given to students with more than three years of Italian in high school, except by permission of department chair. Irregular. Skill Area III

ITAL 125 Intermediate Italian I 3

Prereq.: One year of college Italian or equivalent. 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. Fall. Skill Area I [I]

ITAL 126 Intermediate Italian II 3

Prereq.: ITAL 125 or equivalent. 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. Spring. Skill Area I [I]

200s

ITAL 225 Intermediate Italian III 3

Prereq.: ITAL 125 or ITAL 126 or permission of instructor. 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. Fall. Skill Area I [I]

ITAL 226 Italian Structure and Idiom 3

Prereq.: ITAL 125 or 126 or permission of instructor. Designed to help students improve writing skills by means of frequent composition in Italian. Further study of grammar. Spring. Skill Area I [I]

300s

ITAL 304 Introduction to Italian Literature I 3

Prereq.: ITAL 225 or ITAL 226 (either may be taken concurrently) or permission of instructor. Taught in Italian. Introduction to major works in Italian literature from the Middle Ages to 1700. Fall. (O) Study Area I [I] [L]

ITAL 305 Introduction to Italian Literature II 3

Prereq.: ITAL 225 or ITAL 226 (either may be taken concurrently) or permission of instructor. Taught in Italian. Introduction to major works in Italian literature since 1700. Spring. Study Area I [I] [L]

ITAL 315 Italian Civilization to 1861 3

Prereq.: ITAL 225 or ITAL 226 (either may be taken concurrently) or permission of instructor. The cultural development of Italy from its beginnings to unification. Fall. Study Area II [I]

ITAL 316 Italian Civilization from 1861 to the Present 3

Prereq.: ITAL 225 or ITAL 226 (either may be taken concurrently) or permission of instructor. Cultural development of Italy from 1861 to the present. Spring. Study Area II [I]

ITAL 335 Advanced Composition and Diction 3

Prereq.: ITAL 226. Additional practice for student development of oral proficiency in Italian through discussion of readings, films and other authentic materials. On demand. [I]

ITAL 336 Advanced Structure and Idiom 3

Prereq.: ITAL 226. Additional practice for student development of oral proficiency in Italian through discussion of readings, films, and other authentic materials. On demand. [I]

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

ITAL 441 Advanced Oral Practice 3

Prereq.: Permission of instructor. Taught in Italian. Development of fluency in oral self-expression. Speech analysis to improve pronunciation and intonation. On demand. [I] [GR]

ITAL 470 14th-Century Italian Literature 3

Prereq.: ITAL 304 or permission of instructor. Taught in Italian. Study of the period with special emphasis on Dante, Petrarch, Boccaccio. On demand. [I] [GR]

ITAL 476 16th-Century Italian Literature 3

Prereq.: ITAL 304 or permission of instructor. Taught in Italian. Major works of Italian renaissance. On demand. [I] [GR]

ITAL 488 Italian Life and Culture 3

Prereq.: Permission of instructor. Discussion of contemporary Italian society, traditions and values. On demand. [I] [GR]

500s

ITAL 560 Advanced Written Italian 3

Prereq.: Permission of instructor. 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. On demand.

ITAL 561 Topics in Italian Literature 3

Prereq.: Permission of instructor. 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. On demand.

ITAL 571 20th-Century Italian Literature 3

Prereq.: Permission of instructor. Taught in Italian. Representative authors and literary movements of the 20th century. Irregular.

ITAL 588 Topics in Italian Cultural Studies 3

Prereq.: Permission of instructor. 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. Irregular.

ITAL 599 Thesis 3

Prereq.: Fifteen credits of approved graduate study, permission of graduate advisor, and a 3.00 overall GPA. Preparation of thesis under the supervision of thesis advisor. On demand.

Japanese

1. Jump to level:
2. [200s](#)
3. [300s](#)

100s

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. Skill Area III

JAPN 112 Elementary Japanese II 3

Prereq.: JAPN 111 or equivalent (normally, two years high school study). 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. Spring. Skill Area III

JAPN 125 Intermediate Japanese I 3

Prereq.: One year of college Japanese or equivalent. Continuation and review of grammar and structure. Development of reading skills. Fall. Skill Area I [I]

JAPN 126 Intermediate Japanese II 3

Prereq.: JAPN 125 or equivalent. Further study of grammar and structure. Readings in literary and cultural areas. Spring. Skill Area I [I]

200s

JAPN 225 Intermediate Japanese III 3

Prereq.: JAPN 126 or permission of instructor. Designed to improve speaking skills through discussion of contemporary texts. Further study of grammar. Fall. Skill Area I [I]

JAPN 226 Intermediate Japanese IV 3

Prereq.: JAPN 126 or permission of instructor. Designed to develop current idiomatic usage and fluency of expressions. Further study of grammar. Spring. Skill Area I [I]

300s

JAPN 335 Japanese for Oral Expression I 3

Prereq.: JAPN 226 or equivalent. Taught in Japanese. Designed to further develop oral proficiency through the discussion of contemporary texts. Fall. [I]

JAPN 336 Japanese for Oral Expression II 3

Prereq.: JAPN 335 or permission of instructor. Taught in Japanese. Designed to continue developing oral proficiency through further study of grammar and discussion of contemporary texts. Spring. [I]

Journalism

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

200s

JRN 200 Introduction to Journalism 3

Prereq.: ENG 110. 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. Skill Area I

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. Skill Area I

JRN 237 Introduction to the Profession 1

Prereq.: JRN 200 (preferably taken with JRN 235 or 236). Overview of career opportunities in print, broadcast and online journalism.

300s

JRN 336 News Writing and Reporting II 3

Prereq.: JRN 235 or permission of instructor. 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.

JRN 340 Introduction to Broadcast News 3

Prereq.: JRN 200 and 235 (COMM 330 recommended), or permission of instructor. Introduction to the writing, production, and performance requirements of TV news.

JRN 370 Today's News in Context 3

Prereq.: JRN 235 or JRN 236. Examination of current news and the historical figures, forces, and events underlying it. Students study the intersection of past and present on issues such as government reform, war and peace, foreign policy, social justice, the electoral process, health care, the economy, religion and the environment. Fall. (O)

JRN 371 Reporting Cultural Diversity 3

Prereq.: JRN 235 or JRN 236. 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. Irregular.

JRN 380 Feature Writing 3

Prereq.: JRN 235 or permission of instructor. Writing and analysis of human interest articles; exploration of the newspaper and magazine markets. No Credit given to students with credit for ENG 380. (E)

JRN 381 Opinion Writing 3

Prereq.: JRN 235 or JRN 236. Study, evaluation, and writing of opinion pieces for newspapers, magazines, and online publications. Focus is mainly on public affairs issues. Fall. (O)

JRN 383 Responsibilities of Journalism 3

Prereq.: JRN 235 or 236 or permission of instructor. 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. Irregular.

JRN 384 Journalism History 3

Prereq.: JRN 235 or 236 or permission of instructor. Examination of the history of American journalism from colonial times to the late 20th century. Irregular.

JRN 385 Web Journalism 3

Prereq.: JRN 235 or 236 or permission of instructor. Introduction to writing and reporting for the web. Students will create multimedia content and examine the Internet's impact on journalism. Irregular.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

JRN 400 Journalism Theory 3

Prereq.: JRN 235 and JRN 236 and JRN 383 or JRN 384; or permission of instructor. 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. Irregular.

JRN 410 Public Opinion 3

Prereq.: Junior or senior standing. Dissects the social-psychological phenomenon of public opinion to understand its nature as well as to explore its social function. Goes in depth into the most important public opinion research methodologies. Cross-listed with COMM 410. No credit given to students who have received credit for COMM 410. Irregular.

JRN 412 Editing 3

Prereq.: JRN 235 or permission of instructor. 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. Irregular.

JRN 416 Magazine Writing 3

Prereq.: JRN 235 and JRN 236 or permission of the instructor. 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. Irregular.

JRN 418 Studies in Journalism 3

Prereq.: JRN 235 or permission of instructor. 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. Irregular.

JRN 420 Political Economy and Media 3

Prereq.: Junior or senior standing or permission of instructor. Examines structures that shape media organizations and content, with some focus on the link between political economy and news. Irregular.

JRN 440 TV News Practicum 3

Prereq.: JRN 200, 235, 340, and COMM 330 (or related video/television production experience), Direct experience in the production of TV news. May be repeated for up to 6 credits.

JRN 490 Individual Guided Projects 1 TO 3

Prereq.: Senior standing, G.P.A. of at least 3.0 and permission of instructor. Conference course for students who want to pursue an individually designed project. May be repeated for a maximum of 6 credits. On demand.

JRN 491 Campus Newspaper Critique 1

Prereq.: Permission of instructor. 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.

JRN 495 Internship in Journalism 3

Prereq.: JRN 235 and 236. Students work in a professional news or media organization and meet regularly with a faculty advisor. On demand.

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. Fall. Skill Area III

LAT 112 Elementary Latin II 3

Prereq.: LAT 111 or equivalent (normally, two years high school study). 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. Spring. Skill Area III

Latin American Studies

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

200s

LAS 235 International Relations 3

Introduction to the 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. Cross listed with PS 235. No credit given to students with credit for PS 235. Study Area II [I]

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 or 381 or LAS 381.

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. Spring. (O) Study Area II [I]

300s

LAS 316 Latin American Civilization 3

Prereq.: SPAN 226 or 291 (may be taken concurrently). 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. Spring. Study Area II [I]

LAS 375 Spanish American Literature I 3

Prereq.: SPAN 300 or permission of instructor. Cross listed with SPAN 375; see SPAN 375 for detailed course description. No credit given to students with credit for SPAN 375. Fall. Study Area I [I] [L]

LAS 376 Spanish-American Literature II 3

Prereq.: SPAN 300 or permission of instructor. Cross listed with SPAN 376. See SPAN 376 for detailed description. No credit given to students with credit for SPAN 376. Spring. Study Area I

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

LAS 428 Cultures of Latin America 3

Prereq: ANTH 140 or ANTH 170 or SOC 110. 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 with ANTH 428. No credit given to students with credit for ANTH 428. Fall. [I]

LAS 434 Mexico, Central America and the Caribbean 3

Cross listed with GEOG 434. See GEOG 434 for detailed description. No credit given to students with credit for GEOG 434.

LAS 436 Spanish American Literature I 3

A survey of the countries of South America with emphasis on people, places, and problems. Cross listed with GEOG 436 and IS 436. No credit given to students with credit for GEOG 436 or IS 436. Spring. [I]

Latino Studies

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

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. Fall. Study Area II

300s

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. Cross-listed with HIST 316. No credit may be received by students who have received credit for HIST 316. Fall.

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. Cross-listed with HIST 317. No credit may be received by students who have received credit for HIST 317. Spring.

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. Cross-listed with HIST 319. No credit may be received by students who have received credit for HIST 319. Fall.

LTN 322 Race and Ethnic Relations 3

Prereq.: SOC 110, 212. 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 may be received by students who have received credit for SOC 322. Irregular.

LTN 347 Latino/a Literature 3

Prereq.: ENG 110. Important U.S. Latino/a literary works in prose, poetry, drama, and essay. Cross-listed with ENG 347. No credit may be received by students who have received credit for ENG 347. Spring. Study Area I [L] [I]

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

LTN 410 Individual Study Project in Latino Studies 3

Prereq.: LTN 110; enrollment in Latino Studies Minor program. 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. Irregular.

LTN 422 Sociology of Immigration 3

Prereq.: SOC 110. 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 422. No credit may be received by students who have received credit for SOC 422. Irregular.

LTN 470 Topics in Latino Studies 3

Prereq.: LTN 110; enrollment in Latino Studies minor program. 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. Irregular.

Law

Note: See also the Pre-Law Program on page 000, as well as EXS 412, PHIL 349, PS 235, PS 241, PS 331, PS 332, PS 338, and PS 339.

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

200s

LAW 250 Legal Environment of Business 3

Prereq.: 30 credits completed before beginning course work. Introduction to the legal environment of organizations, including principles that affect management, marketing, accounting, finance and technology. Included is a review of social responsibility of business, international legal environment, administrative law, torts, contracts, agency, business organizations, and intellectual property.

300s

LAW 390 Topics in International Business Law 3

Prereq.: LAW 250. Selected topics in international legal studies. May include specific business topics. Course content may vary from semester to semester. Irregular. [I]

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

LAW 400 Advanced Business Law 3

Prereq.: LAW 250 (C- or higher). 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. [GR]

Library Science

LSC 150 Library Resources and Skills 1

Prereq.: Open to all CCSU students. Introduction to the use of information resources available electronically and in print that facilitate undergraduate research. Emphasis is placed on searching the library catalog and subject databases to find books, articles and other information. Additional topics include the correct citation of sources, evaluating information and searching the World Wide Web. Skill Area IV

Linguistics

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

200s

LING 200 Introduction to Linguistics 3

The structure and system of language with English as the subject of analysis: history, phonology, morphology, syntax, semantics, usage. Study Area III

LING 230 The Study of Language 3

General concepts of language as it evolved in thought, society, literature, and scientific analysis, with emphasis on universal characteristics and relevance to contemporary English. Study Area III [I]

300s

LING 300 Language Acquisition 3

Prereq.: LING 200. Study of how we acquire our first language; child language, regional and social dialect, register, style, and idiolect.

LING 312 Introduction to Syntax 3

Prereq.: LING 200. Introduction to basic principles of syntactic theory within contemporary grammatical frameworks and how they generate grammatical sentences. Construction of sound syntactic arguments in linguistic theory. Emphasis on English syntax. Irregular.

LING 313 Introduction to Phonetics & Phonology 3

Prereq.: LING 200. Articulation, acoustics, and perception of speech sounds in human language. Patterning and representation of sounds in phonological systems. Phonological processes. Use of the computerized Speech Laboratory. Irregular.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

LING 400 Linguistic Analysis 3

Intensive analysis (syntactic, morphological, phonological) of selected data from English and other languages. Particular emphasis on developing analytical skills. Irregular. [GR]

LING 430 Studies in Linguistics & the English Language 3

Selected topics in linguistics. Students may take this course under different topics for a maximum of 6 credits. Irregular. [GR]

LING 431 The History of the English Language 3

History, growth, and structure of the English language. Spring. [GR]

LING 433 Introduction to Computational Linguistics 3

Prereq.: LING 312 and 313. Investigation of computational models of natural language processing for both parsing and production of lexical, phonological, and syntactic units, including text to speech. The relationship between linguistic theories and the algorithms that can implement them. Irregular.

LING 434 Speech & Natural Languages Processing 3

Prereq.: LING 312 and 313. Exploration of techniques and methods of human-computer dialogues with primary focus on how computers recognize, parse, and produce syntactic, semantic, pragmatic, and other discourse-theoretic aspects of human languages such as English. Irregular.

LING 496 TESOL Methods 3

Principles, methods, and materials for teaching English to non-English speaking students at all levels. Acquisition and practice of basic language teaching skills. Intercultural communication in the TESOL classroom. [GR]

LING 497 Second Language Acquisition 3

Major theories of language acquisition and their potential application to language learning. The theoretical bases of second language instruction. Spring. [GR]

500s

LING 512 Modern Syntax 3

Concepts and formalisms in grammar. Problem solving in English syntax. Contemporary developments in syntactic theory. Spring.

LING 513 Modern Phonology 3

Characteristics and organization of sound systems of languages. Special attention to the sound system of English and how it fits into universal patterns. Generative and post-generative phonologies. Spring.

LING 515 An Introduction to Sociolinguistics 3

Examination of the interlocking nature of language and society, with particular emphasis on sociolinguistic theory and field work.

LING 530 Topics in Theoretical and Applied Linguistics 3

Detailed study of a specific subfield in theoretical or applied linguistics. Students may take this course under different topics for a maximum of 6 credits. Irregular.

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. Fall.

LING 535 Second Language Testing 3

Linguistic and academic assessment of non-native speakers of English. Determination of language dominance and proficiency of bilinguals. Preparation of language tests. Fall.

LING 596 TESOL Practicum 3

Prereq.: LING 496. Students will teach ESOL under supervision. Spring.

LING 598 Research in TESOL & Applied Linguistics 3

Covers research topics and methods in TESOL and applied linguistics. Fall.

LING 599 Thesis 3

Prereq.: 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. Preparation of the thesis under supervision of the thesis advisor. On demand.

Management

Note: Enrollment in 300- and 400-level management courses requires admission to the upper-division of the Business School (including meeting specific GPA requirements and completion of eight Business School pre-major courses with grades of at least C- in all eight courses). Certain courses (MGT 305, MGT 321, MGT 326, MGT 345, MGT 390, MGT 403, MGT 425, MGT 431, MGT 460, MGT 462, and MGT 481) may be taken as part of a pre-approved minor in business with a management concentration.

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

200s

MGT 295 Fundamentals of Management and Organizational Behavior 3

Prereq.: ENG 110 with a grade of C- or higher and sophomore standing. 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.

300s

MGT 305 Human Resource Management 3

Prereq.: MGT 295 (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. 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.

MGT 321 International Management 3

Prereq.: MGT 295 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. 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. [I]

MGT 326 Business Organizational Behavior 3

Prereq.: MGT 295 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. 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.

MGT 345 Organizational Theory 3

Prereq.: MGT 295 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. Provides a systematic understanding of complex business organizations in modern society. The unit of analysis will be the organization and its major subunits. Explores how organizations shape and influence behaviors and develops a conceptual framework for analyzing the design and operation of business corporations and other complex organizations.

MGT 348 Management Systems 3

Prereq.: Grades of at least C- in MGT 295 and the eight pre-major courses, junior standing, and meeting upper-division Business School GPA requirements. 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.

MGT 390 Management Topics 3

Prereq.: MGT 295 with a grade of at least C-; junior standing; (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; and permission of the department chair. 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. Irregular.

MGT 395 Field Studies in International Business 3

Prereq.: (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. 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. [I]

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"**MGT 403 Ethical and Social Issues for the Manager 3**

Prereq.: MGT 295 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. 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. [GR]

MGT 425 Labor/Management Relations 3

Prereq.: MGT 295 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. 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. [GR]

MGT 431 Compensation and Benefits 3

Prereq.: MGT 305 and STAT 201 with grades 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. 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. Fall. [GR]

MGT 448 Managing Strategy and Operations 3

Prereq.: Grades of at least C- in FIN 295, MGT 295, MGT 348, MIS 201, and the eight pre-major courses; senior standing; and meeting upper-division Business School GPA requirements. 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 460 Staffing 3

Prereq.: 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. 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. Spring. [GR]

MGT 462 International Human Resource Management 3

Prereq.: 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. 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. Fall. [GR]

MGT 470 Organizing and Managing for Quality 3

Prereq.: Grades of at least C- in MGT 295 and the eight pre-major classes, junior standing, and meeting upper-division Business School GPA requirements. Examines leading organizational architecture that employs quality management in all activities of the enterprise. Explores how competitive strength is built by enabling the work force to innovate, so that products and service meet global customer standards. Irregular. [GR]

MGT 471 Managing Knowledge for Business Performance 3

Prereq.: Grades of at least C- in MGT 295 and the eight pre-major courses, junior standing, and meeting upper-division Business School GPA requirements. For graduate students, permission of department chair and additional work are required. Explores how people in organizations manage processes for creating, sharing, and evaluating knowledge used to improve and innovate business performance. Covers nature of knowledge, communities of practice, intellectual capital, knowledge life cycles, and executing knowledge projects. Irregular. [GR]

MGT 473 Organizing and Managing for Innovation 3

Prereq.: Grades of at least C- in MGT 345 and the eight pre-major courses, junior standing, and meeting upper-division Business School GPA requirements. Explores contemporary approaches for releasing employee, supplier and customer creativity to constantly innovate what and how an organization produces its products and services. Irregular. [GR]

MGT 480 Strategic Management 3

Prereq.: Grades of at least C- in FIN 295, LAW 250, MC 207, MIS 201, MGT 295, MKT 295, and the eight pre-major courses; acceptance into upper-division of School of Business; meeting upper-division Business School GPA requirements; and senior standing. 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.

MGT 495 Seminar in International Business 3

Prereq.: Senior standing or permission of instructor. 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. Spring. []

MGT 497 Internship/Independent Study in Management and Organization 1 TO 3

Prereq.: 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. 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 study project. Activity may be either research oriented or an internship. May be repeated for a maximum of 6 credits.

Management Information Systems

Note: Enrollment in 300- and 400-level management information systems courses requires admission to the School of Business or permission of the department chair.

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

200s

MIS 200 Business Problem Solving using Software 1 TO 3

Using designated software package(s) to solve problems and facilitate business decision making. Winter and Summer Sessions.

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.

MIS 210 Application Program Development I 3

Prereq.: 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 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.

MIS 220 Contemporary Business Applications Development I 3

Prereq.: MIS 201 (C- or higher). Introduction to contemporary approaches to application development in a business environment. Emphasis on program design, development, testing, implementation, and documentation of business applications.

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. Irregular.

300s

MIS 300 Project Management for Business 3

Prereq.: MIS 201 (C- or higher) or permission of department chair, and admission to the upper division of the Business School. 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.

MIS 305 E-Business 3

Prereq.: MIS 201 (C- or higher) or permission of department chair. Focuses on conducting e-business activities, including e-commerce, e-business models, and processes in organizations. Technology infrastructure, global, social, ethical, privacy, security as well as planning, designing, developing, and maintaining a web site.

MIS 312 Contemporary Business Applications Development II 3

Prereq.: MIS 220 (C- or higher). Emphasizes program design, development, testing implementation, and documentation of business applications. Window and web applications, data access, security, and exchange will be covered.

MIS 315 Database Management Systems 3

Prereq.: MIS 201 (C- or higher) or permission of department chair. 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.

MIS 361 Systems Analysis and Design for Business 3

Prereq.: MIS 315 (can be taken concurrently; C- or higher) or permission of department chair. 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.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

MIS 400 Business Analytics and Decision Support 3

Prereq.: MIS 315 (C- or higher) or permission of department chair, and admission to the upper division of the Business School. Investigation of methodologies, tools, and processes that support business decisions. Topics include decision making processes, data warehousing, data mining, text and web mining, and business performance management. Fall.

MIS 410 Business-Driven Infrastructure Design 3

Prereq.: MIS 361 (C- or higher) or permission of department chair. Introduce networking concepts. Integrates technical and business needs analysis with network component selection and Internet technologies. Design and price a portion of a large enterprise network. Uses a business case approach with Network Analysis and Design methods. Spring.

MIS 450 Enterprise Strategies and Transformations 3

Prereq.: MIS 361 (C- or higher) or permission of department chair. Organizational transformations are critical for continued market success in an increasingly complex and dynamic global environment. Emphasizes integrative strategies spanning all business functions which are needed by evolving and established enterprises.

MIS 460 Emerging Technologies for Business 3

Prereq.: Senior standing. 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. Irregular.

MIS 462 IT Project Management and System Implementation 3

IT best project management practices. Topics include IT project organization, management, and implementation; vendor-client relationships; communication with stakeholders; and working with local and virtual teams. Group project related to implementation of an Information System. Spring.

MIS 494 Independent Study in Management Information Systems 3 TO 6

Prereq.: MIS 315 and MIS 361 (B or higher) and senior standing. 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. On demand.

MIS 496 Practicum in Management Information Systems 3

Prereq.: MIS 315 and MIS 361 (both with grades of B or higher) and senior standing; or permission of department chair. 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. On demand.

MIS 498 Information and Decision Sciences Seminar 3

Prereq.: MIS 315 and MIS 361 (both with grades of C- or higher) and senior standing. An examination of the current trends in the theory and business practices of information and decision sciences. On demand.

500

MIS 501 Managing the IT Value Proposition 3

Prereq.: Admission to MS-CIT or permission of department chair. Examines IT management from the practical, technical and theoretical aspects of information systems. Introduces information systems concepts and their implication for management of technology. Socio-technical and behavioral issues are examined.

MIS 502 Business Payoff of Information Technology & Systems 3

Prereq.: Admission to MS-CIT or permission of department chair. Examines effective methods for competitive advantage through information systems and methods for sustainable payoff of IT. Impact of information technologies/systems on conducting business in a dynamic, global environment including sourcing options, virtual community and work patterns.

MIS 510 Managing Data Communications & Networking 3

Prereq.: Admission to MS-CIT or permission of department chair. Provides technology overview of data networking and telecommunications in context of Information Systems management issues. Business cases stress strategies for successful design, implementation and maintenance of large-scale networked information systems, management of digital networks. On demand.

MIS 515 Data Management 3

Prereq.: Admission to MS-CIT or permission of department chair. Concepts, principles, issues, and techniques for managing corporate data resources. Techniques for managing the design and development of large database systems. Data warehousing, data mining, and database administration will be emphasized. On demand.

MIS 550 Information Technology Policy and Strategy 3

Prereq.: Admission to MS-CIT or permission of department chair. Strategic use of enterprise information systems and technology for the evolving and changing global marketplace. Development and implementation of policies and plans to achieve the alignment of information systems, technology and enterprise goals. On demand.

MIS 561 International Management Information Systems 3

Prereq.: Admission to MS-CIT or permission of department chair. Examination of the role of information technology in today's business environment. Includes both theoretical perspectives as well as case studies custom-developed from international enterprises. Irregular.

MIS 565 Information Systems Analysis and Design 3

Prereq.: Admission to MS-CIT or permission of department chair. Information systems development methods and analysis and design techniques with a focus on object-oriented analysis and design. Evaluation and selection of systems development, analysis and design methodologies including JAD, RAD, UML, and object-oriented approaches. On demand.

MIS 569 Current Topics in Management Information Systems 3

Prereq.: Admission to MS-CIT program or permission of department chair. Management information systems and information technology issues. Topics vary to reflect conditions in the field. May be repeated with different topics for a maximum of six credits.

Managerial Communication

MC 207 Managerial Communication I 3

Prereq.: ENG 110 and sophomore standing. The study and development of effective business correspondence, reports, and communications systems. Selected assignments include written and oral reports used in business.

MC 200 Polishing Workplace Communication Skills 1 TO 3

Polished communication in the workplace is critical to career success. This course targets business-communications proficiency by building on extant knowledge, skill, and ability. Winter and Summer Sessions.

MC 307 Managerial Communication II 3

Prereq.: ENG 110, MC 207, and sophomore standing. For Business majors and minors only. Study and development of advanced business correspondence, reports, and communication systems for tactical and strategic business executives. Spring.

Manufacturing Technology

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

MFG 118 Introduction to Materials 3

Technical principles and concepts of material structure, properties, and testing methods for the major material families (metals, polymers, ceramics and composites) as it relates to material selection and processing decisions. Three hours lecture and two hours laboratory, course meets five hours per week.

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.

200s

MFG 216 Manufacturing Processes 3

Prereq.: MFG 118 or ET 150, or permission of instructor. 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. Three hours lecture and two hours laboratory, course meets five hours per week.

MFG 226 Principles of Computer Numerical Control 3

Prereq.: MFG 121 or ETM 260 or permission of instructor. 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. Spring.

MFG 236 Tool Design 3

Prereq.: MFG 121 or permission of instructor. 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. Fall.

300s

MFG 321 Computer-Aided Drafting 3

Prereq.: GRT 112 or MFG 121 or permission of instructor. 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.

MFG 366 Manufacturing Supply Chain Strategy 3

Prereq.: MGT 295. 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. Fall.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

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. Fall.

Marketing

Note: Enrollment in 300- and 400-level marketing courses requires admission to the School of Business or permission of the department chair.

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

200s

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.

300s

MKT 305 Consumer Behavior 3

Prereq.: MKT 295 (C- or higher). 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.

MKT 306 Advertising and Promotion 3

Prereq.: MKT 295 (C- or higher). 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.

MKT 307 Sales Administration 3

Prereq.: MKT 295 (C- or higher). Examines the organization of sales departments and how to select, train, administer, and evaluate the sales force. Techniques of sales forecasting, planning, and analysis are explored. Fall.

MKT 311 Retailing 3

Prereq.: MKT 295 (C- or higher). Discussions of retail store problems, opportunities and trends in retailing, store organizations, merchandising, and store management. Spring.

MKT 321 International Marketing 3

Prereq.: MKT 295 (C- or higher). 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. Fall. [I]

MKT 350 Internet Marketing and Channels 3

Prereq.: MKT 295 (C- or higher). Discussion of the supply chain with emphasis on internet marketing. A critical analysis of various distributive strategies, underlying theories of distribution channels, techniques of costing alternative trade channels, and the structuring of channel intermediaries. Spring.

MKT 358 Relationship Marketing 3

Prereq.: MKT 295 (C- or higher). Strategic planning for developing and retaining repeat customers and business buyers. An examination of customer service systems and measurements such as buyer communication, customer satisfaction research, databases, pricing incentives, and product enhancements. Spring.

MKT 359 Special Events Marketing 3

Prereq.: MKT 295 (C- or higher). 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. Fall.

MKT 373 Marketing Research 3

Prereq.: MKT 295, STAT 201 with grades of C- or higher; MKT 305 (may be taken concurrently). 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.

MKT 375 Services Marketing 3

Prereq.: MKT 305 (C- or higher). 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.

MKT 380 Market Data Analysis 3

Prereq.: STAT 201, MKT 373 with a grade of C- or higher. 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.

MKT 390 Product Development & Management 3

Prereq.: MKT 373 (C- or higher). Analytic methods and models used in practice to develop new products and services; step-by-step development process including; opportunity identification, concept generation, concept evaluation, development, launch, management over the life cycle.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

MKT 413 Business-to-Business Marketing 3

Prereq.: MKT 295 (C- or higher). Organization, principles, policies, procedures, and techniques used in effective and efficient buying and selling of materials, equipment and, supplies by business and industry. Emphasis on roles of purchasing agents in w holesale organizations and buyers in retail establishments.

MKT 415 Marketing Touristic Startups 3

Prereq.: MKT 295, MGT 295, AC 211 (w ith a grade of C- or higher). Principles and practices in creating and marketing touristic startups: market research, market identification, market analysis, market planning, market pursuit, and marketing management. Spring.

MKT 439 Direct Marketing 3

Prereq.: MKT 373 C- or higher. Theory and application of direct marketing concepts, issues and applications including: list maintenance, market segmentation, customer profiling, response model building, model performance, the offer letter, media selection and performance.

MKT 444 Direct Marketing Analytics 3

Prereq.: MKT 373 C- or higher. 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. Cross listed w ith STAT 456. No credit given to students w ith credit for STAT 456. Spring.

MKT 450 Marketing Strategy and Plan 3

Prereq.: AC 212, FIN 295, MGT 295, MIS 201, MKT 305 and MKT 380 (all w ith grades of C- or higher). and senior standing. Synthesis of analytical framew orks: models for understanding customers, competitors, collaborators (e.g., suppliers and intermediaries), the organization itself, and the design of its strategy, Students practice decision making w ith a marketing simulation and w rite a marketing plan.

MKT 470 Integrated Marketing Communication 3

Prereq.: MKT 306 (C- or higher). Applications of marketing communication theory. Students learn how an organization integrates its promotion mix elements to present a unified message, and then create a strategic promotion plan for a real client. Fall. [GR]

MKT 471 Topics in Human Geography: Marketing 3

Prereq.: Permission of instructor. Cross listed w ith GEOG 471. See GEOG 471 for detailed description. No credit given to students w ith credit for GEOG 471.

MKT 480 Marketing for Non-Profit Organizations 3

Prereq.: MKT 295 (C- or higher). 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 w ill include market analysis, promotion decisions, market information systems, and decision making in non-profit structures.

MKT 481 Consultative Selling Techniques 3

Prereq.: MKT 305 (C- or higher) or permission of instructor. Integrate theory and application of the consultative sales process w ith 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.

MKT 494 Independent Study in Marketing 1 TO 6

Prereq.: MKT 295 (C- or higher); and senior standing, permission of the supervising instructor, the department chair, and the Dean of the School of Business. Special study or research projects, as assigned. Students w ith a deep interest in a specialized subject area explore their topic in detail. Winter, Summer.

MKT 495 Field Studies in International Marketing 3

Prereq.: Registration for a marketing study abroad program. Study abroad course w here marketing readings intertw ine w ith visits to business and cultural centers in international countries. The program focuses on global marketing. May only be taken once and cannot be combined w ith an independent study in marketing for a study abroad program. [I]

MKT 496 Practicum in Marketing 3

Prereq.: Permission of department chair. Students w ork on a real w orld 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 Project Plan. May be repeated for a maximum of 6 credits. On demand.

MKT 497 Marketing Internship 3

Prereq.: MKT 295 (C- or higher); and permission of the department chair and the Dean of the School of Business. 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. Winter, Summer.

MKT 498 Marketing Seminar 3

Prereq.: MKT 295 (C- or higher) and senior standing. 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. On demand.

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. 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

Prereq.: MFT 541 or permission of instructor. 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. Cross-listed with CNSL 510. No credit given to students with credit for CNSL 510. Spring.

MFT 541 Introduction to Theories of Family Systems 3

Prereq.: Admission to department. 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. Fall, spring, summer.

MFT 542 Professional, Ethical, and Legal Issues in Marriage and Family Therapy 3

Prereq.: Admission to the MFT program. Professional, ethical, and legal issues in marriage and family therapy. Fall, Summer.

MFT 543 The Family Life Cycle 3

Prereq.: MFT 541. 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. Fall.

MFT 544 Families in Context: Gender and Cultural Dimensions 3

Prereq.: MFT 541. Integral principles of human organization that influence family growth and development. Students gain an understanding of ethnicity and gender from a systemic framework. Fall.

MFT 551 Structural/Strategic & Behavioral Family Therapies 3

Prereq.: MFT 541. 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. Spring.

MFT 552 Experiential, Intergenerational and Psychodynamic Family Therapies 3

Prereq.: MFT 551. 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. Fall.

MFT 554 Couples Therapy 3

Prereq.: MFT 541. 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. Fall.

MFT 555 Dysfunctional Family Processes 3

Prereq.: MFT 541. Examination of structures and processes of family dysfunction, including substance abuse, family violence, and sexual abuse. Assessment and intervention strategies from a systemic framework. Spring.

MFT 556 Systemic Perspectives on Mental Disorders 3

Prereq.: MFT 541. 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. Spring.

MFT 557 Action Methods in Marital and Family Therapy 3

Prereq.: MFT 541 or permission of instructor. 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. Spring.

MFT 558 Internal Family Systems Therapy 3

Prereq.: MFT 541 or permission of instructor. 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. Summer.

MFT 583 Marriage and Family Therapy Practicum I 3

Prereq.: MFT 551 and permission of MFT coordinator. Students participate in direct client contact, staff meetings, and supervision in a clinical setting. Fall.

MFT 584 Marriage and Family Therapy Practicum II 3

Prereq.: MFT 583. Students participate in direct client contact, staff meetings, and supervision in a clinic setting. Spring.

MFT 585 Marriage and Family Therapy Internship (Plan E) 3 TO 9

Prereq.: MFT 584 and permission of the MFT coordinator. 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 500 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.

MFT 592 School-Based Family Counseling 3

Prereq.: CNSL 500, CNSL 501, PSY 512 and MFT 541 or permission of instructor. 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. Spring, Summer.

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. Fall.

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. Spring.

MFT 598 Research Methods in Marriage and Family Therapy 3

Prereq.: Admission to M.S. in MFT graduate program or permission of department chair. Quantitative and qualitative research design, data analysis, interpretation, and program evaluation methods related to marriage and family therapy. Spring.

Master of Arts in Teaching

MAT 510 Research on Teaching Diverse Learners 5

Prereq.: Admission to the M.A.T program. Research-based introduction to teaching, learning theory, classroom implications of developmental and diversity issues, and personal stance. Includes at least 15 hours of school day field experiences in assigned settings. 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. Summer I.

MAT 511 Introduction to Special Education 1

Prereq.: Admission to M.A.T. program. 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. Summer I.

MAT 520 Design and Delivery of Instruction 4

Prereq.: Admission to the M.A.T. program, and MAT 510 (C or better). Coreq.: MAT 529. 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. 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. Summer II.

MAT 529 Content Pedagogy I in Certification Area: English, Mathematics, Science, Spanish, Special Education, Technology 3

Prereq.: MAT 510 (C or better). Coreq.: MAT 520. Introduction to discipline-specific standards, pedagogy, and assessment strategies. Taught in certification area: English, mathematics, science, Spanish, special education or technology. Summer II.

MAT 530 Meeting the Needs of Special Learners in the Classroom 3

Prereq.: Admission to the M.A.T. program, and MAT 511 (C or better) and MAT 520 (C or better). Coreq.: MAT 533. Study of strategies for meeting the needs of special learners in the regular classroom, emphasizing differentiation of instruction, assessment and management. Fall.

MAT 531 Literacy and Language Issues in the Classroom 3

Prereq.: Admission to the M.A.T. program, and MAT 520 (C or better). Coreq.: MAT 533. Study of research, theory, and practice on developing literacy in content area classroom; differentiation to support struggling readers and writers; and strategies to support English language learners. Fall.

MAT 532 Research I: Reading and Designing Educational Research 3

Prereq.: Admission to the M.A.T program. Coreq.: MAT 533. Develop ability to locate and critically read educational research; review literature; and design action research. This is the first half of the program capstone sequence (Plan E). Fall.

MAT 533 Field Experience in the Certification Area: English, Mathematics, Science, Spanish, Special Education, Technology 3

Prereq.: Admission to the M.A.T program, MAT 520 and MAT 529, both with grades of C or higher. Coreq.: MAT 530, MAT 531, MAT 532, MAT 534, and MAT 539. Two days weekly supervised field experience in assigned public school classroom in certification area: English, mathematics, Science, Spanish, Special Education, or Technology. Focus on lesson planning, delivery, management and analysis of instruction. University supervisor observations and seminar. 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. Fall.

MAT 534 Creating Productive Learning Environments 3

Prereq.: Admission to the M.A.T. program, and MAT 520 with a grade of C or higher. Coreq.: MAT 533. Develop basic preventive management strategies, a repertoire of approaches to daily management of classroom behavior, skills in addressing chronic disciplinary problems, and a personal discipline plan congruent with school policies. Fall.

MAT 539 Content Pedagogy in the Certification Area II 3

Prereq.: Admission to the M.A.T. program, and MAT 520 with a grade of C or higher. Coreq.: MAT 533. Continuation of study of discipline-specific standards, pedagogy and assessment strategies in the certification area: English, mathematics, science, Spanish, special education, or technology. Taught in the certification area. Fall.

MAT 540 Internship in the Certification Area: English, Mathematics, Science, Spanish, Special Education, or Technology 6

Prereq.: Admission to the M.A.T. program and MAT 530, 531, 532, 533, 534, and 539 (all with grades of C or higher); a minimum GPA of 3.00; and permission of department chair. Coreq.: MAT 541 and MAT 542. 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. 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. Spring.

MAT 541 Internship Seminar 1

Prereq.: Admission to the M.A.T. program. Coreq.: MAT 540. Cross disciplinary seminar focused on problem solving and reflection to improve student learning and support novice teachers. Attention to progress in action research. Spring.

MAT 542 Assessment of Student Learning 3

Prereq.: Admission to the M.A.T. program. Coreq.: MAT 540. Design, implement, and analyze effective assessments of student learning, utilize state assessment data, make data-based decisions, and document impact on K-12 student learning. Spring.

MAT 550 Research II: Conducting and Reporting Action Research 3

Prereq.: Admission to the M.A.T. program; MAT 532, 540, 541, and 542 (all with grade of C or higher); and minimum GPA of 3.00 in MAT program. Complete the action research cycle by analyzing data and reporting research through paper and presentation. This is the second half of the program capstone (Plan E). 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. Summer I.

MAT 551 Perspectives on Educational Policy and Practice 3

Prereq.: Admission to the M.A.T. program. Study of the contribution of philosophical, sociological and historical perspectives on American education today. Summer I.

Mathematics

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)
6. [600s](#)

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. Fall, Spring, Summer.

100s

MATH 101 Intermediate Algebra 3

Prereq.: MATH 099 (C- or higher) or placement exam. 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, 116, 119, 123, 124, 125, 135 or 152. This course may not be used to meet the General Education requirement nor requirements for a major, a minor, or certification in mathematics.

MATH 105 Survey of Mathematics for Liberal Arts 3

Prereq.: MATH 101 (C- or higher) or placement exam. 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. Skill Area II

MATH 106 Mathematical Topics for Liberal Arts 3

Prereq.: MATH 101 (C- or higher). 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. Skill Area II

MATH 110 Finite Mathematics 3

Prereq.: MATH 101 (C- or higher) or placement exam. 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. Fall. Skill Area II

MATH 113 Structure of Mathematics I: Number Systems 3

Prereq.: MATH 101 (C- or higher) or placement exam; open only for students seeking elementary certification. 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. Skill Area II

MATH 115 Trigonometry 3

Prereq.: MATH 101 (C- or higher) or placement exam. 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, 124, 135, or 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. Skill Area II

MATH 116 Pre-Calculus Mathematics 3

Prereq.: MATH 101 (C- or higher) or placement exam. 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, 124, 125, 135 or 152. Skill Area II

MATH 119 Pre-Calculus with Trigonometry 4

Prereq.: MATH 101 (B- or higher) or placement exam. 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, 116, 124, 135 or 152. CSUS Common Course. Skill Area II

MATH 120 Problem Solving I 1

Prereq.: MATH 115 (C- or higher) or MATH 119 (C- or higher) or placement exam. 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.

MATH 123 Applied Business Mathematics 3

Prereq.: MATH 101 (C- or higher) or placement exam. 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, 125, 135 or 152. Skill Area II

MATH 124 Applied Calculus with Trigonometry 4

Prereq.: MATH 101 (C- or higher). 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, 119, 125, 135, or 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. Skill Area II

MATH 125 Applied Calculus 3

Prereq.: MATH 101 (C- or higher) or placement exam. 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, 135, or 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. Skill Area II

MATH 135 Applied Engineering Calculus I 3

Prereq.: MATH 119 (C- or higher) or MATH 115 (C- or higher) and MATH 116 (C- or higher) or Math Placement Exam. 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, 125, or 152. Skill Area II

MATH 136 Applied Engineering Calculus II 3

Prereq.: MATH 135 (C- or higher) or permission of instructor. 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. Skill Area II

MATH 152 Calculus I 4

Prereq.: MATH 115 (C- or higher) and MATH 116 (C- or higher), or MATH 119 (C- or higher). Limits and continuity, derivatives, applications of derivatives including transcendental functions. Antiderivatives, definite integrals with applications. CSUS Common Course. Skill Area II

200s

MATH 211 Clinical Experience in Mathematics Education I 1

Prereq.: MATH 152 and MATH 120 (C- or higher). 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.

MATH 213 Structure of Mathematics II: Probability & Geometry 3

Prereq.: MATH 113 (C- or higher); open only for students seeking elementary certification. 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. Skill Area II

MATH 218 Discrete Mathematics 4

Prereq.: MATH 152 with a grade of C- or higher. Topics include logic, induction, recursion, combinatorics, matrices, graph theory, set theory, and number theory.

MATH 220 Problem Solving II 1

Prereq.: MATH 120 and 152, both with grades of C- or higher. 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.

MATH 221 Calculus II 4

Prereq.: MATH 152 (C- or higher). Further application of integration and techniques integration. Improper integrals and L'Hopital's. Infinite series including Taylor series and representation of functions. Skill Area II

MATH 222 Calculus III 4

Prereq.: MATH 221 (C- or higher). 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.

MATH 226 Linear Algebra and Probability for Engineers 4

Prereq.: MATH 221 (C- or higher). Introduction to the mathematics required for engineering, including basic linear algebra and topics in probability and statistics. Emphasis on applications. Fall.

MATH 228 Introduction to Linear Algebra 4

Prereq.: MATH 152 and MATH 218 both with grades of C- or higher. Vector spaces, systems of linear equations, determinants, linear transformations, and matrices are considered. CSUS Common Course.

300s

MATH 300 Mathematics Internship 3

Prereq.: Permission of the department and a 3.00 GPA in mathematics. 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.

MATH 305 Structure of Mathematics III: Number Patterns 3

Prereq.: MATH 213 and either MATH 115, MATH 116 (formerly MATH 121) or MATH 119 (all with C- or higher); only open for students seeking elementary certification. 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.

MATH 306 Structure of Mathematics IV: Development of Geometric Ideas 3

Prereq.: MATH 213 and either MATH 115, MATH 116 (formerly MATH 121) or MATH 119 (all with C- or higher); open only for students seeking elementary certification. Exploration of geometric concepts via hands-on activities and computer software. Topics include congruence, similarity, transformations, tessellations, and fractals.

MATH 307 Topics in Elementary Mathematics 1 TO 3

Prereq.: Permission of instructor. 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. Irregular.

MATH 311 Clinical Experience in Mathematics Education II 1

Prereq.: MATH 211 (B- or higher). Tutors are trained at level 2 (CLRA certification) and assigned to tutor in a middle school or high school setting.

MATH 313 Number Systems from an Advanced Viewpoint 3

Prereq.: MATH 218 (C- or higher) and MATH 221 (C- or higher). 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 328. Spring.

MATH 320 Problem Solving III 1

Prereq.: MATH 220 (C- or higher) and 228 (C- or higher). 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.

MATH 327 Curriculum & Technology in Secondary Mathematics I 3

Prereq.: MATH 218 (C- or higher) or MATH 221 (C- or higher). 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. Spring.

MATH 328 Curriculum & Technology in Secondary Mathematics II 3

Prereq.: MATH 218 (C- or higher) or MATH 221 (C- or higher). 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. Fall.

MATH 344 Mathematics in Diverse Cultures 3

Prereq.: MATH 152 or MATH 125 or MATH 305 all with grades of C- or higher. 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. Spring. (E) [I]

MATH 355 Introduction to Differential Equations with Applications 4

Prereq.: MATH 221 and either MATH 226 or MATH 228 (C- or higher). Introduction to analytical, geometric, and numerical methods for solving ordinary differential equations. Basic models of physical systems using ordinary differential equations. Introduction to software used for solving ordinary differential equations. Spring.

MATH 366 Introduction to Abstract Algebra 4

Prereq.: MATH 218 (C- or higher). Certain fundamental structures such as groups, rings, integral domains, and fields are considered.

MATH 377 Introduction to Real Analysis 4

Prereq.: MATH 221 (with grade of C- or higher). In-depth introduction to the theory of functions, including integration, differentiation, and series.

MATH 383 College Geometry 3

Prereq.: MATH 328 or 366 or 377 (all with C- or higher). 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. Spring.

MATH 398 Independent Study in Mathematics 1 TO 3

Prereq.: MATH 228 or 366, and a 3.00 G.P.A. in mathematics and permission of instructor. 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. On demand.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"**MATH 400 Introduction to Mathematica 4**

Prereq.: MATH 221 and either MATH 228 or MATH 226 (C- or higher). Introduction to symbolic computation package Mathematica. Emphasis on applications and independent research. Fall.

MATH 409 Mathematics through Computers 3

Prereq.: MATH 305 or 306; MATH 116, or MATH 119 (all with C- or higher). 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.

MATH 411 Clinical Experience in Mathematics Education III 1

Prereq.: MATH 211 (B- or higher) and MATH 221 (C- or higher). 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.

MATH 412 Elementary Mathematical Methods 3

Prereq.: MATH 213 (C- or higher); open only for students seeking elementary certification. 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. CT law requires fingerprinting and a criminal background check for the filed experiences in this class. Fingerprinting must be completed prior to the beginning of class.

MATH 413 Teaching Mathematics in the Secondary School 4

Prereq.: MATH 327 and admission to the Professional Program in Secondary Teacher Education. Topics include planning for instruction, classroom management, promoting effective discourse, methods to address the needs of a diverse student population, and methods of assessment. Field experience required. Taken concurrently with EDSC 425. CT law requires fingerprinting and a criminal background check for the filed experiences in this class. Fingerprinting must be completed prior to the beginning of class.

MATH 421 History of Mathematics 3

Prereq.: MATH 221 or for graduate students, admission to M.A., Mathematics or the M.S., Mathematics (for certified secondary teachers). 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. Spring. (O) [GR]

MATH 426 Student Teaching Seminar 1

Prereq.: MATH 413. Examination of problems which arise in secondary mathematics instruction. Taken concurrently with EDSC 435.

MATH 440 Selected Topics in Mathematics 1 TO 3

Prereq.: Permission of instructor. 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. Irregular. [GR]

MATH 449 Mathematics Laboratory for Elementary School 3

Prereq.: MATH 412, 414 or 327 or equivalent and student teaching. 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. Summer. [GR]

MATH 450 Seminar in Proof 4

Prereq.: MATH 366 and 377 (both with grades of C- or higher), one of which may be taken concurrently. Students will study a number of important theorems in mathematics, examining the proofs of these theorems in depth. Each student will make a presentation to the class before the end of the semester. Topics will vary based on student and instructor interest. This is a capstone course for the BA major. Class is limited to 15 students. Spring.

MATH 455 Introduction to Partial Differential Equations with Applications 4

Prereq.: MATH 355 (C- or higher) or permission of department chair. 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. Fall. (O) [GR]

MATH 465 Introduction to Fractal Geometry and Chaos 3

Prereq.: MATH 218 or 221 (both with C- or higher), or master's degree program. Topics will include self similarity, fractal dimension, iterated function systems, Mandelbrot and Julia sets, complex iteration, cellular automata, and dynamical systems. Much of the work will involve using software to draw and investigate fractal images and chaos. Spring. (E)

MATH 468 Symbolic Logic 3

Prereq.: MATH 366 or equivalent. Introduction to truth, validity and argument. Methods of deduction, propositional functions and quantifiers, logic of relations, deductive systems, and propositional calculus. Spring. (E) [GR]

MATH 469 Number Theory 3

Prereq.: MATH 366 or equivalent. Elementary theory of numbers. Divisibility, prime numbers, Fundamental Theorem of Arithmetic, congruences, Diophantine equations, quadratic residues and continued fractions are among topics considered. Fall. (O) [GR]

MATH 470 Mathematical Methods in Operations Research 3

Prereq.: STAT 215 or 315, and MATH 110 or 228 or permission of instructor. Selected topics chosen from the areas of linear programming, decision analysis, and network analysis. Summer. (E) [GR]

MATH 477 Numerical Analysis 3

Prereq.: MATH 221 and CS 151 or permission of instructor. 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. Summer. (O) [GR]

MATH 491 Advanced Calculus 3

Prereq.: MATH 222 or permission of instructor. 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. Fall. (E) [GR]

500s

MATH 500 Mathematics Practicum 3

Prereq.: Admission to the M.A. program in mathematics and permission of the department. Supervised application of academic knowledge to an employment environment related to their field of study. On demand.

MATH 504 Topics in Mathematics 1 TO 3

Prereq.: Permission of instructor. 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. Irregular.

MATH 506 Teaching Number Concepts in the Elementary Grades 3

Prereq.: Admission to M.S. in mathematics for certified elementary teachers. 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. Fall. (O)

MATH 507 Teaching Geometry & Measurement in the Elementary Grades 3

Prereq.: Admission to M.S. in Mathematics for certified elementary teachers. NCTM Standards-based instructional practices that promote understanding of key concepts in geometry and measurement in the elementary grades. Fall. (E)

MATH 508 Teaching Probability & Statistics in the Elementary Grades 3

Prereq.: Admission to M.S. in Mathematics for certified elementary teachers. NCTM Standards-based instructional practices that promote understanding of key concepts in probability and statistics in the elementary grades. Spring. (O)

MATH 509 Teaching Algebraic Thinking in the Elementary Grades 3

Prereq.: Admission to M.S. in Mathematics for certified elementary teachers. NCTM Standards-based instructional practices that promote algebraic thinking in the elementary grades. Spring. (E)

MATH 515 Abstract Algebra I 3

Prereq.: MATH 366 or permission of instructor. Extension of basic group theory introduced in MATH 366, including normal subgroups, quotient groups, cyclic groups, permutation groups, classical isomorphism theorems, and Sylow theorems. Fall. (E)

MATH 516 Abstract Algebra II 3

Prereq.: MATH 515. Selected topics from advanced polynomial ring theory, Galois and extension field theory, homological algebra. Spring. (E)

MATH 519 Principles of Real Analysis I 3

Prereq.: MATH 377 or permission of instructor. Introduction to functions of a real variable and their properties. Rigorous study of the real number system, topological properties of real line, Cauchy sequences, limit and continuity properties of a real variable, metric spaces. Fall. (O)

MATH 520 Principles of Real Analysis II 3

Prereq.: MATH 519. Topics include Riemann-Stieltjes integrals, functions of bounded variation, sequences and series of real numbers, power series. Spring. (O)

MATH 523 General Topology 3

Prereq.: MATH 377 or permission of instructor. Rigorous study of point-set topology. Topics include set theory, definition and basic properties of topological spaces, continuous functions, and homeomorphisms. Spring. (O)

MATH 525 Higher Geometry 3

Prereq.: MATH 221 or permission of instructor. 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. Fall.

MATH 526 Complex Variables 3

Prereq.: MATH 222 or permission of instructor. An introduction to the theory of functions of a complex variable. Topics include the field of complex numbers, complex analytic functions, elementary functions and their mapping properties, integration theory, and power series expansion of analytic functions. Spring. (E)

MATH 531 Basic Concepts of Elementary School Mathematics 3

Analysis of concepts underlying contemporary mathematics program in elementary school. Emphasis is placed on both structure of mathematical content and procedures used in developing pupil understanding of concepts and processes. Open only to post-baccalaureate certification students. Fall.

MATH 534 Techniques in Diagnosis and Remediation for the Teaching of Mathematics - K-12 3

Prereq.: Admission to M.S. in Mathematics for certified elementary or certified secondary teachers. 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. Spring.

MATH 536 Teaching Number Concepts in the Middle Grades 3

Prereq.: Admission to M.S. in Mathematics for Certified Elementary School Teachers. 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. Fall. (O)

MATH 537 Teaching Geometry & Measurement in the Middle Grades 3

Prereq.: Admission to M.S. Mathematics for certified elementary teachers. NCTM Standards-based instructional practices that promote understanding of key concepts in geometry and measurement in the middle grades. Fall. (E)

MATH 538 Teaching Probability & Statistics in the Middle Grades 3

Prereq.: Admission to M.S. in mathematics for certified elementary teachers. NCTM Standards-based instructional practices that promote understanding of key concepts in probability and statistics in the middle grades. Spring. (O)

MATH 539 Teaching Algebraic Thinking in the Middle Grades 3

Prereq.: Admission to M.S. in mathematics for elementary teachers. NCTM Standards-based instructional practices that promote algebraic thinking in the middle grades. Spring. (E)

MATH 540 Curriculum Problems in School Mathematics 3

Prereq.: Admission to M.S. in Mathematics for certified elementary or certified secondary teachers. 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. Spring. (O)

MATH 543 Secondary School Algebra with Technology from Advanced Viewpoint 3

Prereq.: Admission to graduate certification program in mathematics or M.S. in Mathematics for certified secondary teachers. 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. Summer. (E)

MATH 544 Secondary School Geometry with Technology from an Advanced Viewpoint 3

Prereq.: Admission to graduate certification program in mathematics or M.S. in Mathematics for certified secondary teachers. 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. Summer. (O)

MATH 547 Reflective Practice in Teaching Mathematics 3

Designed to help in-service teachers develop as reflective practitioners through the use of lesson logs, narrative commentary, analysis of videotaped lessons, and examination of student work. Emphasis on relating instruction to the big ideas of mathematics, designing appropriate assessments, and determining meaningful feedback for students. Particularly helpful to beginning teachers who will be compiling their BEST portfolios. Open only to certified in-service teachers of mathematics, grades 7-12. Fall.

MATH 580 Directed Study in Mathematics 1 TO 3

Prereq.: Permission of the instructor. 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. Irregular.

MATH 590 Special Project in Mathematics 3

Prereq.: Completion of at least 21 credits in the student's planned program of graduate study and a 3.00 overall GPA. 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. Irregular.

MATH 598 Research in Mathematics Education 3

Prereq.: STAT 453 and permission of advisor. 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. Fall.

MATH 599 Thesis (Plan A) 3 OR 6

Prereq.: Permission of the advisor, and a 3.00 overall GPA. Preparation of thesis under guidance of thesis advisor for students completing master's requirements under M.S. and M.A. Plan A.

600s

MATH 611 Mathematics Curriculum K-8 Theory and Implementation 3

Prereq.: Admission to Sixth-Year Program in Mathematics Education Leadership. 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. Fall (O).

MATH 612 Mathematics Curriculum 7-14 Theory and Implementation 3

Prereq.: Admission to Sixth-Year Program in Mathematics Education Leadership. Examination of key questions of what mathematics high school graduates should know and be able to apply in light of foundations laid in the middle grades and needs of post-secondary education and the work force. Exemplary secondary school curricula will be studied. Spring (O)

MATH 613 Research on the Learning of Mathematics 3

Prereq.: Admission to Sixth-Year Program in Mathematics Education Leadership and STAT 453 or permission of department chair. 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. Fall (E)

MATH 614 Research on the Teaching of Mathematics 3

Prereq.: Admission to Sixth-Year Program in Mathematics Education Leadership and STAT 453 or permission of department chair. 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. Spring (E)

MATH 615 The Cultural Context of Mathematics Education 3

Prereq.: Admission to Sixth-Year Program in Mathematics Education Leadership. Explores the many aspects of cultural connections with mathematics. Topics may include the history of mathematics, comparative international studies and an introduction to ethnomathematics. Summer (E)

MATH 616 Assessment in Mathematics Education 3

Prereq.: Admission to Sixth-Year Program in Mathematics Education Leadership. 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. Summer (O)

MATH 622 Internship in Mathematics Education Leadership 3

Prereq.: Completion of 24 credits in Sixth-Year Program in Mathematics Education. Supervised internship concerning leadership in promoting effective teaching and learning in mathematics. Students initiate and complete an action plan and professional portfolio. On Demand.

Mechanical Engineering

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

200s

ME 216 Manufacturing Engineering Processes 0 TO 3

Prereq.: ENGR 150 (C- or higher). 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 analytical class work and manufacturing laboratory experiments. Lecture two hours and laboratory three hours per week.

ME 258 Engineering Thermodynamics 3

Prereq.: CHEM 161, 162; PHYS 125 (C- or higher). 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. Spring.

300s

ME 345 Engineering Statistical Analysis of Operations 3

Prereq.: MATH 226. 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. Fall.

ME 352 Modeling of Dynamic Systems 3

Prereq.: ENGR 252 (C- or higher), MATH 355. Mathematical modeling and analysis of dynamic systems including mechanical, electrical, and electromechanical. Use of complex algebra and Laplace transform techniques for solving and interpreting system behavior. Introduction to basic control systems and mechanical vibrations. Fall.

ME 354 Fluid Mechanics 3

Prereq.: ENGR 251 (C- or higher) and ME 258 (C- or higher) and MATH 355. 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. Fall.

ME 358 Engineering Thermodynamics II 3

Prereq.: ME 354. 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.

ME 360 Manufacturing Operations Analysis and Simulation 3

Prereq.: ME 345. 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. Fall.

ME 367 Machine Design 3

Prereq.: ENGR 252 (C- or higher) and ENGR 257 (C- or higher). Analysis for the design of basic mechanical elements, and their role in the design of machines; theories of failure, fatigue design, design of bolted connections, welds, springs, bearings, gears, clutches, and brakes. Spring.

ME 370 Instrumentation 3

Prereq.: ENGR 257 (C- or higher), ME 354 (C- or higher) and ENGR 290. 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. Spring.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

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. Irregular.

ME 403 Control of Dynamic Systems 3

Prereq.: ME 352, MATH 222. Topics include lumped physical system models; electrical, fluid, mechanical, and thermal system analysis; linear system transient, steady-state behavior; analysis and design of feedback control systems; transfer functions; block diagrams; proportional, rate, and integral controllers; and hardware and implementation. Spring.

ME 452 Mechanical Vibrations 3

Prereq.: ENGR 252 (C- or higher) and MATH 355. 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. Irregular.

ME 454 Heat Transfer 3

Prereq.: MATH 355 and ME 354 (C- or higher). 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. Spring.

ME 458 Heating, Ventilating and Air Conditioning Systems Design 3

Prereq.: ME 454 (may be taken concurrently); for graduate students, permission of instructor. 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. Irregular. [GR]

ME 459 Energy Conversion Systems 3

Prereq.: ME 354 (C- or higher). 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. Irregular.

ME 460 Manufacturing System Design 3

Prereq.: ME 360. 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. Spring.

ME 466 Inventive Engineering Design 3

Prereq.: PHYS 126. 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. Spring.

ME 480 Propulsion Systems 3

Prereq.: ME 354 (C- or higher). 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. Fall.

ME 483 Aerodynamics 3

Prereq.: MATH 222, ME 354 (C- or higher). 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. Spring.

ME 485 Introduction to Combustion 3

Prereq.: ME 354 (C- or higher), MATH 222. 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. Irregular.

ME 486 Aerospace Structures and Materials 3

Prereq.: MATH 222, MATH 226 and ENGR 257 (C- or higher). 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. Spring.

ME 497 Senior Project I: Project Research 2

Prereq.: ME 354 (C- or higher) and ME 367 (C- or higher). 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. Fall.

ME 498 Senior Project II: Design Project 2

Prereq.: ME 370, ME 497 and ETM 467. 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. Spring.

ME 552 Mechanical Vibrations 3

Prereq.: Permission of instructor. 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.

Modern Languages

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

ML 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. On demand. Skill Area III

ML 112 Elementary Modern Language II 3

Prereq.: ML 111 (same language) or high school equivalent (normally two years of high school study). 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. On demand. Skill Area III

ML 125 Intermediate Modern Language I 3

Prereq.: One year of college instruction in the target language, or equivalent. 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. On demand. Skill Area I

ML 126 Intermediate Modern Language II 3

Prereq.: ML 125 in the target language or equivalent. Continuation of ML 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. On demand. Skill Area I [I]

200s

ML 200 Topics in Modern Language Studies 3

Prereq.: Permission of instructor. 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. Irregular. Skill Area I [I]

300s

ML 300 Topics in Modern Language Cultural Study 3

Prereq.: Permission of instructor. 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. Irregular.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

ML 400 Topics in Advanced Modern Language Studies 3

Prereq.: Permission of instructor. 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. On demand. [GR]

ML 420 Internship in Foreign Languages 1 TO 3

Prereq.: Appropriate 226 course or equivalent in target language. Practical field experience using the target language. One credit per eight-week unit. May be repeated to a total of 3 credits. On demand. [GR]

ML 428 Methods and Materials for Teaching World Languages at Elementary School Level 3

Prereq.: 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. 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. NOTE: Instructors may not override professional program admission requirement. CT law requires fingerprinting and a

criminal background check for the filed experiences in this class. Fingerprinting must be completed prior to the beginning of class. Fall. Summer. [GR]

ML 429 Seminar in Modern Language Teaching Methods 4

Prereq.: Admission to the Professional Program or State language certification. Discussion and practice of the historical, theoretical and contemporary issues, and selected topics related to the teaching of modern languages at the secondary level. Includes 30 hour field experience done outside class hours in assigned public school setting. Not for credit toward any master's degree. CT law requires fingerprinting and a criminal background check for the filed experiences in this class. Fingerprinting must be completed prior to the beginning of class. Fall.

ML 440 Student Teaching Seminar in Modern Languages 1

Prereq.: Admission to the Professional Program in teacher education. Discussion, critical thinking and problem solving techniques with applications in the foreign language classroom. Taken concurrently with EDSC 435. Spring.

ML 490 Teaching World Languages II: Acquisition in Young Children for Teachers of World Languages 3

Prereq.: 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. 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. NOTE: Instructor may not override professional program admission requirement. Summer. [GR]

ML 492 Topics in Language Teaching 1 TO 3

Prereq.: ML 429. 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. Irregular. [GR]

ML 496 Independent Study in Modern Languages 3

Prereq.: Permission of instructor. 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. On demand. [GR]

500s

ML 500 Studies in Modern Languages 3

Prereq.: Permission of instructor. Study of selected language, cultural and literary topics taught in the target language. May be repeated with different topics for up to 6 credits. On Demand.

ML 550 Intensive Studies in Modern Languages 3

Prereq.: Admission to the Summer Institute of the target language. 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. Summer.

ML 595 Special Project in Modern Languages 3

Prereq.: Completion of 18 credits of approved graduate studies program, approval of advisor, and 3.00 overall GPA. Preparation of Special Project in Modern Languages under the supervision of a faculty member. On Demand.

ML 598 Research in Modern Languages 3

Prereq.: Admission to the graduate program. 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. Fall. (O)

Music

Note: Students enrolled in the following courses will be assessed an Applied Music Fee-\$300.00 for ½ hour lesson (MUS 177) and \$400.00 for full hour lesson (MUS 178, 278, 378, 478). Contact the department at 860-832-2912 for additional information. (Fees subject to change.)

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

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.

100s

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. Irregular. Study Area I

MUS 101 Practicum in Music Education 2

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. Open only to music majors. Spring.

MUS 109 Fundamentals of Music 3

Music reading, ear-training, and elementary music theory. CSUS Common Course. Study Area I

MUS 110 Listening to Classical Music 3

Introduction to masterpieces of Western art music and to skills required for critical listening. CSUS Common Course. Study Area I [I]

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. Study Area I [I]

MUS 112 Computer Applications to Music 3

Prereq.: MUS 109 Exploration of music using computer technology. Includes music fundamentals, elementary principles of musical composition, and computer sound synthesis through the use of computers. Study Area I

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. Study Area I

MUS 114 Introduction to Music Technology 1

Prereq.: MUS 109 or MUS 121, and MUS 250 (or equivalent skills) (both with C- or higher). 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.

MUS 115 Aural Skills I 1

Prereq.: Open only to Music majors. Coreq.: MUS 121. Development of sight-singing skills, diatonic major and minor materials.

MUS 116 Aural Skills II 1

Prereq.: Open only to Music majors. Coreq.: MUS 122. Continued development of diatonic major and minor sight singing and ear training skills. Introduction to chromatic materials.

MUS 121 Music Theory I 2

Prereq.: MUS 114 (may be taken concurrently); open only to Music majors or minors; or permission of instructor. Coreq.: MUS 115. Basic properties of music with emphasis on melodic materials; study includes stylistic analysis, composition, two and three-part counterpoint.

MUS 122 Music Theory II 2

Prereq.: MUS 121 (C- or higher); open only to Music majors or minors; or permission of instructor. Coreq.: MUS 116. Homophonic texture and diatonic harmonic relations, form, and analysis.

MUS 140 Ensemble 1

Prereq.: Permission of instructor through audition. 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).

MUS 141 Chorus 1

Prereq.: basic proficiency in singing; or permission of instructor. A variety of choral literature will be performed each semester. May be repeated for credit with different course content.

MUS 142A Band: Wind Symphony 1

Prereq.: basic proficiency in playing a wind, brass, or percussion instrument; or permission of instructor. A variety of band literature will be performed each semester. May be repeated for credit with different content.

MUS 143 Sinfonietta 1

Prereq.: basic proficiency in playing a string, wind, brass, or percussion instrument; or permission of instructor. Standard orchestral literature will be played each semester. Course may be repeated for credit with different content.

MUS 144 Marching Band 1

Prereq.: basic proficiency in playing a wind or percussion instrument; or permission of instructor. Performance of marching band music and opportunities to perform at football games and other special events. May be repeated for credit with different content. Fall.

MUS 147A Traditional Jazz Ensemble 1

Prereq.: Permission of instructor through audition. Standard big-band instrumentation repertoire that concentrates on ensemble playing while giving the more accomplished musicians improvisatory opportunities.

MUS 147B Improvisatory Jazz Ensemble 1

Prereq.: Permission of instructor through audition. Varied instrumentation. May be divided into several groups concentrating on individual development of jazz improvisatory skills. May be repeated for credit with different content.

MUS 148 Ensemble: University Singers 1

Prereq.: Permission of instructor through audition. 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.

MUS 149 University Chamber Players 1

Prereq.: Permission of instructor through audition. A select ensemble of musicians exploring their passion for chamber music in all its settings. May be repeated for credit with different content.

MUS 177 Applied Music 1

Prereq.: open to non-majors by permission of instructor. Individual instrumental or vocal instruction in performance. May be repeated with different content for a total of 6 credits. Fee: \$300 per semester. (Fee subject to change)

MUS 178 Applied Music for Majors 2

Prereq.: open only to Music majors. 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.)

200s

MUS 211 Ethnomusicology 3

Prereq.: MUS 121 or MUS 109 for music majors (C- or higher); permission of instructor. Introduction to the discipline of ethnomusicology. Case studies explore different musical systems and their relationship to their cultural settings. Fall. [I]

MUS 213 Jazz Styles and Chronology 3

Prereq.: MUS 113 (C- or higher) or permission of instructor. Critical study of major jazz artists and the influence of their lives, culture, and music on the development of jazz. On demand.

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. Spring. Study Area I

MUS 215 Aural Skills III 1

Prereq.: MUS 116 (C- or higher); open only to Music majors. Coreq.: MUS 122. Continued development of diatonic major and minor sight singing and eartraining skills. Introduction to modulatory materials.

MUS 216 Aural Skills IV 1

Prereq.: MUS 215 (C- or higher); open only to Music majors. Coreq.: MUS 222. Continued development of diatonic major and minor sight singing and eartraining skills. Expanded tonal and atonal materials.

MUS 221 Music Theory III 2

Prereq.: MUS 122 (C- or higher); open only to Music majors. Coreq.: MUS 215. Harmonic relations continued; chromatic and higher tertian harmony, form, and analysis continued, basic principles of orchestration.

MUS 222 Music Theory IV 2

Prereq.: MUS 221 (C- or higher); open only to Music majors. Coreq.: MUS 216. Study of historical forms and contrapuntal techniques through analysis, composition, and performance, continuation of orchestration study.

MUS 235 Music History I 3

Prereq.: MUS 121 (C- or higher). Survey of the development of Western music in its historical context from ancient Greece to the late Baroque era. [I]

MUS 236 Music History II 3

Prereq.: MUS 122 and MUS 235 (both with C- or higher). Survey of the development of Western music in its historical context from the late Baroque to the late Romantic era. [I]

MUS 250 Piano Class I 2

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.

MUS 251 Piano Class II 2

Prereq.: MUS 250 (C- or higher) or equivalent skill and permission of instructor. Continuation of keyboard skills introduced in MUS 250.

MUS 259 Vocal Methods 1

Prereq.: open only to Music majors. Methods and materials of class instruction in voice.

MUS 261 Woodwind Methods 1

Prereq.: open only to Music majors. Beginning class instruction in woodwind instruments.

MUS 262 Brass Methods 1

Prereq.: open only to Music majors. Beginning class instruction in brass instruments.

MUS 263 Percussion Methods 1

Prereq.: open only to music majors. Class instruction in snare drum, tympani, and related orchestral and band percussion instruments.

MUS 264 Voice Class 2

Instruction in voice production and vocal techniques. Vocalizations for vowels, range, flexibility. Song repertoire for individual members.

MUS 267 String Methods: Violin and Viola 1

Prereq.: open only to Music majors. Methods and materials of class instruction in violin and viola.

MUS 268 String Methods: Cello and Double Bass 1

Methods and materials class instruction in cello and double bass. Open only to Music majors.

MUS 269 Technology in Music Education 1

Prereq.: MUS 101 and MUS 114 (both with C- or higher). 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. Fall.

MUS 273 Jazz Improvisation I 2

Prereq.: MUS 121 (C- or higher) or permission of instructor. 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.

MUS 274 Jazz Improvisation II 2

Prereq.: MUS 273 (C- or higher) or permission of instructor. 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.

MUS 278 Applied Music for Majors II 2

Prereq.: MUS 178 (C or higher); open only to Music majors. 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.) Spring.

MUS 295 Beginning Composition 2

Prereq.: MUS 114 and MUS 221 (both with C- or higher); or permission of instructor. Fundamental principles, techniques, and skills of music composition. Introduction to contemporary innovations in musical styles and language. Composition of simple, short musical compositions. Spring.

300s

MUS 310 General Music Education, Part I (Grades PK-4) 3

Prereq.: MUS 101 (C- or higher). Organization, aims, and supervision of elementary school general music programs. Materials for teaching general music in the elementary schools. Open only to Music Education majors. Field experience required (10 hours). To be taken concurrently with EDTE 314.

MUS 311 General Music Education, Part II (Grades 5-12) 3

Prereq.: 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. 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. 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. Spring.

MUS 315 Choral Music Methods 4

Prereq.: MUS 101 (C- or higher) and 310 (C or higher), and admission to the professional program in Music Education. Coreq.: MUS 311, SPED 315, and EDSC 425. 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). 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. Spring.

MUS 316 Instrumental Music Methods 4

Prereq.: MUS 101 (C- or higher) and MUS 310 (C or higher), and admission to the professional program in Music Education. Coreq.: MUS 311, SPED 315 and EDSC 425. 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). 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. Spring.

MUS 335 Music History III 3

Prereq.: MUS 221 and MUS 236 (both with C- or higher); open only to Music majors. Survey of the development of Western music in its historical context from the late Romantic era to the present. [I]

MUS 350 Piano Class III 2

Prereq.: MUS 251 (C- or higher) or equivalent skill and permission of instructor. Continuation of MUS 251 with emphasis on keyboard skill. Harmonization of folk melodies, improvising to given chord pattern, sight-reading of community songs.

MUS 351 Piano Class IV 2

Prereq.: MUS 350 (C- or higher) or equivalent skill and permission of instructor. Continuation of MUS 350. Improvisation on more advanced level. Repertoire from various styles of piano literature.

MUS 367 Choral Conducting 2

Prereq.: MUS 222 (C- or higher) or equivalent. Development of skills in choral conducting and score reading. Open only to Music majors. Fall.

MUS 368 Instrumental Conducting 2

Prereq.: MUS 222 and MUS 367 (both with C- or higher); or permission of instructor. Development of skills in instrumental conducting, baton technique, and score reading. Open only to Music majors. Spring.

MUS 378 Applied Music for Majors III 2

Prereq.: MUS 278 (C or higher); open only to Music majors. Individual instrumental or vocal instruction in performance. May be repeated for up to 6 credits. Fee: \$400 per semester. (Fee subject to change).

MUS 380 Advanced Notation, Sequencing, and Sound Synthesis 2

Prereq.: MUS 114 (C- or higher); open only to Music majors; or permission of instructor. Advanced development of music technology skills focusing on computer-based notation, sound synthesis, MIDI sequencing, and digital audio recording and editing. Spring.

MUS 390 Orchestration 2

Prereq.: MUS 114 and MUS 222 (both with C- or higher); or permission of instructor. Techniques and principles of orchestration; both instrumental and vocal arranging. Open only to Music majors. Fall.

MUS 395 Composition 3

Prereq.: MUS 222 and MUS 295 (both with C- or higher); open only to Music majors; or permission of instructor. Principles and techniques of music composition, geared to the mature musician; much independent work. Open only to music majors. Spring.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

MUS 400 Project in Music 1 TO 4

Prereq.: Permission of instructor. 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. [GR]

MUS 401 Topics in Music 1 TO 3

Prereq.: basic proficiency in singing; or permission of instructor. A variety of choral literature will be performed each semester. May be repeated

for credit with different course. Irregular. [GR]

MUS 402 Student Teaching Seminar 1

Prereq.: Acceptance into the Professional Program. Coreq.: EDSC 420 or EDSC 421. Seminar in which students discuss experiences in their learning communities, share resources, problem-solve, and develop and refine teaching techniques.

MUS 404 Topics in Performance 1 TO 3

Prereq.: Permission of instructor. Topics relevant to the performing musician including accompaniment, diction for singers, and performance practice. On demand. [GR]

MUS 405 Topics in Composers 3

Prereq.: Permission of instructor. Historical and analytical study of selected composers and their works. On demand. [GR]

MUS 469 Music Theory Review 2

Prereq.: Four semesters of undergraduate music theory. 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.

MUS 470 Musical Structure and Style 3

Prereq.: 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. Survey of the principles of music theory through analysis of representative forms from various style periods. Irregular. [GR]

MUS 478 Applied Music for Majors IV 2

Prereq.: MUS 378 (C or higher); open only to Music majors. Individual instrumental or vocal instruction in performance. May be repeated for up to 4 credits. Fee: \$400 per semester. (Fee subject to change).

500s

MUS 501 Topics in Music 1 TO 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. Irregular.

MUS 502 Topics in Music Education 1 TO 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. Summer.

MUS 503 Topics in Instrumental Music Education 1 TO 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. Summer.

MUS 504 Principles and Foundations of Music Education 3

Prereq.: Admission to the Master of Science (MS) in Music Education degree program. 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. Irregular.

MUS 505 Topics in Pedagogy and Curriculum 1 TO 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. Summer.

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. Summer.

MUS 507 Topics in Conducting 1 TO 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. Summer.

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. Summer.

MUS 509 Comparative Music Studies 3

Prereq.: Admission to the graduate program in Music Education (M.S.) degree program. Study of the world of music from many perspectives including universal themes, organology, acoustics, iconography, notation, uses and function of music, and social identity. Irregular.

MUS 510 Current Issues in Music Education 3

Prereq.: Admission to Master of Science (MS) in Music Education and MUS 504 or permission of graduate coordinator. 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. Irregular.

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. Summer.

MUS 515 Topics in Digital Synthesizer Techniques 2

A study of selected aspects of digital synthesizer techniques and their application to the music classroom. May be repeated for a maximum of 6 credits with different content. Summer.

MUS 526 Developing Children's Choirs 2

Study of organizational techniques, resource materials, and rehearsal techniques for developing children's choirs. Summer.

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.

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.

MUS 536 Topics in Music Technology 1 TO 3

Specialized topics in music technology including computer-assisted instruction, Internet and multi-media authoring, and music computer labs. May be repeated with different topics for a maximum of 6 credits. Summer.

MUS 540 Chamber Ensemble 1

Prereq.: Permission of instructor by audition. 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. Irregular.

MUS 540E Ensemble: Clarinet 1

Prereq.: Permission of instructor by audition.

MUS 540F Ensemble: Percussion 1

Prereq.: Permission of instructor by audition.

MUS 547A Ensemble - Traditional Jazz 1

Prereq.: Permission of instructor through audition. 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.

MUS 547B Ensemble - Improvisatory Jazz 1

Prereq.: Permission of instructor through audition. 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.

MUS 548 Ensemble-University Singers 1

Prereq.: Permission of instructor through audition. 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.

MUS 549 University Chamber Players 1

Prereq.: Permission of instructor through audition. Select ensemble of musicians exploring their passion for chamber music in all its settings. May be repeated up to 4 credits with different content.

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. Summer.

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. Summer.

MUS 556 Orff-Schulwerk Teacher Training Course Level II 3

Prereq.: MUS 551. 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. Summer.

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. Summer.

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. Summer.

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. Summer.

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. Summer.

MUS 569 Aural Skills Development for Teachers 3

Prereq.: Bachelors degree in music. 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. Irregular.

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. Summer.

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. Summer.

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. Summer.

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. Summer.

MUS 578 Advanced Applied Music or Conducting 2

Prereq.: Admission to the Master of Science (MS) in Music Education degree program and approval for the Capstone Recital or Conducting Special Project. Individual instrumental or vocal instruction in performance or conducting. May be taken more than once for credit. Fee: \$400 (subject to change).

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. Summer.

MUS 590 Sinfonietta 1

Prereq.: Permission of instructor. Standard symphonic literature will be rehearsed for concert performance. 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.

MUS 591 Chorus 1

Prereq.: Permission of instructor. 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.

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.

MUS 597A Capstone Project in Music 3

Prereq.: 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. 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. Summer.

MUS 597B Performance or Conducting Recital 3

Prereq.: 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. The preparation and presentation of a performance or conducting recital under the guidance of the appropriate applied music instructor. Summer.

MUS 598 Research in Music Education 3

Prereq.: Admission to MS in Music Education degree program and MUS 504 or permission of Graduate Music Coordinator. Study of research methods used in music education and the primary sources needed to conduct these types of research. Irregular.

MUS 599 Thesis 3

Prereq.: 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. Preparation of the thesis under the

supervision of the thesis advisor. Irregular.

Nursing

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

NRSE 110 Introduction to Nursing Theories 3

Prereq.: Pre-nursing majors only. Explores current and historical theories of nursing, health, behavior, aging and other theories as they relate to nursing. Fall.

NRSE 150 Nutrition 3

Prereq.: CHEM 150 and BIO 111 or BMS 111 or BMS 102 (may be taken concurrently). Pre-nursing majors only. CHEM 152 should be taken concurrently. 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. Spring.

200s

NRSE 210 Health Assessment 4

Prereq.: Admission to the professional program in Nursing, PSY 236, and EXS 207 (C or better). Provides the theoretical knowledge and skills necessary to perform a comprehensive health assessment including comprehensive history taking, interviewing, and assessment techniques. Fall.

NRSE 246 Health Care Ethics 3

Prereq.: Admission to the professional program in nursing or permission of instructor. Introduction to basic ethical theories and principles and their application to contemporary health care issues. Discussion will focus on issues connected with confidentiality, competency, research, experimentation, allocation of scarce resources as well as those connected with elderly and other vulnerable populations. Irregular.

NRSE 250 Nursing Care of Well Populations 4

Prereq.: Admission to the BSN professional program in Nursing, NRSE 210, and EXS 208 (C or better). 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. Spring.

300s

NRSE 300 Nursing Assessment 4

Prereq.: Current Connecticut Registered Nurse License, or permission of the department chair. The health assessment course is designed to prepare the registered nurse with the theoretical knowledge and skills necessary to perform a comprehensive assessment. The emphasis will be on comprehensive history taking, interviewing, and assessment techniques.

NRSE 301 Theoretical Foundations of Nursing 3

Prereq.: CT RN license or permission of department chair. Investigation of related nursing theories and their application to nursing practice. An examination of the concept of wellness, leadership, teaching, and learning as applied to individuals, families, populations and communities. Fall.

NRSE 303 Introduction to Nursing Research 3

Prereq.: NRSE 301 and matriculation into the B.S.N. program. Basic nursing research design and methodology. 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.

NRSE 310 Altered Health Concepts and Therapeutic Interventions 4

Prereq.: Admission to the professional program in Nursing; BMS 216 (C or better). Coreq.: NRSE 303 and 320. 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. Fall.

NRSE 320 Holistic Care of Adults with Health Alterations 5

Prereq.: Admission to the professional program in Nursing; BMS 216 (C or better). Coreq.: NRSE 303 and 310. 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. Fall.

NRSE 342 Ethical Issues Confronting the Geriatric Patient 3

Prereq.: Permission of instructor. Introduction to the major ethical/social/political issues arising in the care and treatment of the elderly individual. Irregular.

NRSE 350 Nursing Care of Families in Transition 5

Prereq.: Admission to the professional program in nursing and NRSE 303, NRSE 310 and NRSE 320. Coreq.: NRSE 375 and BIO/BMS 412. Prepares student to care for nursing care of families in transition. Highlights nursing judgements that encompass creative and caring interventions based on cultural competence and developmental approaches. Integrates concepts from the biologicalsciences and social sciences. Requires 99 hours in a clinical site. Spring.

NRSE 375 Seminar in Family Nursing Concepts 2

Prereq.: Admission to the Professional Program in Nursing; NRSE 303, NRSE 310, and NRSE 320. Coreq.: NRSE 350 and BIO/BMS 412. Focuses on application of family concepts through the use of case study and problem-based learning. The family is viewed from a holistic perspective with a focus on transitions experienced by families. Spring.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"**NRSE 400 Nursing Externship 3**

Prereq.: Admission to the professional program in nursing; NRSE 246 and 350. 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. Irregular.

NRSE 410 Holistic Family Care and Health Promotion of Families, Populations and Communities 4

Prereq.: NRSE 300, 301, 303, and matriculation in the BSN program. Integration, analysis, and synthesis of comprehensive theoretical concepts of holistic care across the life span in diverse settings. Must be taken concurrently, consecutively or contiguously with NRSE 412 and 414. Fall, Spring, Summer.

NRSE 412 Holistic Nursing Care of Families, Populations, and Communities Clinical Practicum 4

Prereq.: NRSE 410 and matriculation in the BSN program. Application of the nursing process to families, populations, and communities in diverse settings. Emphasis on leadership, delegation, health promotion, and complex care, based on evidence-based practice.

NRSE 413 Population- and Community-Based Nursing Care 5

Prereq.: NRSE 300, 301, 303; matriculation in the RN / BSN program. Focuses on families, populations and communities, both local and global, as units of nursing care. Fall.

NRSE 414 Professional Nursing Role 4

Prereq.: NRSE 413. Synthesis of professional nursing practice from the analysis of selected ethical, social, political, professional, and role issues with related field experiences as appropriate. Spring.

NRSE 420 Social Justice and Community Health Issues 3

Prereq.: Admission to the professional program in nursing; NRSE 350. Concepts of Community and Public Health nursing will be explored from a social justice framework. Common community health care problems and the health care challenges faced by vulnerable populations as well as newly emerging issues such as global health, emergency preparedness and health care reform will be examined. Fall.

NRSE 430 Psychiatric/Mental Health Nursing 4

Prereq.: Admission to the professional program in nursing. Coreq.: NRSE 420 and 440. 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. Fall.

NRSE 440 Gerontological Nursing 3

Prereq.: Admission to the professional program in nursing and PS 110. Coreq.: NRSE 420 and NRSE 430. 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. Fifty clinical hours required off campus. Fall.

NRSE 460 Seminar and Practicum in Community Health Nursing 4

Prereq.: Admission to the professional program in nursing; NRSE 420. Taken concurrently with NRSE 470. Students will identify concepts of social justice in community health settings and incorporate them into population based health interventions. Emphasis is on synthesis of professional nursing concepts in promoting transition of care across settings. Required clinical hours off campus. Spring.

NRSE 470 Holistic Nursing Care of the Critically Ill 5

Prereq.: Admission to the professional program in nursing. Taken concurrently with NRSE 460. 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. Spring.

NRSE 480 Professional Issues 2

Prereq.: Admission to the professional program in nursing and NRSE 420 and NRSE 430 and NRSE 440. Synthesis of professional nursing practice from the analysis of selected ethical, social, political, professional role issues and related field experiences. Taken concurrently with NRSE 490. Spring.

NRSE 490 Leadership and Management in Nursing 3

Prereq.: Admission to the professional program in nursing or the RN to BSN program. 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. Spring.

NRSE 498 Special Studies in Nursing 1 TO 3

Prereq.: Permission of instructor. 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. [GR]

500s

Peace Studies

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

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. Fall. Study Area II

PES 111 War & Peace through Films 3

Films illustrative of issues and dilemmas of war and peace; followed by in-class discussion. Fall. Study Area II

200s

PES 202 Peace Psychology 3

Cross listed with PSY 202. See PSY 202 for a detailed description. No credit given to students with credit for PSY 202. Irregular.

PES 210 Topics in Peace Studies 1 TO 3

Topics vary. May be repeated with different topics for credit up to a maximum of 6 credits. On demand.

300s

PES 310 Internship in Peace Studies 1 TO 6

Prereq.: Minor in Peace Studies or permission of instructor. 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. On demand.

PES 345 Philosophy of War and Peace 3

Cross listed with PHIL 346. No credit given to students with credit for PHIL 346. See PHIL 345 for detailed description. [I]

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

PES 410 Research in Peace Studies 3

Prereq.: Open to Peace Studies minors only. Directed research project in Peace Studies. Spring.

Philosophy

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

PHIL 100 Search in Philosophy 3

Introduction to the techniques and perspectives of philosophical inquiry. Title and content may vary from section to section. Study Area I

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. Study Area I

PHIL 121 Introduction to Philosophy through Literature 3

Introduction to philosophical inquiry pursued through literary works. Topics covered include the nature of literary understanding, its relation to philosophical inquiry, and the meaning and grounds of philosophical ideas about the identity and interpretations of a work of literature. Study Area I

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. Irregular. Study Area I

PHIL 135 Nature, Mind, and Science 3

Introduction to philosophical problems concerning matter, life, mind, cosmology, and evolution from ancient times to the present. Fall. Study Area I

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. Spring. Study Area I

200s

PHIL 211 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. Fall. (E) [I]

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. Skill Area II

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. Cross listed with WGSS 222. No credit given to students with credit for WGSS 222. Fall. (E)

PHIL 230 Ancient Greek Philosophy 3

Development of Greek philosophy from the pre-Socratics to Plato and Aristotle. Fall.

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. Spring. (E) Study Area I

PHIL 235 Philosophy of Social Science 3

Study of philosophical questions related to the social sciences, including the origin and nature of the concept of social science and the relation between social science and natural science. (O) Study Area I

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. Spring.

PHIL 241 Environmental Ethics 3

Critical examination of ethical problems concerning how people treat the land, air, plants, and animals. Fall. (E) Study Area I

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. Fall. (O)

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. Fall. Study Area I.

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. Fall.

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. Fall. (O) Study Area I

PHIL 250 Introduction to Asian Philosophy 3

Broad survey of Indian and Chinese philosophical traditions. Fall. (E) Study Area I [I]

PHIL 255 Philosophy of Religion 3

Critical examination of important concepts, beliefs and arguments presented in world religions. Fall. Study Area I

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. Spring. Study Area I [I]

PHIL 275 Chinese Philosophy 3

Close examination of the foundational texts of the Confucian and Taoist traditions including the four Confucian and two Taoist classics. Spring. (E) Study Area I [I]

PHIL 290 Philosophical Methods 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. Spring.

300s

PHIL 310 Intermediate Seminar 3

Prereq.: PHIL 290 or permission of instructor. Prepares majors and minors in Philosophy for the Senior Seminar. Topics vary. May be repeated with a different topic for up to 6 credits.

PHIL 320 Modern Logic 3

Prereq.: PHIL 220 or permission of instructor. 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. Irregular.

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. Fall. (O)

PHIL 332 The Age of Ideology 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. Spring. (E) [I]

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. Spring. (E)

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. Spring. Study Area I.

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. Cross listed with PES 345. No credit

given to students with credit for PES 345. [I]

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. Spring.

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. Fall. (O)

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. Spring. (O)

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. Spring. Study Area I [I]

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. Spring. (O)

PHIL 376 Buddhist Philosophy 3

Critical survey of Buddhist philosophy from its Indian beginnings to its development in China, including contemporary aspects. Primary source material is used to illustrate key doctrinal developments. No credit given to those with credit for PHIL 276. Fall. [I]

PHIL 382 Special Topics in Philosophy 3

Study of various topics not dealt with in other philosophy courses. Irregular.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

PHIL 400 Senior Seminar 3

Prereq.: PHIL 310 or permission of instructor. Senior level study and research in philosophy. Topics vary. May be repeated with a different topic for up to 6 credits.

PHIL 440 Project in Practical Ethics 3

Prereq.: PHIL 220, 346 and six credits from PHIL 144, 222, 240, 241, 242, 349, NRSE 246 341, 342. Research in practical ethics. May include a practicum designed by the student and approved by the instructor. On demand. [GR]

PHIL 441 Philosophy Honors Thesis 3

Prereq.: Major in philosophy and approval of department. Undergraduate thesis on a topic in philosophy. On demand.

PHIL 492 Independent Study 1 TO 3

Prereq.: Permission of instructor. Individual research in selected topics. Open to any student who wishes to pursue a topic of special interest for which the student is qualified. On demand. [GR]

Physical Education

Note: Students not majoring in physical education should see other courses under recreation. PE 144 is required of all students entering with fewer than 15 credits and is recommended to be taken in a student's first year.

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

PE 101 Coaching Permit: Legal Liability and Safety Aspects of Coaching 1

This course is designed to acquaint the student with a background in legal liability with specific reference to negligence, due process, and product liability. Summer, Winter.

PE 102 Coaching Permit: Medical Aspects of Coaching 1

This course is designed to acquaint the student with the medical aspects of coaching adolescents. Instruction will include the care of, prevention of, and rehabilitation of athletic-related injuries. Summer, Winter.

PE 103 Coaching Permit: Principles and Practices of Coaching 1

This course is designed to acquaint the student with the aspects of coaching which deal with the values of athletics in education, ethics, public relations, motivation, aggression and violence, anxiety and stress, and practice sessions. Summer, Winter.

PE 111 Orientation to Physical Education 2

Examines the history, philosophy, and foundation aspects of physical education with allied fields. Open to physical education majors only.

PE 144 Fitness/Wellness Ventures 2

Benefits of healthy lifestyle incorporating fitness and wellness topics within a lecture and activity setting. Required of all students entering with fewer than 15 credits and recommended to be taken in a student's first year. CSUS Common Course. Skill Area IV

200s

PE 219 Methods of Teaching Golf 1

Designed for the student to teach and perform various golf swings and to learn golf course strategies and course management. Activity course. Open to physical education majors only.

PE 273 Tumbling and Gymnastics 2

Skills course in tumbling and gymnastics emphasizing pedagogy, error correction, and spotting techniques. Basic tumbling skills and apparatus activities are included. Activity course. Open to physical education majors only.

PE 277 Outdoor Adventure Activities 2

Survey course that includes group initiative games, rope course activities, and orienteering. Develops skills necessary to organize a safe, effective outdoor education program. Some class meetings occur off campus. Activity course. Open to physical education majors only.

PE 278 Methods of Teaching Games 2

Effectively organize and implement a variety of games experiences for primary grades, intermediate grades and middle school. Emphasis on selection of age-appropriate games and demonstration to involve children in the analysis and modification of games. Activity course. Open to physical education majors only.

PE 279 Methods of Teaching Team Sports 2

Methods course in the fundamental skills and techniques of team sports. Focus on preparing students to plan teaching strategies for skill attainment and proper teaching progressions. Activity course. Open to physical education majors only.

PE 280 Methods of Teaching Racquet Sports 2

Survey course in racquet sport skills and techniques that will focus on application of motor learning and kinesiological principles for personal skill development as well as teaching/coaching application. Activity course. Open to physical education majors only.

PE 299 Psycho-Social Aspects of Physical Education 3

Coreq.: EDTE 314 Prereq.: DAN 272 or PE 278. Examination of the foundation and practical psychological and sociological principles to facilitate teaching effectiveness and student learning in physical education. 10 hours of field experience in an elementary physical education setting required.

300s

PE 300 Developmental Movement 3

Prereq.: PE 299. Application of Laban's Movement Framework to the teaching of elementary physical education. Includes rhythmic activities, folk dance, and developmentally appropriate games. Open to physical education majors only.

PE 305 Evaluation in Physical Education 3

Prereq.: STAT 104. Measurements in health and physical education. Emphasis on modern tests of physical fitness, skills, knowledge, and general motor ability. Open to physical education majors only.

PE 337 Group Process in Health Education 3

Prereq.: EXS 210 or permission of instructor. 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 interpersonal relationships of groups. Irregular.

PE 374 Methods of Teaching Fitness 3

Prereq.: EXS 214 (C- or higher). Introduces the prospective teacher of physical education to a philosophy of helping to prepare public school age children for a lifetime of fitness through physical education. Emphasis on health-related fitness, aerobic, anaerobic, plyometric, stretching activities and resistance trainings. Activity course. Open to physical education majors only. Fall, spring, summer.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"**PE 405 Elementary Methods in Physical Education 3**

Coreq.: PE 406. Prereq.: PE 300 and admission to the professional program in physical education. 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. 20 hours of field experience in an elementary physical 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. [GR]

PE 406 Adapted Physical Education 3

Coreq.: PE 405. Prereq.: PE 300 and admission to the professional program in physical education. 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 domain. 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.

PE 408 The Curriculum Process in K-12 Physical Education 3

Prereq.: PE 300 and admission to the professional program in physical education. Identification of competency-based, goal-oriented activities appropriate to K-12 physical education. Emphasis on program development and design, instructional process, program implementation, and evaluation.

PE 416 Organization and Administration of Physical Education 3

Coreq.: PE 417. Prereq.: PE 405 and admission to the professional program in physical education. Administrative procedures involved in conducting physical education activities, arranging programs, providing facilities and handling staff-class details, finance, publicity, interscholastic, and intramural activities. 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. [GR]

PE 417 Secondary Methods in Physical Education 3

Coreq.: PE 416. Prereq.: PE 405 and admission into the professional program in physical education. Curricular content of physical education for secondary teaching is discussed and analyzed. Methods and techniques of teaching are presented and opportunities for teaching provided. Course is a prerequisite to student teaching. Open to physical education majors only. 20 hours of field experience in a secondary physical 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.

PE 420 Lifespan Motor Development 3

Prereq.: PE 300, PSY 236, and admission to the professional program in physical education. Study of changes in motor behavior across the lifespan; processes that underlie these changes, and factors that affect them. Emphasis upon the young learner, task analysis and developmentally appropriate instruction.

PE 422 Motor Learning 3

Prereq.: Admission to the professional program in physical education and PE 420 or permission of instructor. Examines the principles of motor learning which affect skill acquisition of secondary and post-secondary school learners.

PE 490 Independent Study in Physical Education 1 TO 3

Prereq.: Senior standing and permission of department chair. Reading and research in approved topics under the guidance of a member of the department. May be repeated for a total of 3 credits.

500s

PE 500 Improving Student Learning in Physical Education 3

Prereq.: Permission of instructor. Components of the effective teaching of physical education are explored. Topics include teacher standards, student performance standards, instructional planning, assessment strategies, and reflective practice. Spring. (E)

PE 505 Instructional Tools for Physical Education 3

Prereq.: Admission to M.S. in Physical Education or permission of instructor. 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. Fall. (E)

PE 510 Instructional Models for Physical Education 3

Prereq.: Admission to M.S. in Physical Education or permission of instructor. 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. Fall. (O)

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. Spring. (O)

PE 524 Sport, Physical Education, Athletics, and the Law 3

The varied aspects and impact of law in professional sport, physical education, and athletics. Emphasis on negligence, product liability, and risk management. Fall. (E)

PE 525 Concepts in Athletic Administration 3

Prereq.: Admission to M.S. in Physical Education or permission of department chair. Focus on management application and control of interscholastic and intercollegiate athletics; specific reference to philosophical and sociological applications, institutional governance, ethical conduct and sportsmanship, legal issues, and evaluation systems. Fall. (O)

PE 590 Independent Study/Topics in Physical Education 3

Prereq.: Admission to the M.S. in Physical Education with approved planned program, or permission of instructor. 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. Irregular.

PE 597 Research in Physical Education and Exercise Science I 3

Prereq.: Admission to M.S. in Physical Education or permission of department chair. 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. Fall.

PE 598 Research in Physical Education and Exercise Science II 3

Prereq.: PE 597; admission to M.S. in Physical Education or permission of department chair. 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. Spring.

PE 599 Thesis 3

Prereq.: 18 credits of approved graduate study including PE 597 and 598; minimum 3.00 overall GPA. Preparation of the thesis under the supervision of the thesis advisor.

Physics

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

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. Study Area IV

PHYS 113 The Sound of Music 3

An introductory course covering the physical basis of music, sources of sound, transmission and detection of sound waves, characteristics of sensation of sound and their physical correspondents, and general consideration of architectural acoustics. Two lectures and one two-hour laboratory per week. Spring. Study Area IV

PHYS 121 General Physics I 4

Prereq.: MATH 119, or MATH 124, or MATH 115 and 116, or MATH 115 and 125 (prerequisites may be taken concurrently with PHYS 121). 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. Study Area IV

PHYS 122 General Physics II 4

Prereq.: PHYS 121. 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. Study Area IV

PHYS 125 University Physics I 4

Prereq.: MATH 152. 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. Study Area IV

PHYS 126 University Physics II 4

Prereq.: PHYS 125. Continuation of PHYS 125. Study of electricity, magnetism, and optics. Three lectures, one recitation and one three-hour laboratory per week. CSUS Common Course. Study Area IV

200s

PHYS 220 Mechanics I 3

Prereq.: PHYS 122 or 126, MATH 222 (may be taken concurrently). 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. Irregular.

PHYS 250 Intermediate Lab I 1

Prereq.: PHYS 125, 126 and 220 or 320 (may be taken concurrently). Laboratory course with experiments performed in mechanics, heat, and thermodynamics. One three-hour laboratory per week. Irregular.

300s

PHYS 305 Foundations of Electricity and Magnetism 3

Prereq.: PHYS 220 and MATH 222. Electrostatics, circuit theory, electromagnetic fields of steady and alternating currents, solutions of Laplace's equation, Maxwell's equations, and propagation of electromagnetic waves. Irregular.

PHYS 320 Heat and Thermodynamics 3

Prereq.: PHYS 122 or 126, MATH 222. Nature and measurement of heat, thermoproperties of matter, thermodynamic processes, and introductory statistical mechanics. Irregular.

PHYS 325 Optics 4

Prereq.: PHYS 122 or 126, MATH 221 (may be taken concurrently). 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. Irregular.

PHYS 331 Electronics I 3

Prereq.: PHYS 122 or 126, MATH 221 (may be taken concurrently). 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. Irregular.

PHYS 332 Electronics II 3

Prereq.: PHYS 331. A continuation of PHYS 331. Digital circuitry including flip-flops, counters, ADC and DAC, shift registers, microprocessor architecture, instruction set, addressing, and interfacing. Two lectures and one three-hour laboratory per week. Irregular.

PHYS 338 Digital Systems Laboratory 1

Prereq.: CS 354 (may be taken concurrently). Laboratory experiments and designs that lead to understanding of concepts of digital systems, using logical and sequential networks. One three-hour lab per week.

PHYS 341 Fiber Optic Communication Theory 3

Prereq.: PHYS 325. 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. Irregular.

PHYS 350 Intermediate Lab II 1

Prereq.: PHYS 305 or 425 (may be taken concurrently). Laboratory course with experiments in electrical measurements and modern physics (Planck's constant, charge to mass ratio of the electron, Millikan's oil drop experiment, etc.). One three-hour laboratory per week. Irregular.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

PHYS 425 Modern Physics 3

Prereq.: PHYS 305. Special theory of relativity; quantum aspects of matter and of electromagnetic radiation, Bohr model, nuclear structure, radioactivity. Irregular. [GR]

PHYS 450 Advanced Laboratory 1

Prereq.: PHYS 331, 425. A study of the 400 kV Van de Graaf accelerator, particle detection electronics, and a study of induced nuclear reactions. One three-hour laboratory per week. Irregular. [GR]

PHYS 452 Independent Study in Physics 1 TO 3

Prereq.: Approved plan of study by arrangement with supervising instructor and approval of department chair. 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. [GR]

PHYS 460 Seminar in Physics 1

Prereq.: Senior standing. 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. Spring. [GR]

PHYS 470 Quantum Mechanics 3

Prereq.: PHYS 425. Limits of classical physics, wave packets and uncertainty, Schrodinger wave equation, eigenfunctions and eigenvalues, one-dimensional potentials, wave mechanics, operator methods. Irregular. [GR]

PHYS 471 Quantum Mechanics II 3

Prereq.: PHYS 470. 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. Irregular. [GR]

PHYS 480 Student Internship in Physics 3

Prereq.: Senior standing and permission of the student's advisor. 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. On demand (fall or spring semester).

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. Irregular. [GR]

500s

PHYS 505 Mathematical Physics 3

Prereq.: Undergraduate physics minor; MATH 222. Introduction to basic mathematical methods of theoretical physics, such as linear algebra (matrices), vector analysis, partial differential equations, orthogonal functions, and complex variables presented with physical illustrations. Irregular.

PHYS 511 Classical Mechanics 3

Prereq.: PHYS 425 or permission of chair. Mechanics of continuous media, wave motion, special relativity, and introduction to Lagrange's and Hamilton's equations. Irregular.

PHYS 519 Advanced Topics in Physics 3

Prereq.: Permission of instructor and student's advisor. Combination of lecture, discussion, and laboratory work. May be repeated more than once for credit under different topics. Irregular.

PHYS 542 Advanced Electricity & Magnetism 3

Prereq.: PHYS 425 or permission of chair. Field theory of electromagnetism. Magnetic fields of currents, magnetic materials, electromagnetic induction of Maxwell's equations. Irregular.

PHYS 598 Research in Physics 3

Prereq.: Admission to the MS program in natural sciences, and 15 credits in planned program of study, and permission of instructor. Student will conduct original research in physics including a literature review, project proposal, research presentation, and a report suitable for journal publication. On demand.

PHYS 599 Thesis 3

Prereq.: PHYS 598, permission of the advisor, and a 3.00 overall GPA. 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. On demand.

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. Fall. Skill Area III

POL 112 Elementary Polish II 3

Prereq: 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. Continuation of POL 111. Functional approach to grammar. Development of facility in speaking, understanding, reading Polish. Spring. Skill Area III

POL 125 Intermediate Polish I 3

Prereq.: One year of college Polish or equivalent. 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. Fall. Skill Area I [I]

POL 126 Intermediate Polish II 3

Prereq.: POL 125 or equivalent. Continuation of POL 125. Further work in written and oral expression. Spring. Skill Area I [I]

Political Science

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

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 110 is required for all political science majors. CSUS Common Course. Study Area II [I]

PS 110 American Government & Politics 3

Structure, functions, services, and problems of government and politics at the national level. PS 110 or 104 is required of all political science majors. CSUS Common Course. Study Area II

200s

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. Study Area II

PS 231 Conduct of American Foreign Policy 3

Theories, processes, and problems of American foreign policy and the craft of diplomacy, with special attention to contemporary issues.

PS 232 Ancient and Medieval Political Thought 3

Political thought from Plato to Machiavelli. Fall. Study Area I

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. Cross listed with LAS 235. No credit given to students with credit for LAS 235. CSUS Common Course. Study Area II [I]

PS 241 Women and American Law 3

Examines the evolution of women's legal rights in the United States. Special attention given to the legal status of women in the economic, political, educational, and judicial sectors of society. Cross listed with WGSS 241. No credit given to students with credit for WGSS 241. Fall. (E)

PS 250 Approaches to Political Science 3

Prereq.: PS 104 or 110, and open to majors only. 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. Spring.

PS 260 Public Administration 3

Prereq.: PS 104 or 110. Study of administrative theory and the politics of bureaucracy. Assigned readings, field projects, and research papers. Study Area II

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. Fall. Study Area II

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. Spring. Study Area II

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. On demand.

300s

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. Spring. (O) Study Area II

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. Fall.

PS 330 American Parties and Interest Groups 3

Prereq.: PS 104, 110 or permission of instructor. Historical development and current operation of party organizations in the United States, with attention to voting behavior, interest groups, the influence of new s media, etc. Field research projects. Fall. (E)

PS 331 American Constitutional Law 3

Prereq.: PS 110. 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.

PS 332 Civil Liberties 3

Prereq.: PS 110. Constitutional safeguards of liberty and property. Special attention to privileges and immunities, equality and civil rights. 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. Spring. Study Area II

PS 335 American Political Thought 3

American political thought, with special attention to early and contemporary discussion of liberalism, conservatism, pluralism, and radicalism. Spring. (E)

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. [I]

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. Irregular. [I]

PS 339 International Law 3

Nature and functions of international law in the international community, in theory as well as in practice. [I]

PS 343 Political Leadership 3

Prereq.: PS 104, 110 or instructor's permission. Analysis of political leadership and its role in the political process.

PS 345 International Terrorism 3

Examination of definitions, history, philosophy, and theories of international 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. [I]

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). Fall, Spring, Summer. [I]

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

PS 415 Government & Business in the Information Age 3

Prereq.: PS 104 or 110 or 315 or permission of department chair. Analysis of the evolution of the pattern of interaction between business and government in the American administrative and political process as we enter the information age, with attention to how we as members of society are affected by and may influence this process. Spring. (E) [GR]

PS 420 Government and Politics of Latin America 3

Historical, social, economic, and ideological factors impacting contemporary government and politics in Latin America. Summer. [I] [GR]

PS 421 Government and Politics of Africa 3

Historical, social, economic, and ideological factors impacting contemporary government and politics in Africa. Summer. [I] [GR]

PS 425 Asian Politics 3

Prereq.: PS 104. 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. Spring. [I] [GR]

PS 430 The American Presidency 3

Prereq.: PS 104 or 110 or permission of instructor. 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. Cross listed with AMS 430. No credit given to students with credit for AMS 430. Spring. [GR]

PS 431 The Legislative Process 3

Prereq.: PS 104 or 110 or permission of instructor. 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. Spring. (O) [GR]

PS 432 Urban Politics and Government 3

Prereq.: PS 104 or 110 or permission of instructor (non-Political Science introductory courses may be substituted with permission of instructor). Selected urban conditions and problems such as housing, racial relations, power structure, intergovernmental relations, partisan politics, group behavior, forms of government, politics of planning, regionalism, economic development, transportation, and communication. Field research projects. Fall. (O) [GR]

PS 433 20th-Century Political Thought 3

Contemporary approaches to political theory, such as socialism, conservatism, liberalism, and group theory. Fall. [GR]

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. Spring. [I] [GR]

PS 435 Russian and Eastern Europe 3

Government and politics of Russia and of selected Eastern European countries such as Poland, Hungary, Ukraine, and Yugoslavia. Irregular. [I] [GR]

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. Irregular. [GR]

PS 445 Public Policy Analysis and Evaluation 3

Prereq.: PS 260 or permission of department chair. An investigation in perspectives and methods of measuring public policies. [GR]

PS 446 The Budgetary Process 3

Prereq.: PS 110 and 260. Examination and analysis of budgeting as an administrative and political process, with attention to techniques and reform efforts. [GR]

PS 448 Current U.S. Public Policy Issues 3

Prereq.: PS 110 and PS 230; or permission of instructor. Study of the politics and administration of government programs in such fields as education, healthcare, housing, and social welfare policy. Significant independent student research project in U.S. politics required. Fall

PS 450 Ethics, Corruption, and Virtue in Public Service 3

Prereq.: PS 110, 260, and junior standing. An examination of the ethical dimensions of public service, including elective, appointment, and civil service. Topics include relationship between ethical theory and practice, standards of evaluation for action, administrative discretion, and ethical training for public administrators. Fall.

PS 470 National Intern Experience 12

Prereq.: Junior, senior, or graduate status; minimum 3.00 grade point average. For undergraduate students, special exception may be granted by the internship advisor in consultation with the department chair. Government or political intern experience in Washington, D.C., or other national settings, typically through a program such as the Washington Center. Cannot be used to satisfy the requirements for a political science major if the student has completed PS 480 or PS 482. No more than 6 credits of PS 470 may be applied toward a political science major. By application. [GR]

PS 480 State Internship Experience 4

Prereq.: Junior or senior status with a minimum 2.50 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. Must be taken concurrently with PS 485. Students who apply and are admitted to this program are assigned to work in state and local government departments and agencies for a minimum of two days a week. Not open to students who have completed PS 482. Cannot be used to satisfy the requirements for a political science major if the student has completed PS 470. By application. Spring. [GR]

PS 482 Intensive State Internship Experience 9

Prereq.: Junior, senior, or graduate status; minimum 3.00 grade point average. For undergraduate students, special exception may be granted by the internship advisor in consultation with the department chair. Must be taken concurrently with PS 485. Students who apply and are admitted to this internship are assigned to work on a full-time basis, five days per week. 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 a political science major. By application. Spring. [GR]

PS 485 State Internship Seminar 3

Prereq.: Students must be enrolled in a department approved internship. 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. Spring. [GR]

PS 490 Directed Readings in Political Science 1 TO 6

Prereq.: Permission of instructor. Individual programs of study for students with special abilities or interests in political science. May be repeated with different topics to a maximum of 6 credits. On demand. [GR]

PS 491 Advanced Studies in Political Science 1 TO 6

Intensive study of selected problems in political science. On demand. [GR]

500s

PS 501 Advanced Studies in International Law 3

Prereq.: Graduate status. 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. Fall.

Psychology

Note: Junior standing is recommended for 300-level courses; junior or senior standing is required for 400-level courses.

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

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. Study Area III

PSY 113 Exploring Psychology 1

Prereq.: PSY 112 (may be taken concurrently). 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.

PSY 125 Environment & Behavior 3

Prereq.: PSY 112. Effects of built and natural environment on human behavior, cognition, and emotion. Study Area III

200s

PSY 200 Learning & Memory 3

Prereq.: PSY 112. 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. Study Area III

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. Cross listed with PES 202. No credit given to students with credit for PES 202. Irregular.

PSY 221 Research Methods in Psychology I 4

Prereq.: PSY 112 (C- or higher) and STAT 215 (C- or higher). Introduction to research problems in psychology, with an emphasis on experimental designs which employ a single independent variable. Student 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.

PSY 222 Research Methods in Psychology II 4

Prereq.: PSY 221 (C- or higher). Controlled experiments are contrasted with non-experimental designs, such as naturalistic observation, surveys, and field studies. Factorial, mixed, and multivariate designs are discussed. Student will complete the independent project proposed in PSY 221. 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.

PSY 225 Peer Tutoring in Research Methods 1

Prereq.: PSY 221 (B or higher) and permission of instructor. Peer tutor training. Students attend class 1 hour per week and tutor 3 hours per week, assisting students enrolled in PSY 221 and 222. 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).

PSY 234 Industrial and Organizational Psychology 3

Prereq.: PSY 112 or permission of instructor. Application of psychological theory, knowledge, and methods to behavior in industry and organizations.

PSY 236 Life-Span Development 3

Human development from conception through old age, considering physical, emotional, social, and intellectual factors. Required of all psychology majors. Study Area III

PSY 241 Introduction to Health Psychology 3

Prereq.: PSY 112. 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. Study Area III

PSY 250 The Psychology of Community Service 3

Prereq.: PSY 112. 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. Fall.

PSY 270 Psychology and the Law 3

Prereq.: PSY 112. 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. Spring.

PSY 281 Cognitive Psychology 3

Prereq.: PSY 112. 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. Study Area III

300s

PSY 330 Abnormal Psychology 3

Prereq.: PSY 112 and one other psychology course. Symptoms, causes and treatment of deviant behavior, anxiety disorders, psychoses, personality disorders, substance abuse disorders.

PSY 342 Sensation & Perception 3

Prereq.: Six credits in psychology or permission of instructor. Study of the physiological, psychophysical, and psychological processes through which organisms interact with the environment. Fall.

PSY 350 Cross-Cultural Psychology 3

Prereq.: PSY 112 and 6 additional credits in psychology. Exploration of topical areas in psychology from a multicultural, multiethnic perspective. Students will become more aware of the role that culture and ethnicity play in shaping human behavior and student's awareness of the range of cultural variation will be raised. [I]

PSY 361 Psychology of Early Childhood 3

Prereq.: PSY 236. Study and observation of young children (birth to age six), with emphasis on the development, origins, and dynamic processes of behavior within this age range.

PSY 362 Child Psychology 3

Prereq.: PSY 236. Advanced study in developmental psychology through the childhood years. Emphasis on topics in the areas of social, emotional, personality, and cognitive development.

PSY 363 Adolescent Psychology 3

Prereq.: PSY 236. Research studies pertaining to adolescence, with special emphasis on psychological development and problems characteristic of the age.

PSY 364 Adult Development & Aging 3

Prereq.: PSY 236 or permission of instructor. Study of behavior, dynamics and developmental processes from early adulthood through old age and death.

PSY 365 Psychology of the Exceptional Child 3

Prereq.: PSY 236. Psychological characteristics of exceptional children (gifted, retarded, emotionally disturbed, physically handicapped, etc.) with emphasis on implications of these characteristics for classroom procedures.

PSY 372 Social Psychology 3

Prereq.: Two courses in psychology. Influence of social factors on behavior, cognition, and emotions of individuals. Analysis of methods of research in social setting.

PSY 380 Psychology of Dying and Death 3

Prereq.: PSY 112 or equivalent. Psychological issues of death, dying, and suicide. Topics include death and denial, fear of death, grief and bereavement, child's and adolescent's view of death, psychological stages of dying, and euthanasia.

PSY 385 Humanistic Psychology 3

Prereq.: Two courses in psychology. Study of humanistic approaches to the understanding of behavior. Focus is on the healthy personality and its potential for self-actualization.

PSY 390 Human Sexuality 3

Prereq.: PSY 112 and one other course in psychology. 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.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"**PSY 410 Media Psychology 3**

Prereq.: One psychology course and at least junior standing or graduate status; or permission of the instructor. 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). Summer. [GR]

PSY 430 Psychology of Diversity 3

Prereq.: PSY 112 or permission of instructor. Open to students with junior or higher standing. Review of psychological research and theories pertaining to the study of diversity. Implications for clinical work and community education will be discussed. [GR]

PSY 440 Motivation 3

Prereq.: Three courses in psychology. Physiological and psychological variables in selected motivational processes. Problems of measurement, empirical findings, and theoretical research. Readings in contemporary literature. [GR]

PSY 444 Positive Psychology 3

Prereq.: PSY 112 and 3 additional credits in Psychology or permission of instructor. Scientific study of human strengths. Topics include optimism, creativity, well-being, and resilience. Spring. [GR]

PSY 446 Introduction to Psychotherapy and the Psychology of Counseling 3

Prereq.: PSY 330 and 6 other credits in Psychology or permission of instructor or admission to M.A. Psychology. 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. Spring. [GR]

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 sex roles will be examined.

PSY 450 Biopsychology 3

Prereq.: Six credits in psychology or permission of instructor. Analysis of relationships between bodily processes and behavior. [GR]

PSY 451 Psychological Evaluation 3

Prereq.: Three courses in psychology. Principles and problems basic to construction, choice and use of psychological measuring instruments, and study of application to diagnosis. Special Condition: completion of additional project by graduate students. Fall. [GR]

PSY 454 Drugs and Behavior 3

Prereq.: PSY 112. 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. [GR]

PSY 458 Human Neuropsychology 3

Prereq.: PSY 330 and 450, or permission of instructor. 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. Spring. [GR]

PSY 460 Behavior Modification: Theory and Practice 3

Prereq.: PSY 200 or permission of instructor. 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. [GR]

PSY 470 Personality Psychology: Theories and Research 3

Prereq.: Three courses in psychology. Nature of personality theory and critical analysis of major contemporary theories of personality, including empirical evidence relevant to these theories. [GR]

PSY 490 History & Systems of Psychology 3

Prereq.: PSY 112, three other courses in psychology and junior standing. Historical study with emphasis on general philosophical bases, development of psychology as an experimental science, and comparative analysis of principal modes of psychological inquiry.

PSY 496 Internship in Psychological Applications 3

Prereq.: Written permission of instructor. 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.

PSY 497 Psychology Capstone Seminar 3

Prereq.: PSY 222 and 75+ credits; or permission of instructor. Majors only. Seminar integrating the fields of psychology. Students will demonstrate critical thinking, independent scholarship, oral and written communication through the collective examination and review of primary sources. The project will be at the level which the students can use to present at a national or regional forum. Irregular.

PSY 498 Topics in Psychology 1 TO 3

Study of selected topics in psychology. Topics announced each semester. May be repeated with different topics for a total of 6 credits. [GR]

PSY 499 Independent Reading and Research in Psychology 1 TO 3

Prereq.: Junior, senior, or graduate standing and written permission of instructor. Directed independent studies in psychology. May be repeated for a total of 6 credits. On demand.

500s

PSY 512 Seminar in Developmental Psychology 3

Prereq.: Admission to graduate program or permission of instructor. Study of human development from conception through old age, including analysis of theory and research findings.

PSY 526 Psychology of Learning 3

Prereq.: PSY 512 or equivalent or permission of instructor. Introduction to research and theories of learning with emphasis on implications for classroom procedures.

PSY 530 Psychopathology 3

Prereq.: Admission to M.A. in Psychology or permission of instructor. 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. Spring.

PSY 541 Health Psychology 3

Prereq.: Admission to graduate program or permission of instructor. 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. Fall.

PSY 542 Psychology of Stress 3

Prereq.: Admission to M.A. in Psychology or permission of instructor. 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). Spring. (O)

PSY 543 Stress Management: Theory & Research 3

Prereq.: Admission to M.A. in Psychology or permission of instructor. 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. Spring. (E)

PSY 544 Biofeedback: Principles and Practices 3

Prereq.: Admission to graduate program in psychology. Basics of theory underlying biofeedback; use of biofeedback equipment; overview of biofeedback assessment, treatment, and evaluation. Fall. (E)

PSY 545 Introduction to Clinical Psychology 3

Prereq.: Admission to M.A. in psychology or permission of instructor. Survey of current clinical practice, theory, and research with an emphasis on ethical issues. Fall.

PSY 546 Short-Term Psychotherapy and Health Care 3

Prereq.: Admission to M.A. in Psychology or permission of instructor. Examination of American health care system and psychotherapy practice. Topics include description of short-term therapy models, ethics, diversity, and controversies. Fall.

PSY 550 Introduction to Community Psychology 3

Introduction to the history, central assumptions and methodologies of community psychology. Fall.

PSY 551 Primary Prevention 3

Prereq.: PSY 550. Intensive examination of the theoretical and empirical underpinnings of primary prevention programs in mental health. Spring.

PSY 553 Developing Prevention Programs 3

Prereq.: PSY 551 or permission of instructor. Development and operation of prevention/empowerment strategies in institutional and/or community settings. Fall.

PSY 571 Psychology of Women's Health 3

Prereq.: Admission to graduate program or permission of instructor. 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. Spring. (E)

PSY 590 Advanced Topics in Psychology 3

Prereq.: Admission to graduate program or permission of instructor. 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. Irregular.

PSY 591 Advanced Independent Reading and Research in Psychology 3

Prereq.: Permission of instructor. Directed advanced independent studies in psychology. On demand.

PSY 595 Graduate Internship in Psychological Applications 3

Prereq.: Permission of instructor. 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. On demand.

PSY 596 Psychological Research: Design and Analysis I 3

Prereq.: Admission to M.A. program in psychology or permission of instructor. 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. Fall.

PSY 597 Psychological Research: Design and Analysis II 3

Prereq.: PSY 596. An overview of research methods in psychology, continued from PSY 596. Each student will complete the independent project proposed in PSY 596. Spring.

PSY 599 Thesis 3

Prereq.: 21 credits of graduate work, and a 3.00 overall GPA. Students must consult with their advisor before registering for thesis credits. Preparation of the thesis under the supervision of the thesis advisor.

Quantitative Reasoning

QR 100 Basic Quantitative Reasoning 3

Prereq.: Permission of instructor or department chair. Designed to improve student's ability to succeed in mathematics courses and other disciplines requiring quantitative reasoning, problem-solving skills and overcoming math anxiety. Students will be given diagnostic tests to identify areas requiring remediation and will take the mathematics placement examination at the end of the course. This does not meet the prerequisite for any mathematics course and may not be used to meet the general education requirement or any major or minor in mathematics.

Reading

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

RDG 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. Skill Area IV

300s

RDG 315 Comprehensive Reading Instruction I 3

Prereq.: Admission to the Professional Program in Teacher Education. Taken concurrently with EDTE 315 (Elementary Education majors). Concentrates on early literacy processes, with an emphasis on work identification skills. Topics include theories of reading, emergent literacy, reading instructional frameworks common in PreK-2 classrooms, early writing experiences as they relate to reading, concepts about print, phonological awareness, phonics, sight word knowledge, context knowledge, and fluency. 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.

RDG 316 Comprehensive Reading Instruction II 3

Prereq.: RDG 315. Taken concurrently with EDTE 320 (Elementary Education majors) or EDTE 420 (Early Childhood majors). 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, ELL instruction, reading assessment, and theories of reading. 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.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

RDG 400 Writing Instruction for Teachers 2

Prereq.: Permission of Teacher Education chair and Reading and Language Arts chair. 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.

RDG 412 Literacy in the Elementary School 3

Prereq.: RDG 316. Taken concurrently with EDTE 420 (Elementary Education majors). Introduction to foundational, philosophical and theoretical underpinnings of literacy education. An integrated approach to teaching the language arts, including reading, writing, speaking, listening, viewing, and visually representing in the elementary school curriculum. Field experience required.

RDG 440 Literacy in the Secondary School 3

Prereq.: Admission to the Professional Program in Teacher Education and EDTE 316 or permission of Reading Department chair. Fundamentals of reading and language arts to support instructional design and student development across disciplines and grade levels. Designed for pre-service content area teachers. Field experience required. Recommended to be taken concurrently with EDSC 425. Not open to post-baccalaureate students. 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.

500s

RDG 500 Independent Study in Reading and Language Arts 3

Prereq.: 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. 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. On demand.

RDG 502 Current Trends in Developmental Reading PK-12 3

Prereq.: Admission to M.S. or Sixth-Year program. Survey of current reading practices and materials in the schools. Emphasis on developmental reading from pre-school through high school and into the adult years.

RDG 503 Developmental Reading in PreK-12 3

Prereq.: 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. Focus on evidence-based instructional practices to promote factors involved in teaching reading readiness, reading in primary grades, word recognition, fluency, 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. Provides a broad understanding of the processes by which students learn to read and write within the context of today's diverse learning communities.

RDG 504 Middle School Level Literacy Development 3

Prereq.: 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. 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.

RDG 506 Developmental Reading in the Secondary Schools 3

Prereq.: Open to students in pre-certification or certification status in secondary or PK-12 post baccalaureate certification programs, or permission of department chair. The Basic Skills Development program in elementary school reviewed. The Basic Skills Development program in elementary school reviewed. Study of the need for continuing systematic instruction in reading for pupils throughout grades 7-12. Organization of such a program, materials, and methods currently in use, and means of evaluation are considered. NOTE: No credit will be given to students who have credit for RDG 440, RDG 505, or RDG 593.

RDG 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. Irregular.

RDG 569 Folktelling Art and Technique 3

Prereq.: RDG 588 and admission to M.S. or Sixth-Year program in reading and language arts, or permission of department chair. Study of the art and techniques of storytelling. Develop competency in the oral tradition of folktelling. Investigate the planning of study units and activity programs for use in elementary and secondary schools. Irregular.

RDG 578 Teaching Writing in the Elementary Schools 3

Prereq.: Admission to M.S. or Sixth-year program in reading and language arts, or permission of department chair. An integration of theories, practices, and techniques as related to teaching writing in the elementary schools. Students, in conjunction with the instructor, design lessons construct models, and collect children's writing efforts for their level.

RDG 579 Technology in Reading & Language Arts Instruction 3

Prereq.: Admission to M.S. or Sixth-Year program in reading and language arts, or permission of department chair. 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.

RDG 582 Introduction to Critical Literacy 3

Prereq.: Admission to M.S. or Sixth-Year program in reading and language arts, or permission of department chair. 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. On demand.

RDG 583 Teaching Writing across the Curriculum I 6

Prereq.: Acceptance to the Central Connecticut Writing Project (CCWP). 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 towards the Master's in English or in Reading and Language Arts with the permission of the CCWP director and advisor. Cross listed with ENG 583. Summer.

RDG 585 Reading in Content Area 3

Prereq.: RDG 502 or RDG 503 or RDG 504 or RDG 506 and admission to M.S. or Sixth-Year program in reading and language arts. Investigation of materials and procedures used for teaching reading in content area. Special emphasis on vocabulary and comprehension development.

RDG 586 Literacy Instruction for Diverse Populations I 3

Prereq.: Admission to M.S. or Sixth-Year program in reading and language arts, or permission of department chair. 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.

RDG 587 Bibliotherapy 3

Prereq.: Admission to M.S. or Sixth-Year program in reading and language arts, or permission of department chair. Identification, selection, and effective use of books that address problems confronting young people from pre-school age to adolescence. Concerns include physical and mental handicaps, divorce, death, alcoholism, drug abuse, neglect.

RDG 588 Teaching Children's Literature 3

Prereq.: Admission to M.S. or Sixth-Year program in reading and language arts, or permission of department chair. Study of wide variety of literature for children. Investigation of the appreciation for literature with children. Competency in storytelling and writing original stories and poems will also be developed.

RDG 589 Creative Language Arts 3

Prereq.: RDG 502 or RDG 503 or RDG 504 or RDG 506 and admission to M.S. or Sixth-Year program in reading and language arts. 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.

RDG 594 Diagnosis of Reading & Language Arts Difficulties 3

Prereq.: RDG 502 or RDG 503 or RDG 504, and admission to M.S. or Sixth-Year program in reading and language arts, Reading and Language Arts Consultant Certification, or OCP in reading and language arts. May not be taken concurrently with RDG 595. Study and interpretation of selected tests and instruments useful in analysis of physical, intellectual, social, and emotional factors related to reading difficulties.

RDG 595 Remedial & Corrective Techniques in Reading & Language Arts 3

Prereq.: RDG 594 and admission to M.S., Sixth-Year program in reading and language arts, or Reading and Language Arts Consultant Certification, or OCP in reading and language arts. Study of principles of remedial-corrective reading and language arts methods of analysis and interpretation, and materials useful in correction of reading and language arts difficulties.

RDG 596 Clinical Practices in Reading & Language Arts 6

Prereq.: RDG 595 and admission to M.S., Sixth-Year program in reading and language arts, or Reading and Language Arts Consultant Certification, or OCP in reading and language arts. Diagnosis and treatment of reading and language arts difficulties and disabilities. Case study prepared for pupil tutored during term.

RDG 598 Seminar in Reading & Language Arts Research 3

Prereq.: 15 credits in graduate reading and language arts courses and admission to M.S. or Sixth-Year program in reading and language arts. Advanced studies in reading research as well as basic reading and language arts research studies are reviewed. Emphasis will be on the articulation between research findings and reading and language arts practices in schools. The significance of the findings of research will be studied through prescribed readings, written and oral reports, and seminar discussion.

RDG 599 Thesis 3 TO 6

Prereq.: 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. 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. On demand.

600s

RDG 667 Multicultural Literature in the Classroom 3

Prereq.: RDG 588 and admission to Sixth-Year program in reading and language arts, or Ed.D. program. A variety of teaching methods will be studied and applied to multicultural and multiethnic books for children in the elementary and middle grades. The implementation of various teaching methodologies as part of a whole language learning and teaching philosophy will be explored.

RDG 675 Reading and Writing as Integrated Process 3

Prereq.: RDG 589; admission to Sixth-Year program in Reading and Language Arts or permission of department chair. Integration of theories, practices, and techniques as related to the teaching of reading and writing in K-12 grades. Students, in conjunction with the instructor, will focus on teacher as writer and on developing young writers K-12. Students will integrate reading and writing instruction by designing lessons, models and assessments. Irregular.

RDG 680 Current Trends and Issues in Reading and Language Arts 3

Prereq.: RDG 502, RDG 503, RDG 591), RDG 504, and RDG 506 and admission to M.S. or Sixth-Year program in reading and language arts, or Ed.D. program. Current trends and current issues in reading and language arts. Focus on recent research and its application to reading and language arts. Courses will focus on recent research and its application to reading and language arts instruction in school settings.

RDG 686 Literacy Instruction for Diverse Populations II 3

Prereq.: RDG 586; RDG 667 and admission to Sixth-Year program in reading and language arts, or Ed.D. program. Strategies and techniques for promoting and expanding literacy among children of diverse backgrounds. Models of theoretical frameworks and analytic strategies that address children's diverse educational needs will be practiced.

RDG 692 Specialized Diagnosis and Remedial Techniques 3

Prereq.: RDG 594 and 595, and admission to Sixth-Year program in reading and language arts. Specialized diagnostic procedures and materials in reading for children who are perceptually, neurologically, and psycholinguistically disabled. Role of children's literature, bibliotherapy, and cultural implication of story content are examined. Consultants from specialized areas, such as medicine and psychology will be used as resource persons.

RDG 694 Organization, Administration, and Supervision of Reading & Language Arts Programs 3

Prereq.: 15 credits of graduate study in reading and admission to Sixth-Year program in reading and language arts, or Reading and Language Arts Consultant Certification, or OCP in reading and language arts. Study of patterns of organization, administration, evaluation, and supervision of various types of reading and language arts programs in schools.

RDG 696 Practicum for Reading and Language Arts Consultants 3

Prereq.: RDG 596 and RDG 694 and admission to Sixth-Year program in reading and language arts, or OCP in reading and language arts. 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.

RDG 697 Practicum for Reading and Language Arts Consultants II 3

Prereq.: RDG 696. Continuation of RDG 696 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.

RDG 698 Research Seminar 3

Prereq.: 24 credits of graduate study in reading, and admission to Sixth-Year program in reading and language arts, or OCP in reading and language arts. In-depth individual study of research pertaining to reading materials, programs, and methods. Research reports required.

700s

RDG 700 Seminar in Literacy 3

Prereq.: Admission to the Ed.D. program. 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. On demand.

Recreation

(Physical Education and Human Performance)

1. Jump to level:
2. [200s](#)

100s

REC 104 Self-Defense 1

Rigorous program designed to combine self-defense techniques, increased strength, stamina, and flexibility, which provides an increased awareness and understanding of the ability to defend oneself.

REC 105 Intermediate Self-Defense 1

Prereq.: Permission of instructor. Combination of self-defense techniques, increased strength, stamina, and flexibility on an intermediate level. Provides an increased awareness and understanding of the ability to defend oneself.

REC 141 Volleyball 1

Course designed to teach volleyball's offensive and defensive techniques. Games are designed to teach team play and strategy.

REC 162 Badminton 1

Tactics and strategies in performing various fundamentals and methods in badminton.

REC 165 Level 1 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.

REC 166 Tennis 1

Fundamentals and techniques in practicing and playing tennis.

REC 168 Weight Training 1

Tactics, strategy, and proper methods in performing a variety of weight training techniques.

REC 169 Golf 1

This course is designed to perform various golf strokes and the proper methods of how to play the game of golf.

REC 170 Introduction to Ice Hockey 1

Students will learn the beginning and/or intermediate fundamentals of ice hockey. Puck skills, skating with pucks and game play will be included. Winter, Summer.

REC 171 Introduction to Ice Skating 1

Students will learn the beginning and/or intermediate fundamentals of ice skating. Winter, Summer.

200s

REC 200 Beginning Swimming 1

How to perform the proper tactics and fundamentals for beginning swimmers. CSUS Common Course. Winter, Summer.

REC 230 Intermediate Swimming 1

This course is designed to acquaint, practice, and perform correct swimming techniques for intermediate swimmers.

REC 232 Lifeguard Training 2

Prereq.: Successful completion of the American Red Cross Screening test (administered during the first week of class). Provides skills to respond effectively to medical and aquatic emergencies. American Red Cross Certification in First Aid, CPR and Lifeguarding may be obtained. CSUS Common Course.

REC 233 Water Safety Instructor's Course 2

Prereq.: Swim the following strokes 25 yards each: front crawl, breaststroke, elementary breaststroke, sidestroke, (and butterfly 15 yards); tread water for 1 minute. Planning, conducting, and evaluating instruction in swimming and water safety. Includes peer teaching opportunities. American Red Cross certification prepares student as a Water Safety Instructor. Spring.

Religious Studies

100s

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. Fall. (E) Study Area I

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. Study Area I [I]

200s

REL 250 Japanese Religion 3

Survey of Japanese religion from ancient times to the modern era, including Shinto, Confucianism, Buddhism, Taoism, and the new religions. Spring. Study Area I [I]

REL 256 Philosophy, Religion, and Spirituality 3

Philosophic examination of religious concepts, themes, and arguments about what is most deep and rich in human experience, as this is revealed by literature, film and other forms of expressive culture. Spring. Study Area I [I]

REL 257 Special Topics in Religion 3

Study of selected topics in religion. May be repeated under different topics for up to 6 credits. On demand. Study Area I

300s

REL 361 African-American Religion 3

Examines history, leadership, dynamics, theology, and cultural milieu of African-American religion with focus on religious experience and on spiritual response to social, economic and political oppression and exploitation. Spring. (E)

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

REL 492 Independent Study 1 TO 3

Prereq.: Permission of instructor. 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. On demand.

Robotics

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

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. Fall.

200s

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. Spring.

ROBO 240 Electro-Mechanical Converters and Drivers 3

Prereq.: CET 236. 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. Spring.

300s

ROBO 310 Data Acquisition & Processing 3

Prereq.: CET 323 and CET 363. 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. Fall.

ROBO 330 Fluid Power Systems 3

Prereq.: ET 354. Study of the design and fabrication of fluid-based power systems, including hydraulics and pneumatics. Two hours of lecture and two hours of lab per week. Fall.

ROBO 350 Applied Control Systems I 3

Prereq.: ROBO 310, MATH 221. 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. Spring.

ROBO 370 Mechanisms for Automation 3

Prereq.: ROBO 220, MATH 226, MFG 216, ET 252, and ET 357. Analysis and synthesis of mechanism. Introduction to mechanical transmission and control components. Two hours of lecture and two hours of lab per week. Spring.

ROBO 380 Mechatronics 3

Prereq.: ROBO 240, ROBO 330, ROBO 350, ROBO 370, and CET 453. Analysis, modeling and prototyping of embedded systems. Identification of commonly used digital controller; introduction to nonlinear effects and their compensation in mechatronic systems. Two hours of lecture and two hours of lab per week. Fall.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

ROBO 460 Applied Control Systems II 3

Prereq.: ROBO 350, MATH 355, and ETM 358. Programmable controllers, human-machine interface, distributed and supervisory control systems for manufacturing and processing systems. Process control of level, heat, flow, pressure, and PH. Two hours of lecture and two hours of lab per week. Fall.

ROBO 470 Robotics Systems Engineering and Analysis 3

Prereq.: ROBO 110. Principles of design and practical approaches to systems engineering. Life-cycle costing, scheduling, risk management, functional analysis, conceptual and detail design, test evaluation, project management. Three hours of lecture per week. fall.

ROBO 480 Industrial Robotics 3

Prereq.: ROBO 380, and ROBO 460. 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. Spring.

ROBO 496 Industrial Internship 3

Prereq.: senior standing and permission of instructor. 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 internship after junior year. Graded on a pass/fail basis. Summer.

ROBO 497 Capstone Senior Project 3

Prereq.: open only to Robotics and Mechatronics majors; senior standing, and permission of instructor. Research leading to the simulation and construction of a prototype robotics/mechatronics project that is presented orally and in writing. Projects must satisfy relevant requirements and show sound technical judgement. Spring.

School of Engineering and Technology

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

SET 490 Topics in International Field Studies (3)

Prereq.: Permission of academic advisor. 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. On Demand. [I]

500s

SET 590 Topics in International Field Studies (3)

Prereq.: Permission of academic advisor. 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. On Demand.

Science Education

1. Jump to level:
2. [400s](#)
3. [500s](#)

100s

SCI 111 Elementary Earth-Physical Sciences 3

Prereq.: Open only to students in elementary education programs. Inquiry-based introduction to topics in earth and physical sciences contained within the Connecticut State Science elementary standards. Study Area IV

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

SCI 412 Elementary Science Methods 2

Prereq.: BIO 211, SCI 111, admission to the Professional Program in Teacher Education. 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.

SCI 416 Educational Technology in Secondary Science 1

Prereq.: Admission to the Professional Program in Teacher Education. Taken concurrently with SCI 417. Examination and use of software applications, hardware, and the Internet in the context of integrating educational technology into science curriculum.

SCI 417 Teaching of Science in the Secondary School 3

Prereq.: EDTE 316, Admission to the Professional in Teacher Education. Taken concurrently with ESC 425 and SCI 416. Examination and application of curriculum, instruction, and assessment strategies in line with national and state standards/frameworks and CSDE certification requirements, including the BEST program and science teaching portfolio development. 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.

SCI 419 Student Teaching Seminar 1

Prereq.: SCI 417 (EDSC 435 taken concurrently). 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.

SCI 420 History and Nature of Science 3

Prereq.: Three courses in science or mathematics, or permission of department chair. Study of the history and nature of science. Examination of scientist's lives and discoveries through a cultural, political, and economic lens; and how science distinguishes itself from other disciplines' ways of knowing the world by examining contemporary assumptions, issues, and values of science. A safety plan based on state and national recommendations for implementation in the classroom will be required. [GR]

SCI 452 Independent Study in Science 1 TO 6

Prereq.: Approved plan of study by arrangement with the supervising instructor and approval of the science department chair. 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. On demand. [GR]

SCI 453 Environmental Interpretation Internship 3

Prereq.: Prior completion of two field trips to environmental education facilities approved by advisory committee and senior standing. Responsible experiences in an environmental education facility. Before commencing the internship, a plan of the internship must be approved by the Advisory Committee on Environmental Interpretation. [GR]

SCI 456 Teaching Science to Young Children 3

Prereq.: Permission of instructor. 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. On demand. [GR]

SCI 485 Studies in Science 1 TO 3

Prereq.: Permission of instructor. Selected studies in the sciences which are not offered presently in the curriculum of the science departments. Course may be repeated for different topics, but the student may not take this course for credit under the same topic more than once. On demand. [GR]

500s

SCI 500 Science, Technology, and Society 3

Prereq.: Three courses in the natural sciences. Discussion of the nature and values of science and technology and their implications for society. Irregular.

SCI 518 Teaching Science in the Out-of-Doors 3

Prereq.: Two science courses. Development of leadership skills and instructional techniques necessary for teaching science in the outdoor classroom. The methods and materials for developing and conducting an outdoor education program in science are discussed. Three hours a week; field studies are required. Fall. (O)

SCI 520 The Physical Sciences 3

Emphasis on conceptual understanding of the physical strands in the Connecticut Science Standards: Properties of Matter, Forces and Motion, and Energy Transfer and Transformations. Development of content activities, labs, and assessments for use in the classroom. Spring. (E)

SCI 530 The Earth/Space Sciences 3

Emphasis on conceptual understanding of the Earth/Space science strands in the Connecticut Science Standards: Energy in the Earth's Systems, The Changing Earth, and Earth in the Solar System. Development of content activities, labs, and assessments for use in the classroom. Spring. (O)

SCI 540 The Life Sciences 3

Emphasis on conceptual understanding of the life science strands in the Connecticut Science Standards: Heredity and Evolution, Structure and Function, and Matter and Energy in Ecosystems. Development of content activities, labs, and assessments for use in the classroom. Fall. (E)

SCI 555 Teaching of Science in the Elementary School 3

Prereq.: Permission of instructor or chair. Examination of science instruction and assessment strategies in line with the National Science Standards and the State of Connecticut Standards. Fall.

SCI 557 Science Instruction and Curriculum Development 3

Prereq.: In-service teacher or permission of instructor. Examination and application of elementary and secondary science curriculum, instruction, and assessment strategies in line with the State of Connecticut Standards. Irregular.

SCI 570 Teaching of Science in the Secondary School 3

Prereq.: In-service teacher or permission of instructor. Examination of middle-level and secondary science curriculum, instruction, and assessment strategies in line with State of Connecticut science standards. On demand.

SCI 580 Topics in Science Education 3

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. Irregular.

SCI 581 Independent Study 1 TO 3

Prereq.: Acceptance into the Master of Natural Science: Science Education Program. Work in laboratory, theory, or research to meet individual requirements in areas not covered by regular curriculum. May be taken more than once for a limit of 6 total credits. Requires approved plan of study by arrangement with the supervising instructor.

SCI 595 Special Projects in Science Education 3

Prereq.: Admission to the M.S. program in Natural Sciences: Science Education, completion of at least 15 credits in the planned program (or permission of instructor) and a 3.00 overall GPA. Study of individual and collaborative action research techniques. Requirements include the design and completion of a classroom/school action research project and the preparation and submission of a paper for publication. Spring. (E)

SCI 598 Research in Science Education 3

Prereq.: Admission to the M.S. program in Natural Sciences and 15 credits in planned program of Science Education; or permission of instructor. Focus on current global issues related to science education. Students examine current literature and conduct an informal research project on current issues. Requirements include preparation of a research paper. Spring. (O)

SCI 599 Thesis (Science Education) 3

Prereq.: 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. Preparation of the thesis under the supervision of the thesis advisor. On demand.

Social Sciences

SSCI 415 Social Studies Methods at the Secondary Level 4

Prereq.: Admission into the Professional Program of teacher education for History/Social Studies, EDTE 316, and either SPED 315 or SPED 501. Must be taken concurrently with EDSC 425 and either RDG 440 or RDG 506. 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. Field experience 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.

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.

SSCI 499 Individual Practicum 1

Prereq.: Permission of history department chair; admission to the professional program in teacher education. Individual practicum for students to complete field experience hours in secondary history and social studies classrooms. Irregular.

Social Work

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

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. Study Area III

200s

SW 225 Writing for the Social Work Profession 3

Prereq.: ENG 110. Coreq.: SW 226 or 227. 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. Skill Area I

SW 226 Social Welfare Policy and Services I 3

Prereq.: SOC 110 or ANTH 140, SOC 111 and PS 110 or 230. 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. Fall.

SW 227 Human Behavior and the Social Environment I 3

Prereq.: BIO 111 or BMS 111, SOC 233. 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. Spring.

300s

SW 360 Generalist Social Work Practice with Individuals and Families 3

Prereq.: SW 226, 227 and admission to Social Work major. 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. Fall.

SW 361 Generalist Social Work Practice with Small Groups 3

Prereq.: SW 226, 227 and admission to Social Work major. 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. Spring.

SW 362 Generalist Social Work Practice with Organizations and Communities 3

Prereq.: SW 360 and 361. 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. Recommend SW 450 and 451 or SW 452 and 453 be taken concurrently. Fall.

SW 368 Human Behavior and the Social Environment II 3

Prereq.: SW 360 (may be taken concurrently) and admission to the Social Work major. The ecosystems framework provides the framework to examine systems of all sizes; families, groups, organizations, and communities. Special attention given to the impact of human diversity, discrimination, and oppression in the context of these social systems. Fall.

SW 374 Introduction to Social Work Research 3

Prereq.: STAT 215. Research knowledge and skills essential for beginning social work practice. Theory of social research, hypothesis testing, research design, sampling, data collection techniques, and ethical issues germane to social workers. Quantitative and qualitative research and the problem-solving model, associated with a research proposal applicable to social work practice, will be developed. Fall.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

SW 426 Social Welfare Policy and Services II 3

Prereq.: SW 360, 361 and ECON 200. 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. Spring.

SW 433 Independent Studies in Social Work 3

Prereq.: Senior standing in the Social Work major and permission of the program director. Student must have a written study proposal approved by the program director prior to registering for this course. Readings and research in selected areas of social work. On demand. [GR]

SW 436 Health and Social Work 3

Prereq.: SW 226 and 227; or permission of the instructor. 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. Irregular. [GR]

SW 437 Child Welfare I 3

Prereq.: SW 226 and 227; or permission of the instructor. Examination of the role of the social worker in meeting the needs and protecting the rights of children. Irregular. [GR]

SW 438 Child Welfare II 3

Prereq.: SW 226 and 227; or permission of instructor. Examination of current social issues, such as war, poverty, and divorce, that impact the lives of children. Irregular. [GR]

SW 440 Social Work Practice with African Populations 3

Prereq.: SW 226 and SW 227; or permission of instructor. 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. Irregular. [I]

SW 441 Social Work Practice with Latinos 3

Prereq.: Permission of instructor. 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. Irregular. [I] [GR]

SW 442 The Social Consequences of Immigration 3

Prereq.: Permission of instructor. Explores the development of immigration policies, social service delivery structures, and practices that help social workers provide services to immigrants and refugees. Irregular. [I] [GR]

SW 450 Field Education Experience I 3

Prereq.: All other requirements for the major except SW 362 and 426 (may be taken concurrently with this course); completed field application and permission of field coordinator. 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. Must be taken concurrently with SW 451.

SW 451 Field Education Seminar I 3

Prereq.: All other requirements for the major except SW 362 and 426 (may be taken concurrently with this course); completed field application and permission of field coordinator. 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 and practice. Must be taken concurrently with SW 450.

SW 452 Field Education Experience II 3

Prereq.: SW 450 and 451 and permission of field coordinator. 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 which further prepare them for professional practice responsibilities. Must be taken concurrently with SW 453.

SW 453 Field Education Seminar II 3

Prereq.: SW 450 and 451 and permission of field coordinator. 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 and practice. Must be taken concurrently with SW 452.

SW 478 Current Topics in Social Work 3

Prereq.: Permission of instructor. 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. Irregular. [GR]

Sociology

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

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. Study Area III

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. Study Area III

200s

SOC 210 Sociological Inquiry 3

Prereq.: SOC 110. Exposes students to the sociological imagination, the link between theory and methods, how evidence is assembled to produce explanations of social phenomena, and the impact of sociological knowledge on public policy and culture. Sociology majors only.

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. Study Area III

SOC 232 City and Suburban Life 3

Prereq.: SOC 110. Examination of the development of preindustrial cities and how they differ from modern urban areas. Research on differences between suburban and urban life will be explored as well as contrasting lifestyles which coexist within urban areas. Post-World War II policies which helped to lead to many of today's problems will be identified and discussed. Irregular.

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. Study Area III

SOC 234 The Social Construction of Self and Society 3

Prereq.: SOC 110. 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. Irregular.

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. Cross listed with WGSS 240. No credit given to students with credit for WS 240 or WGSS 240. Irregular. Study Area III

300s

SOC 300 Sociological Theory 4

Prereq.: SOC 110 and 3 additional credits in Sociology. Sociology majors only. 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.

SOC 310 Research Methods 4

Prereq.: SOC 110 and 3 additional credits in Sociology. Sociology majors only. 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.

SOC 312 Class, Power, and Status 3

Prereq.: SOC 110, 212. Examines theories and forms of class inequality and social stratification. Assesses 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. Irregular.

SOC 322 Race and Ethnic Relations 3

Prereq.: SOC 110, 212. Examines the social forces and structures that privilege one racial/ethnic group over another and the cultural dynamics that perpetuate and make these arrangements possible. Particular attention will be given to the historical and social construction of race and ethnicity. Cross listed with AMS 322 and LTN 322. No credit given to students with credit for AMS 322 or LTN 322. Irregular.

SOC 333 Culture and Society 3

Prereq.: SOC 110 and 3 additional credits in Sociology. 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. On demand.

SOC 336 Deviance and Social Control 3

Prereq.: SOC 110. Investigates the production and enforcement of the boundaries between social forms that are deemed normal, acceptable, good, healthy, moral, and/or natural and those that are considered deviant, bad, sick, evil and/or unnatural. Approached the study of topics in deviance and control through an engagement with a number of theoretical and historical perspectives on deviance. Irregular.

SOC 340 Aging in American Society 3

Prereq.: SOC 110. Analysis of demographic changes, role shifts, age stereotyping, institutionalization, and their implications for the treatment and status of the elderly. Exploration of the processes of aging in the later years and the impact of the same on people's lives. Irregular.

SOC 350 Gay & Lesbian Communities 3

Prereq.: SOC 110. 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. Irregular.

SOC 399 Sociology Book Club 1

Prereq.: SOC 110 or SOC 212 or permission of instructor. Designed like a book club, the purpose of the course is to enjoy and enhance the experience of reading. Students will choose the books.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

SOC 400 Topics in Social Theory 3

Prereq.: SOC 210 and 300. Selected topics in social theory. May be repeated with different topics for a maximum of 6 credits. On demand.

SOC 410 Quantitative Analysis 4

Prereq.: SOC 310, STAT 215. 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. On demand.

SOC 411 Oral History for the Social Sciences 4

Prereq.: SOC 310 or HIST 301 or ANTH 374 or permission of instructor. 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. Irregular. [GR]

SOC 412 Qualitative Analysis 4

Prereq.: SOC 310. 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.

SOC 413 Community Research 4

Prereq.: SOC 310. Coreq.: SOC 477. 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. Irregular.

SOC 422 Sociology of Immigration 3

Prereq.: SOC 110. 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 422. No credit may be received by students who have received credit for LTN 422. Irregular.

SOC 424 Genocide and the Modern World 3

Prereq.: SOC 110 and 3 additional credits in Sociology. 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. Irregular. [I]

SOC 425 Information, Images, and Inequality 3

Prereq.: SOC 110 and 3 additional credits in Sociology. Examination of the new forms of property, value, social control, identity formation, social relations and class inequities that have emerged with the information age and the electronic marketplace. Presents a political economy of virtual reality. Irregular.

SOC 426 Sociology of Revolution 3

Prereq.: SOC 110 and three additional credits in Sociology Examines major theoretical perspectives used by sociologists to interpret and explain revolutions. Emphasis on Bourgeois, socialist, nationalist, populist, and post-modern revolutions. [I]

SOC 427 American Poverty and Social Welfare 3

Prereq.: SOC 110. Overview of how poverty is measured and understood, and how it has changed over time. Explores the emergence and development of the American welfare state. Irregular.

SOC 428 Globalization and its Discontents 3

Prereq.: SOC 110. 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. Irregular. [I]

SOC 429 Animals and Society 3

Prereq.: SOC 110. Using Symbolic Interaction 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. Irregular.

SOC 430 Schools, Education and Society 3

Prereq.: SOC 110 and 3 additional credits in sociology. 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. Irregular.

SOC 433 Independent Studies in Sociology 1 TO 3

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 6 credits. On demand. [GR]

SOC 440 Death and Dying: Sociological Implications 3

Prereq.: SOC 110. 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. Irregular.

SOC 444 Sport and Play in Society 3

Prereq.: SOC 110 and 3 additional credits in Sociology. 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. Irregular.

SOC 445 Social Construction of Sexuality 3

Prereq.: SOC 110 and 3 additional credits in Sociology. 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. Irregular.

SOC 452 Organizations, Occupations, and Work 3

Prereq.: SOC 110 and 3 additional credits in Sociology. 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. Irregular. [GR]

SOC 455 Men, Masculinity, & Manhood in American Society 3

Prereq.: SOC 110. 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. Irregular.

SOC 460 Social Movements and Collective Action 3

Prereq.: SOC 110 and 3 additional credits in Sociology. 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 movements, the peace movement, and the environmental movement. Irregular.

SOC 466 Gas, Food, and Lodging 3

Prereq.: SOC 110 and 3 credits in Sociology. Few technological changes have reshaped our society as rapidly and completely as the automobile has during the last century. This course examines the social influence of the automobile on identity, geography, the environment, community culture, work, and the family. Irregular.

SOC 477 Community Research Topics 4

Prereq.: SOC 310. Coreq.: SOC 413. In-depth 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. Irregular.

SOC 478 Current Topics in Sociology 3

Prereq.: SOC 110. Analysis and evaluation of special topics in the field of sociology. Not a seminar. May be repeated with different topics. Irregular.

SOC 480 The Polish-American Immigrant and Ethnic Communities 3

Prereq.: SOC 110 or SOC 212 or HIST 301 or permission of instructor. Explores the processes of migration and resettlement of Polish immigrants and their descendants in America with a focus on economic, political and social factors. Cross-listed with HIST 482; no credit given to students with credit for HIST 482. Irregular. [GR]

SOC 482 The Social Experiences of HIV/AIDS 3

Prereq.: SOC 110 and 3 additional credits in Sociology. Examines global and U.S. experiences of the HIV/AIDS epidemic from a sociological perspective. Explores the social forces that determine the social construction, distribution and experience of the epidemic. Considers the impact on, and response to the epidemic by, communities and cultures worldwide. Irregular.

SOC 484 Sociology of Music 3

Prereq.: SOC 110. 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. Irregular.

SOC 485 Ads, Fads, and Consumer Culture 3

Prereq.: SOC 110. 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. Irregular.

SOC 490 Community Intern Experience and Seminar 4

Prereq.: Sociology major with 2.70 GPA or higher and at least 15 credits in Sociology. 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. Spring.

SOC 491 Intern Seminar and Research 3

Prereq.: Sociology major with 2.70 GPA or higher and two letters of recommendation addressing academic ability and maturity. Taken concurrently with SOC 490. Assigned readings and research projects related to work assignment of SOC 490. Spring.

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. Irregular. [I]

SOC 495 Passages & Prospects 1

Prereq.: 27 credits in Sociology or permission of department chair. Capstone seminar examines sociologists in American society and influence of the discipline on social policy. Student portfolio review explores academic achievements, sociological understanding and career alternatives.

SOC 499 Senior Seminar in Sociology 4

Prereq.: SOC 300; either SOC 410, 411, 412, or 413; and 16 additional credits in Sociology. 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.

Spanish

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

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. Skill Area III

SPAN 112 Elementary Spanish II 3

Prereq.: SPAN 111 or equivalent (normally, two years high school study). 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. Skill Area III

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. Only three credits may be applied toward the International requirement. Skill Area III

SPAN 123 Basic Spanish Review 3

Prereq.: Three years of Spanish in high school or equivalent preparation. 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. Skill Area III []

SPAN 125 Intermediate Spanish I 3

Prereq.: One year college Spanish or equivalent. 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. Skill Area I []

SPAN 126 Intermediate Spanish II 3

Prereq.: SPAN 125 or equivalent. 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. Skill Area I []

SPAN 128 Intensive Intermediate Spanish I 6

Prereq.: One year of college Spanish or equivalent. Equivalent to SPAN 125-126. Development of speaking, reading and writing skills, and awareness of Hispanic cultures. Review of selected grammar. No credit given to students with more advanced Spanish coursework. Six classroom hours per week. Open only to non-native speakers of Spanish. Fall, Spring, Summer. Skill Area I []

SPAN 190 Language for Heritage Speakers of Spanish I 3

Prereq.: Permission of department chair. 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. Fall. Skill Area I []

SPAN 191 Language for Heritage Speakers of Spanish II 3

Prereq.: Permission of instructor. 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. Spring. Skill Area I []

200s

SPAN 225 Intermediate Spanish III 3

Prereq.: SPAN 125 or SPAN 126 or permission of instructor. 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. Fall. Skill Area I []

SPAN 226 Intermediate Spanish IV 3

Prereq.: SPAN 125 or SPAN 126 or permission of instructor. 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. Spring. Skill Area I []

SPAN 261 Business Spanish 3

Prereq.: SPAN 190 or 225, or permission of instructor. Development of skills geared to specific situations which would be encountered in business offices, foreign firms, travel agencies, and the like. Fall. Skill Area I []

SPAN 290 Hispanic Culture for Heritage Speakers of Spanish I 3

Prereq.: SPAN 190 or permission of instructor. 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. Fall. Skill Area I [I]

SPAN 291 Hispanic Culture for Heritage Speakers of Spanish II 3

Prereq.: SPAN 191 or permission of instructor. 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. Spring. Skill Area I [I]

300s

SPAN 300 Literary Analysis 3

Prereq.: SPAN 225 or SPAN 226 or SPAN 290 or SPAN 291 (any may be taken concurrently), or permission of instructor. 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. Fall. [I]

SPAN 304 Introduction to Spanish Literature I 3

Prereq.: SPAN 225 or SPAN 226 or SPAN 290 or SPAN 291 or SPAN 300 (any may be taken concurrently), or permission of instructor. Taught in Spanish. Introduction to great literary works of Spain from the Middle Ages to 1700. Fall. Study Area I [I] [L]

SPAN 305 Introduction to Spanish Literature II 3

Prereq.: SPAN 225 or SPAN 226 or SPAN 290 or SPAN 291 or SPAN 300 (any may be taken concurrently) or permission of instructor. Taught in Spanish. Introduction to the major works in Spanish literature since 1700. Spring. Study Area I [I] [L]

SPAN 315 Spanish Civilization 3

Prereq.: SPAN 225 or SPAN 226 or SPAN 290 or SPAN 291 (any may be taken concurrently), or permission of instructor. Taught in Spanish. Cultural evolution of Spain with emphasis on modern period. Fall. Study Area II [I]

SPAN 316 Latin American Civilization 3

Prereq.: SPAN 225 or 226 or 290 or 291 (any may be taken concurrently), or permission of instructor. Taught in Spanish. Cultural evolution of Latin America with emphasis on modern period. Cross listed with LAS 316. No credit given to students with credit for LAS 316. Spring. Study Area II [I]

SPAN 335 Advanced Spanish for Oral Expression 3

Prereq.: SPAN 225 or 291. Taught in Spanish. Development of oral proficiency through discussion of readings and films. Fall. [I]

SPAN 336 Advanced Spanish Composition 3

Prereq.: SPAN 226 or 291. Taught in Spanish. Advanced practice in Spanish based on readings, translations, and frequent compositions. Spring. [I]

SPAN 375 Introduction to Spanish American Literature I 3

Prereq.: SPAN 225 or SPAN 226 or SPAN 290 or SPAN 291 or SPAN 300 (any may be taken concurrently) or permission of instructor. 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. Cross listed with LAS 375. No credit given to students with credit for LAS 375. Fall. Study Area I [I] [L]

SPAN 376 Spanish American Literature II 3

Prereq.: SPAN 300 or permission of instructor. Taught in Spanish. Readings and interpretation of great works of Spanish American literature from end of Romanticism to present. Cross listed with LAS 376. No credit given to students with credit for LAS 376. Spring. Study Area I [I] [L]

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"**SPAN 441 Cross-Cultural Communication 3**

Prereq.: Permission of instructor. 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. Fall. (E) [I] [GR]

SPAN 451 Introduction to Spanish Linguistics 3

Prereq.: Permission of instructor. 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. On demand.

500s

SPAN 515 Colonial Spanish-American Literature 3

Prereq.: Permission of instructor. Taught in Spanish. Study of major authors and literary works of the Colonial period in their cultural context. Irregular.

SPAN 520 Modernismo 3

Prereq.: Permission of instructor. Taught in Spanish. Study of the most significant authors of the Modernista period. Irregular.

SPAN 525 Contemporary Spanish-American Poetry 3

Prereq.: Permission of instructor. Taught in Spanish. Study of major Spanish-American poets and poetic themes from the period following Modernismo to the present. Spring. (E)

SPAN 526 The Spanish-American Short Story 3

Prereq.: Permission of instructor. Survey of representative authors and selected works with emphasis on the twentieth century. Course to be taught in Spanish. Irregular.

SPAN 530 Contemporary Spanish Novel 3

Prereq.: Permission of instructor. Taught in Spanish. Study of significant novels from the 1940s to the present. Spring.

SPAN 534 Women Writers of the Spanish-Speaking World 3

Prereq.: Permission of instructor. Taught in Spanish. Discussion of representative works will center around cultural and gender issues. On demand.

SPAN 535 Contemporary Spanish-American Novel 3

Prereq.: Permission of instructor. Taught in Spanish. Study of representative Spanish-American novels from the 1950s to the present. Spring.

SPAN 545 The Spanish-American Essay 3

Prereq.: Permission of instructor. Taught in Spanish. Analysis of major works by authors such as Sarmiento, Marti, Rodo, Reyes, Paz and others. Irregular.

SPAN 551 Drama of the Golden Age 3

Prereq.: Permission of instructor. 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. Spring. (O)

SPAN 553 19th-Century Spanish Literature 3

Prereq.: Permission of instructor. Taught in Spanish. Study of Spanish romanticism and realism with a consideration of their historical background. Irregular.

SPAN 560 Structure of Spanish Language 3

Prereq.: Permission of instructor. Taught in Spanish. Study of syntactical and morphological aspects of the Spanish language. Spring. (E)

SPAN 561 Topics in Hispanic Literature 3

Prereq.: Permission of instructor. Detailed study of a literary figure, movement, or theme. Subject will vary from semester to semester. Irregular.

SPAN 571 Generation of '98 3

Prereq.: Permission of instructor. 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. Fall. (O)

SPAN 572 20th-Century Spanish Literature 3

Prereq.: Permission of instructor. Taught in Spanish. Representative authors and literary movements of the period following the Generation of '98. Spring. (E)

SPAN 576 Cervantes 3

Prereq.: Permission of instructor. Taught in Spanish. Works of Cervantes with particular emphasis on Don Quixote. On demand.

SPAN 588 Topics in the Contemporary Spanish-Speaking World 3

Prereq.: Permission of instructor. Taught in Spanish. Contemporary society in the Spanish-speaking world, its institutions, traditions, and values.

SPAN 599 Thesis 3

Prereq.: Completion of 18 credits of approved graduate study program, approval of advisor, and a 3.00 overall GPA. Preparation of thesis under the supervision of thesis advisor. On demand.

Special Education

1. Jump to level:
2. [400s](#)
3. [500s](#)

300s

SPED 315 Introduction to Educating Learners with Exceptionalities 3

Prereq.: Admission to the Professional Program in Teacher Education. 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). 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.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

SPED 430 Characteristics and Education of Individuals with Behavioral/Emotional Disorders 3

Prereq.: SPED 315 or permission of instructor. Taken concurrently with SPED 431. Overview of the education of behavioral/emotional disorders, autism and attention deficit hyperactivity disorders. Topics include characteristics, identification, etiology, theoretical, and educational approaches. Involves field-experience component. [GR]

SPED 431 Behavior Management and Social Skills Development 3

Prereq.: SPED 315 or permission of instructor. Taken concurrently with SPED 430. Examination of methodologies for evaluation, assessment, management of student behavior, and program planning/instruction utilized in special education settings. Involves field-experience component. 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. [GR]

SPED 433 Educational Assessment for Exceptional Learners 3

Prereq.: Admission to the Professional Program and SPED 432. Examines formal and informal assessment materials and techniques used in evaluating adaptive skills, processing abilities, and academic achievement in individuals with learning and/or behavior problems. Topics include procedures for test selection/administration, methods for scoring and interpreting test results. Involves field-experience component. 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. [GR]

SPED 434 Characteristics and Education of Individuals with Developmental Disabilities 3

Prereq.: Admission to the Professional Program. Taken concurrently with SPED 435. Overview of mental retardation, developmental disabilities, autism and physical disabilities. Topics include characteristics, identification, etiology, theoretical, and educational approaches. Involves field-experience component. 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. [GR]

SPED 435 Curriculum Adaptations and Teaching Strategies for Learners with Exceptionalities 3

Prereq.: SPED 433. Taken concurrently with SPED 434. Techniques for assessing social studies, science, and pre-vocational skills, as well as for selecting, developing, and adapting curricula and methods for students with exceptionalities. Involves field-experience component. 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. [GR]

SPED 436 Language Arts for Learners with Exceptionalities 3

Prereq.: SPED 432, 433. Taken concurrently with SPED 438. Techniques for planning and delivering instruction in the areas of reading, writing, and oral language specific to students with special needs. [GR]

SPED 437 Integrative Seminar for Beginning Special Educators 3

Prereq.: SPED 436. Taken concurrently with SPED 439. Examines collaborative strategies for assessment and program planning. Communication skills, professional ethics and codes of conduct will be examined. [GR]

500s

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. Meets State of Connecticut requirement for teacher certification (10 hours of off-campus field experience 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.

SPED 502 Principles of Learning for Special Education 3

Prereq.: Admission to Graduate School. 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 learner's developmental levels. Field experience required. For teacher certification only; will not be counted towards M.S. in Special Education. Summer/Winter.

SPED 506 Foundations of Language for the Exceptional Child 3

Prereq.: Admission to any M.S. education program. 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.

SPED 510 Inclusive Education 3

Prereq.: Certification in any area of education or permission of instructor. 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.

SPED 511 Behavioral/Emotional Disorders 3

Prereq.: SPED 315 or 501, admission to the School of Graduate Studies and admission to the Special Education program; or permission of the chair. Examination of behavioral/emotional disorders, autism, attention deficit hyperactivity disorders, and schizophrenia, with emphasis on current issues, classroom practices, and contemporary research (10 hours of off-campus field experience required).

SPED 512 Learning Disabilities 3

Prereq.: SPED 315 or SPED 501, admission to the School of Graduate Studies and admission to the Special Education program; or permission of the chair. Characteristics and identification of students with learning disabilities. Impact on reading, writing, mathematics, oral language, cognition, and other performance dimensions. Implications for instruction (10 hours of off-campus field experience required).

SPED 513 Developmental Disabilities 3

Prereq.: SPED 315 or SPED 501, admission to the School of Graduate Studies and admission to the Special Education program; or permission of the chair. Examination of developmental disabilities including students with mental retardation, 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).

SPED 514 Cognitive Behavior Management and Social Skill Strategies 3

Prereq.: SPED 315 or SPED 501, admission to the graduate program in Special Education; or permission of the department chair. Examination of methodologies for evaluation, management of student behavior, program planning, cognitive restructuring, and functional behavior analysis utilized in special education settings (15 hours of off-campus field experience required).

SPED 515 Assessment in Special Education 3

Prereq.: SPED 511, 512, 513. Review of methods and materials used in assessing and evaluating the performance of students who may be eligible for special education. Topics include psychometric theory, selecting/administering tests, scoring, and interpreting and communicating test results/findings. 10 hours of off-campus field experience required. May be taken concurrently with SPED 516.

SPED 516 Instructional Programming for Students with Exceptionalities 3

Prereq.: SPED 502 or equivalent, 511, 512, 513. 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. May be taken concurrently with SPED 515.

SPED 517 Instructional Methods for Students with Special Needs - Elementary 3

Prereq.: RDG 503 or equivalent, SPED 515, 516. Methods associated with planning and implementing instruction, with emphasis on the areas of mathematics, reading, writing, and oral language in the elementary grades (10 hours of off-campus field experience required).

SPED 518 Instructional Methods for Students with Special Needs - Secondary 3

Prereq.: RDG 503 or equivalent, SPED 515, 516. Methods associated with planning and implementing instruction in grades 7 through 12. Issues related to academic content, advocacy/self-determination, vocational transition, and functional living are also discussed (10 hours of off-campus field experience required).

SPED 520 Student Teaching Seminar 1

Coreq.: SPED 521. Examines current issues in special education which affect teaching and learning including multiculturalism and diversity, leadership, collaboration, professional ethics, and codes of conduct.

SPED 521 Student Teaching in Special Education - Elementary 3

Prereq.: SPED 517 and permission of the Director of Field Experiences. Eight week supervised student teaching in elementary special education classrooms, agencies, or institutions. Attendance at on-campus seminars is required.

SPED 522 Student Teaching in Special Education - Secondary 3

Prereq.: SPED 518 and permission of the Director of Field Experiences. Eight week supervised student teaching in secondary special education classrooms, agencies, or institutions. Attendance at on-campus seminars is required.

SPED 523 Practicum in Special Education - Elementary 3

Prereq.: SPED 517. Supervised practicum in elementary special education classrooms, agencies, or institutions. Summer.

SPED 524 Practicum in Special Education - Secondary 3

Prereq.: SPED 518 and permission of department chair. Supervised practicum in secondary special education classrooms, agencies, or institutions. Summer.

SPED 532 Contemporary Issues in Special Education 1-3

Prereq.: Certification in education. Overview of current theory and practices in various aspects of special education, including topics in etiology, identification, classification, assessment, and education.

SPED 534 Advanced Topics in Developmental Disabilities 1-3

Prereq.: SPED 513 or permission of Special Education advisor or permission of department chair. Overview of current theory and practice in various aspects of developmental disabilities including advanced topics in etiology, identification, classification, assessment and programming. Irregular.

SPED 536 Autism Spectrum Disorder 3

Prereq.: Admission to any M.S. education program. 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. Irregular.

SPED 541 Person-Centered Planning 3

Prereq.: Admission to Master's Degree Program. 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. Irregular.

SPED 542 Designing Classroom Environments for Creative Learning 3

Prereq.: Admission to graduate school or permission of department chair. 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. Summer.

SPED 560 Positive Classroom Management for Students Receiving Special Education Services 3

Prereq.: Admission to any M.S. education program. Basic skill and application of reality-oriented verbal strategies and Life Space Crisis Intervention strategies and general classroom management for educators who address the needs of special education students experiencing emotional and/or physical crises. This course is for teachers certified in education. Irregular.

SPED 566 Legal and Administrative Issues in Special Education 3

Prereq.: Acceptance to M.S. program in Special Education or permission of department chair. 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.

SPED 578 The Juvenile Offender with Special Education Needs 3

Prereq.: Admission to any M.S. education program. Study of the educational characteristics of the juvenile offender as a special education student, including a review of current educational interventions. This course is for teachers certified in education. Irregular.

SPED 580 Collaborative Process in Special Education 3

Prereq.: Teacher certification or permission of department chair. Examination of the interactions between the special educator and the regular classroom teacher, including programming, management, and monitoring, for the purpose of providing supports and services for students with special education needs.

SPED 581 Assistive Technology in Special Education 3

Prereq.: Admitted to Master's Degree Program in Special Education. 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. Irregular.

SPED 591 Independent Study in Special Education 3

Directed independent studies in special education. May be repeated under different topics for a total of 6 credits.

SPED 595 Topics in Special Education 1 TO 3

Prereq.: Admission to any M.S. education program. 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. Irregular.

SPED 596 Designing Action Research in Special Education (Plan E) 3

Prereq.: Admission to the M.S. in Special Education, SPED 598, and permission of department chair or instructor. Introduction to action research in special education. Students will identify a topic, conduct a literature review, formulate an appropriate research design plan, and receive CCSU Human Studies Committee approval in partial completion of the Master's Degree Capstone (Plan E) project. Fall.

SPED 597 Implementing and Documenting Action Research in Special Education 3

Prereq.: SPED 596. Students implement and document action research design plan formulated in SPED 596. Final report documents results, discussion, and limitations of study. Required presentation supplements the written report. Spring.

SPED 598 Research in Special Education 3

Prereq.: Admission to the Special Education master's program; must be taken prior to enrolling in SPED 596. Examines quantitative, qualitative, and single-case design research methods used in special education for assessing the impact of instructional techniques, treatment programs,

related services, and behavioral interventions. Students will use research quality indicators to evaluate research methods, approaches, and publications in the special education literature base. Students will use statistical applications to analyze data and conduct analyses. Spring, Summer.

Statistics

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

STAT 104 Elementary Statistics 3

Prereq.: MATH 101 (C- or higher) or placement exam. 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, 200, 215, 314 or 315. CSUS Common Course. Skill Area II

200s

STAT 200 Business Statistics 3

Prereq.: MATH 101 (C- or higher) or placement exam. 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, 108, 215, 314, or 315. Skill Area II

STAT 201 Business Statistics II 3

Prereq.: STAT 200 or equivalent (C- or higher). 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, 416 or 453. Skill Area II.

STAT 215 Statistics for Behavioral Sciences I 3

Prereq.: MATH 101 (C- or higher) or placement exam. 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, 108, 200, 314 or 315. Skill Area II

STAT 216 Statistics for Behavioral Sciences II 3

Prereq.: STAT 215 or permission of instructor. 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, 416 or 453. Spring. Skill Area II

300s

STAT 314 Introductory Statistics for Secondary Teachers 3

Prereq.: MATH 218 and 221. 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 201, 216 or 453. Graphing calculator required. Fall.

STAT 315 Mathematical Statistics I 3

Prereq.: MATH 221; and MATH 218 or permission of department chair. Theory and applications in statistical analysis. Combinations, permutations, probability, distributions of discrete and continuous random variables, expectation, and common distributions (including normal). Fall.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

STAT 416 Mathematical Statistics II 3

Prereq.: STAT 315. 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. [GR]

STAT 425 Loss and Frequency Distributions and Credibility Theory 3

Prereq.: STAT 416 (may be taken concurrently). Topics chosen from credibility theory, loss distributions, simulation, and time series. Spring. [GR]

STAT 453 Applied Statistical Inference 3

Prereq.: Graduate standing with at least one course in statistics or STAT 315 or permission of instructor. 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 216. Spring, Summer. [GR]

STAT 455 Experimental Design 3

Prereq.: STAT 201 or 216 or 416 or permission of instructor. Introduction to experimental designs in statistics. Topics include completely randomized blocks, Latin square, and factorial experiments. Fall. (O) [GR]

STAT 456 Fundamentals of SAS 3

Prereq.: CS 151 and STAT 201 or 216 or equivalent. Introduction to statistical software. Topics may include creation and manipulation of SAS data sets; and SAS 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. This course is cross listed with MKT 444. No credit given to students with credit for MKT 444. Spring. (E) [GR]

STAT 465 Nonparametric Statistics 3

Prereq.: STAT 201 or 216 or 416 or permission of instructor. 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. Fall. (E) [GR]

STAT 476 Topics in Statistics 3

Prereq.: Permission of instructor. 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. Spring. (O) [GR]

500s

STAT 520 Multivariate Analysis for Data Mining 4

Prereq.: Two semesters of applied statistics (such as STAT 104/453, STAT 200/201, or STAT 215/216), or two semesters of statistics approved by advisor, or permission of department chair. Concept-based introduction to multivariate analysis, useful for data mining and predictive modeling, with emphasis given to interpreting output and checking model assumptions using one of the standard statistical packages. Topics may include: multivariate normal distribution, simultaneous inferences, one- and two-way MANOVA, multivariate multiple regression and ANCOVA, correlation, principle component and factor analysis, discriminant analysis, cluster analysis and multidimensional scaling, path analysis, structural equation modeling, and longitudinal data analysis. Fall.

STAT 521 Introduction to Data Mining 4

Prereq.: STAT 104 or STAT 200 or STAT 215 or STAT 315 or permission of department chair. Data mining models and methodologies. Topics may include data preparation, data cleaning, exploratory data analysis, statistical estimation and prediction, regression modeling, multiple regression, model building, classification and regression trees and report writing.

STAT 522 Clustering and Affinity Analysis 4

Prereq.: STAT 521 or permission of department chair. Investigation and application of methods and models used for clustering and affinity analysis. Topics may include dimension reduction methods, k-means clustering, hierarchical clustering, Kohonen networks clustering, BIRCH clustering, anomaly detection, market basket analysis, and association rules using the a priori and generalized rule induction algorithms. Spring.

STAT 523 Predictive Analytics 4

Prereq.: STAT 521 or permission of department chair. Investigation and application of methods and models used for predictive modeling and predictive analytics. Topics may include neural networks, logistic regression, k-nearest neighbor classification, the C4.5 algorithms, CHAID and QUEST decision trees, feature selection, boosting, naive Bayes classification and Bayesian networks, time series, and model evaluation techniques. Fall.

STAT 525 Web Mining 3

Prereq.: STAT 521 or permission of department chair. 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. Spring.

STAT 526 Data Mining for Genomics and Proteomics 4

Prereq.: STAT 521 or permission of the instructor. 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. Fall.

STAT 527 Text Mining 4

Prereq.: STAT 521 or permission of the instructor. 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. Spring.

STAT 529 Current Issues in Data Mining 3

Prereq.: Admission to the M.S. Data Mining program or permission of department chair. 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. Irregular.

STAT 534 Applied Categorical Data Analysis 3

Prereq.: STAT 201 or STAT 216, or equivalent, or permission of department chair. 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. Fall.

STAT 551 Applied Stochastic Processes 3

Prereq.: STAT 315 and MATH 228 or permission of instructor. An introduction to stochastic processes. Topics include Markov, Poisson, birth and death, renewal, and stationary processes. Statistical inferences of Markov processes are discussed. Fall. (O)

STAT 567 Linear Models and Time Series 3

Prereq.: STAT 416. Introduction to the methods of least squares. Topics include general linear models, least squares estimators, inference, hypothesis testing, and forecasting with ARIMA models. Spring.

STAT 570 Applied Multivariate Analysis 3

Prereq.: MATH 228; STAT 416 or, with permission of instructor, STAT 201, 216, or 453. Introduction to analysis of multivariate data with examples from economics, education, psychology, and health care. Topics include multivariate normal distribution, Hotelling's T^2 , multivariate regression, analysis of variance, discriminant analysis, factor analysis and cluster analysis. Computer packages assist in the design and interpretation of multivariate data. Spring. (O)

STAT 575 Mathematical Statistics III 3

Prereq.: STAT 416 or equivalent. 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. Fall. (E)

STAT 576 Advanced Topics in Statistics 3

Prereq.: Permission of instructor. 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. Irregular.

STAT 599 Thesis 3

Prereq.: Permission of advisor, and a 3.00 overall GPA. Preparation of thesis under guidance of thesis advisor for students completing master's requirements under M.S. Plan A in Data Mining. On demand.

Sustainability

Note: Enrollment in 300- and 400-level accounting courses requires admission to the School of Business or permission of the department chair. ---Sample example of "Note" text

200s

SUST 210 Principles of Sustainability 3

Description here. This is just a course-listing template; actual course does not exist.

500s

SUST 500 Social, Political, and Ethical Dimensions of Global Sustainability 3

Prereq.: Admission to graduate school or permission of instructor. 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. Fall.

SUST 501 Contemporary Challenges in Environmental Sustainability 3

Prereq.: Admission to graduate school or permission of instructor. 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. Fall.

SUST 502 Science for Sustainability 3

Prereq.: Admission to the graduate school or permission of instructor. 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.

Technology & Engineering Education

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

TE 110 Technological Systems 3

A holistic perspective of technological systems and their impacts on social institutions. Focus on human endeavors in the development, use and control of technology. Fall. Study Area II

TE 115 Electronic Portfolio Assessment 3

Construction of electronic portfolios to organize, display, and provide reflection of student's coursework and projects. Topics include portfolio design and construction methods, artifact selection, reflective practices, and implementation skills. Fall.

TE 155 Integrating Engineering Concepts for K-8 Students 3

Prereq.: TE 115, may be taken concurrently. Fingerprinting required. Development, implementation, and assessment of age-appropriate engineering-design activities that integrate studies of technology, science, social studies, language arts, and mathematics. Field experience required. Spring.

200s

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. Three hours lecture and two hours laboratory, course meets five hours per week. Fall.

TE 217 Laboratory Practices 3

Prereq.: TE 115. Laboratory practices designed to promote Science, Technology, Engineering, and Math (STEM) activities and projects. 3 hr Lecture/2 hr Lab, course meets 5 hours per week. Fall.

TE 221 Innovation & Invention 3

Prereq.: MFG 121. Introduction to teaching engineering design (K-12). 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. Spring.

TE 245 Building Design & Construction 3

Prereq.: MFG 121. 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 hours lecture and two hours laboratory, course meets five hours per week. Fall.

TE 299 Technology & Engineering Education Practicum 3

Prereq.: TE 115 and TE 155; Coreq.: EDTE 314. Fingerprinting required. 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. Fall.

300s

TE 310 Communication Systems 3

Prereq.: TE 115. 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. Three hours lecture and two hours laboratory, course meets five hours per week.

TE 330 Transportation Design 3

Prereq.: TE 215 and TE 221. 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.

TE 399 Teaching Technology & Engineering (K-12) Teaching 3

Prereq.: TE 299 and coreq.: EDTE 314. Develops background for Technology Education student teaching and professionalism. Emphasis on the

development, presentation, and evaluation of student-developed lessons and methods of student assessment, applied to Technology Education laboratories. Field experience required. Fall.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

TE 400 Professional Practices and Responsibilities in Technology and Engineering Education (K-12) 3

Prereq.: TE 399, may be taken concurrently; admission into the Professional Program. Coreq.: EDSC 425. 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. Field hours 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. Fall.

TE 417 Robot Design & Construction 3

Prereq.: TE 215 and TE 221. 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 hours lecture and two hours laboratory, course meets five hours per week.

TE 488 Independent Study in Technology Education 1 TO 3

Prereq.: Senior or graduate standing and permission of instructor. 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. On demand. [GR]

TE 498 Technology & Engineering Education Senior Design Project 3

Prereq.: TE 400, may be taken concurrently, and senior standing. 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. Three hours lecture and two hours laboratory, course meets five hours per week.

500s

TE 501 Improving Curriculum and Instruction in Technology Education 3

Examination of professional practices in teaching technology. Emphasis on current methods in curriculum development, teaching or concept acquisition, and preparing to assess student learning.

TE 503 Bioengineering Concepts and Applications 3

Course will focus on the concepts underlying a wide range of, and the ethical issues of, biotechnologies (DNA, genetics, gene therapy, stem cell research, etc.); and presenting bioengineering concepts to grades 6-12 students. Minimum of 10 hours of field experience in middle or high school setting required.

TE 506 STEM in Technology and Engineering Education 3

Study of techniques for integrating science, technology, engineering and math (STEM) content in an engaged learning technology education curriculum. Irregular.

TE 510 Computer Applications for Technology and Engineering Education 3

Use of computer applications as vehicle to deliver units of study and laboratory activities in technology and engineering education. Emphasis on science, technology, engineering and math (STEM) course content. Irregular.

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. Irregular.

TE 520 Readings in Technology 3

Study of the nature of technology from a variety of perspectives. Students will explore, in-depth, the issues relative to the creation, use, and control of technology and its impacts on individuals and society.

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. Irregular.

TE 560 Technological Developments 3

Study of major technological developments in communication, transportation, and production from a historical perspective. Emphasis on how humans moved from the stone age and the major developments along the way. Irregular.

TE 588 Internship in Technology and Engineering Education 3

Prereq.: Permission of department chair. Guided practice or professional internship relevant to the student's plan of study. Includes work on a

project under supervision of a faculty advisor. Projects may be sponsored by a host organization outside of the university. May be repeated with differing topics for a maximum of 6 credits. On demand.

TE 590 Technology Education Facility Planning 3

Emphasis will be given to a systems approach to facility and environmental planning for industrial education, including philosophical commitment, effective laboratory design and plant layout, equipment, selection, and requisition procedure. Irregular.

TE 595 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. Irregular.

TE 596 Special Projects in Technology Education 3

Prereq.: TE 598, 21 credits in planned program and a 3.00 overall GPA. Study of an advanced topic in technology education approved by advisor and a special project co-advisor. Requirements include a paper on the topic. At the option of the advisors, an oral presentation may also be required. Irregular.

TE 598 Research in Technology Education 3

Familiarization with techniques and resources associated with research in the student's specialization. Opportunity for practical application will be provided. (To be taken during the first 12 credits of the graduate program.) Spring.

TE 599 Thesis 3

Prereq.: Completion of 21 credits of graduate work; TE 598 or ED 598 or permission of instructor. Preparation of thesis under guidance of thesis advisor and additional faculty readers for students completing master's requirements under M.S. Plan A. Oral presentation required. Irregular.

Technology Management

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)
5. [500s](#)

100s

TM 190 Introduction to Quality Assurance 3

Overview of the tools and techniques required in contemporary quality systems. Principles of world-class quality assurance, team building, change management, problem solving, and continuous improvement will be presented. Fall.

300s

TM 310 Industrial Safety 3

Theory of industrial safety with emphasis upon fundamental concepts in the industrial environment. Emphasis will be placed on the psychological, sociological, and physiological aspects of industrial safety.

TM 359 Plant Layout 3

Covers the complete layout function as practiced in modern industry. A detailed analysis is made of the procedures used in placing equipment, organizing efficient machine-operator patterns, and servicing of machines. Considerable time is devoted to practical work on actual layout problems, including integrated production lines, using such tools as layout templates, three-dimensional models, man-machine charts, and process flow charts. The relationship of work standards, methods and layout inspection, production control, and maintenance is also discussed. Fall.

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.

TM 362 Leadership Skills for Supervisors 3

Designed as a bridge between technical courses and the art of supervising people. Potential line supervisors will develop specific abilities in applying leadership principles to everyday work situations through creative class participation in industrial case studies. Techniques of getting-the-job-done through people, include motivation, delegation, discipline, teamwork, decision making, communications, and objectives-planning techniques are also covered.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

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. On demand.

TM 401 Industrial Internship 3

Prereq.: Completion of 75 credits or permission of department chair. 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.

TM 402 Topics in Technology 1 TO 3

Prereq.: Permission of the department chair. 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. [GR]

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. Fall. [GR]

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. Spring. [GR]

TM 415 Fire Protection & Prevention 3

Measures related to safeguarding human life and preservation of property in prevention, detection, extinguishing fires. Spring. [GR]

TM 432 Worker/Supervisor Relations 3

To develop the role of worker-supervisor relationships in manufacturing industries by covering such topics as productivity, supervision within contract guides, union/non-union manufacturing conflicts, Method/Time Study implementation. Spring. [GR]

TM 456 HAZWHOPPER & 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. Spring. [GR]

TM 458 Productivity Improvement 3

Course deals scientifically with analytical and creative problems affecting time. It covers the principles of methods, design, and work measurement. The student acquires skill in using motion study techniques and learns how to establish standards. Applications to product design, machine and tool design, process planning, production scheduling, plant layout, budgeting, sales prices, manpower requirements, wage incentives, and methods of improvements are studied. Spring. [GR]

TM 464 Six Sigma Quality 3

Prereq.: STAT 104 or permission of department chair. 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. Fall. [GR]

TM 480 Robotics 3

Overview of the industrial robot. Introduces the student to the science of flexible automata. Emphasizes features, capabilities, programming, selection and applications of industrial robots. [GR]

TM 490 Advanced Six Sigma Quality 3

Prereq.: TM 464. Planning techniques of Failure Mode and Effects Analysis (FMEA), Quality Function Deployment (QFD), and Design of Experiments (DOE) will be presented. Spring. [GR]

500s

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. Fall.

TM 502 Human Relations and Behavior in Complex Organizations 3

Analysis of human relations in technological organizations, including motivation, corporate processes, communication, and power.

TM 510 Industrial Operations Management 3

Prereq.: Admission to a CCSU graduate program or permission of the department chair. Principles underlying industrial management. Topics include organization for production, industrial risk, product research and development, and the management of capital goods. Spring, Summer.

TM 511 Safety Training Methods 3

Discuss instructional methods for safety professionals. Covers company needs analysis, training content development, basic facilitation and instructional strategies to increase employee safety awareness. On demand.

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. On demand.

TM 521 Computer Aided Design and Drafting 3

Prereq.: TC 113 or permission of instructor. In-depth utilization of computer technology to create and modify two and three-dimensional engineering drawings. Space geometry, vector analysis and specialized drafting conventions will be used to generate a data base for a variety of design-drafting applications. This course is laboratory-oriented and intended to further the student's knowledge in drawing preparation using the computer and associate peripherals.

TM 551 Project Management 3

Prereq.: Admission to a CCSU graduate program or permission of the department chair. 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. Spring.

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. Fall.

TM 562 Supply Chain Strategy 3

Key concepts in managing the flow of goods and information from raw material to end-use customer. Focus on design, analysis and decision-

making methods used in industrial procurement. Highlights integration of procurement with operations. Fall.

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. Spring.

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. Spring.

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. On demand.

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. On demand.

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. On demand.

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. On demand.

TM 594 Research Methods in Technology 3

Prereq.: Admission to a CCSU graduate program or permission of the department chair. 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. Fall.

TM 595 Applied Research Capstone Project 3

Prereq.: TM 594, permission of advisor, and a 3.00 overall GPA. 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. On demand.

TM 596 Technological Issues and Problems 1 TO 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. Irregular.

TM 599 Thesis 3

Prereq.: TM 594 and permission of advisor. 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. On demand.

Theatre

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

100s

TH 101 Performance Practicum 1

Provides an hour per week for students to coordinate production activities for all theatre department shows. These activities might include backstage work, publicity, performance or direction. This hour will also include regular workshops on topics relevant to the theatre industry. Course to be repeated 6 times for majors, 3 times for minors.

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. Study Area I

TH 111 Stagecraft 0 OR 3

Constructing and rigging scenery for different stages. Two lectures and average of two hours laboratory work per week. Study Area I

TH 115 Play Production 1

Open to all students who enjoy working on plays. Students may elect to work in stagecraft, lighting, sound, scene painting or properties, costuming, front-of-house management, or performance. An average of three hours laboratory work per week is required. May be repeated for maximum of 6 credits.

TH 117 Lighting 3

Lighting techniques in modern theatre practice. Two lectures per week. Study Area I

TH 121 Costuming 3

Brief history of costume and constructing costumes. Introduction to design principles. Two lectures and average of two hours laboratory work per week. Study Area I

TH 126 Makeup I 2

Laboratory course in stage makeup. Crew assignments on theatre productions are normally required. One two-hour session per week. Fall. Study Area I

TH 135 Speaking-Voice Development 3

Development of a more relaxed and vibrant speaking voice in dramatic performance through analysis of each student's non-clinical voice-use problems followed by drills and body-voice exercises to free body, breath, and vocal tract. Spring. Study Area I

TH 143 Theatre Games and Improvisations 3

Theatre games and improvisations to build concentration, relaxation, imagination, and the ability to react, leading to heightened awareness and confidence in both exercises and very brief scenes. Exploration of the theatrical moment. Study Area I

TH 145 Acting I 3

Concentration, relaxation, and freeing the imagination, body, and voice. Improvisational exercises for exploration and discovery in relation to acting fundamentals. Students are required to audition for main stage productions, if only for the audition experience. Study Area I

TH 146 Introduction to High Impact Theatre 3

Introduction to theatre techniques which promote personal, social and/or political transformation, with special emphasis on the teachings of Augusto Boal. Spring. Study Area I

TH 147 Theatre Workshop 3

Project based studio class, in which the student is exposed to the various creative approaches involved in the making of a piece of theatre. The student (performer, director and designer) will apply research and methodology to the creation of three pieces during the semester: a traditional text-based piece, a piece adapted from literature not written for the stage, and a piece devised from original content or non-theatrical text. Each student will be required to work in at least one area outside of their intended area of study.

TH 148 Studio Performance I 2

Practical scene and monologue workshop for beginning performance students, focusing on work from contemporary plays. Fall. Study Area I

TH 165 Improvisation for the Classroom 3

Using basic improvisation exercises in educational settings. Spring.

200s

TH 211 Rendering and Drawing for the Stage 3

Prereq.: TH 111 and 121. 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. Irregular.

TH 213 Scene Painting I 3

Studio course in the techniques of painting scenery for the stage. Irregular.

TH 217 Sceno-Graphic Techniques 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. Spring. (E)

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. Spring. (E) Study Area I [I]

TH 235 Movement for Performers 3

Introduction to physical skills required of stage performers and how to synthesize that with textual analysis and voice work. Fall. (O)

TH 246 Acting II 3

Prereq.: TH 135 and TH 145. Continuation of TH 145. Emphasis on basic techniques of acting, including introduction to scene study and characterization. Fall.

TH 251 Stage Management 2

Prereq.: TH 111 and 253 or permission of instructor. 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.

TH 253 Script Analysis for the Theatre 3

Reading and analysis of plays from various periods and countries. Focuses on text analysis from view point of theatre artists: director, actor, designer. Fall. Study Area I

300s

TH 316 Scene Design 3

Prereq.: TH 111 and 217 and departmental permission. Designing scenery for various kinds of stages and plays. Work on ground plans and elevations, perspective drawing, and finished design. Fall. (E)

TH 318 Lighting Design 3

Prereq.: TH 111, 117. Lighting design and layout for the proscenium, open, and arena stages. Special emphasis on design problems, equipment and control systems. Spring. (O)

TH 327 Makeup II 1

Prereq.: TH 126 or prior permission of instructor. Advanced makeup projects with attention to mask building and prosthesis. Open to Theatre majors only. Fall. (E)

TH 330 Design Tutorial 1

Prereq.: Major or minor in Theatre and permission of instructor. 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.

TH 332 Costume Design 3

Prereq.: TH 121, 222 and permission of instructor. Designing costumes for various styles of plays. Work on design renderings and patterns for construction of costumes. Spring. (O)

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. Irregular.

TH 334 Costume Construction 3

Prereq.: TH 121 or permission of instructor. Studio course in methods of constructing theatrical costumes including flat patterning, draping and tailoring in the practical creation of both historical and contemporary garments. Irregular.

TH 338 Advanced Voice Development 3

Prereq.: TH 135. Expanding and developing range, flexibility and vibrancy of the speaking voice in dramatic performance. Development of effective articulation. Fall.

TH 347 Acting III 3

Prereq.: TH 338, 246 or permission of instructor. Performance considerations in scene study and character development, as well as self-scripted pieces. Two lectures and one two-hour lab per week. Spring.

TH 348 Performance Studio II 2

Prereq.: TH 148, 235, and 246. Continuation of TH 148 for advanced acting students. A practical scene and monologue workshop, with emphasis on classical and non-realistic texts. Fall. (O)

TH 352 Directing for the Stage 3

Prereq.: TH 253. 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. Spring. (O)

TH 375 History of Theatre I 3

Theatre from Classical Greece to 18th century, including physical theatre, audiences, acting style and other elements of production. Spring. (E)

TH 376 History of Theatre II 3

Theatre from 18th century to present day, including physical theatre, audiences, acting style, and other elements of production. Representative plays from standpoint of performance. Fall.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"**TH 447 Acting IV 3**

Prereq.: TH 347 and departmental permission. Performance considerations in scene study and role development, with emphasis on plays of varying styles and different periods. Fall. (O) [GR]

TH 456 Shakespearean Production 3

Prereq.: TH 246 and 253 and 347, or permission of instructor. Analysis of selected plays from perspective of actor and director. Students act in and stage scenes as major requirements. Irregular. [GR]

TH 465 Creative Dramatics for Children 3

Trains teachers to develop the imagination, creativity, and communication skills of children ages 5 through 12. Includes pantomime, theatre games, improvisation, and formal theatre experience. Spring. [GR]

TH 471 Studies in Technical Theatre 3

Prereq.: Permission of instructor. Selected area of study in technical theatre not covered in other courses. Topic varies. May be repeated for up to 6 credits. Irregular.

TH 472 Studies in Acting 3

Prereq.: TH 235 and 246; or permission of instructor. Selected area of study in acting not covered in other courses. Topic varies. May be repeated with different topics for credit. Irregular.

TH 473 Studies in High Impact Theatre 3

Prereq.: TH 146 or permission of instructor. Selected area of study in high impact theatre not covered in other courses. Topic varies. May be repeated with different topic for up to 6 credits. Irregular.

TH 474 Studies in NY Theatre Workshop 3

Prereq.: Permission of instructor. Selected area of study in acting/production not covered in other courses. Topic varies. May be repeated for up to 6 credits. Irregular.

TH 475 Studies in London Theatre 3

Prereq.: Permission of instructor. Selected area of study in performance/production not covered in other courses. Topic varies. May be repeated up to 6 credits. Irregular.

TH 477 Contemporary U.S. Theatre 3

Prereq.: TH 347. Survey of contemporary theatre in the United States. Topics include artistic trends, theatre education, multiculturalism, new plays and professional preparation. May include field trips (ticket charge required), guest speakers and research.

TH 481 Projects: Scenery 3

Prereq.: TH 316 and departmental permission. Individual projects in reading, research, or production under guidance of member of theatre staff. [GR]

TH 482 Projects: Costuming 3

Prereq.: TH 332 and departmental permission. Individual projects in reading, research, or production under guidance of member of theatre staff. [GR]

TH 483 Projects: Acting A 1

Prereq.: TH 347 and junior standing and departmental permission. Individual projects in reading, research, or production under guidance of member of theatre staff. [GR]

TH 484 Projects: Acting B 1

Prereq.: TH 483 and departmental permission. Individual projects in reading, research, or production under guidance of member of theatre staff. [GR]

TH 485 Projects: Lighting 3

Prereq.: TH 318 or permission of instructor. 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. On demand.

TH 486 Project: Sound 3

Prereq.: Permission of instructor. Individual sound projects in reading, research, or production under guidance of member of Theatre staff. May be repeated for up to 6 credits.

TH 487 Projects: Research 3

Prereq.: TH 374 or departmental permission. Individual projects in reading, research, or production under guidance of member of theatre staff. [GR]

TH 488 Projects: Directing 3

Prereq.: TH 352 and departmental permission. Individual direction of student production under faculty supervision. [GR]

TH 489 Studies in Theatre/Drama 3

Prereq.: Permission of instructor. Selected area of theatre and/or drama not covered in other courses. Topic varies. May be repeated for credit. Irregular. [GR]

TH 490 Summer Theatre Workshop 3

Prereq.: Permission of instructor. Students work with experienced directors in a summer theatre production workshop learning the craft of acting and performing, culminating in a public performance. May be repeated for a maximum of 6 credits. Summer. [GR]

TH 491 Projects: Technical Direction 3

Prereq.: TH 316 or permission of instructor. 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. On demand.

TH 492 Projects: Theatre Computer Technology 3

Prereq.: Permission of instructor. 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. On demand.

TH 493 Projects: Stage Management 3

Prereq.: TH 251 or permission of instructor. 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. On demand.

TH 495 Theatre Internship 3 TO 6

Prereq.: Permission of department. 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. On demand. [GR]

Tourism & Hospitality Studies

300s

THS 300 The Hospitality Industry 3

Prereq.: GEOG 290. 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.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

THS 410 Tourism & Hospitality Operations 3

Prereq.: THS 300. 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. Spring.

THS 430 Internship in Tourism and Hospitality 3

Prereq.: Permission of program director. 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. On demand.

THS 435 Independent Study in Tourism and Hospitality 3

Prereq.: Permission of program director. Examines individually planned specific topics within the tourism/hospitality industry. Results can include detailed research paper or project paper. On demand.

THS 450 Hotel and Lodging Practicum 3

Prereq.: THS 300. 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. Irregular.

THS 455 Conventions and Meeting Planning Practicum 3

Prereq.: THS 300. 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. Irregular.

THS 490 Current Topics in Tourism & Hospitality 3

Prereq.: THS 300. 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. Spring.

Vocational-Technical Education

Note: Courses designed to develop professional competence; for students seeking certification in Vocational-Technical Education and special studies majors with a specialization in Vocational-Technical Education.

1. Jump to level:
2. [300s](#)
3. [400s](#)

100s

VTE 113 Introduction to Teaching Vocational-Technical Education 4

Introduction and application of current learning theories, Connecticut teaching standards, motivational theories, classroom management, assessment techniques, laboratory safety procedures, and basic writing of lesson plans and behavioral objectives as applied to vocational technical education. Fall, Spring, Summer.

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. Fall, Spring, Summer.

300s

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. Fall.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

VTE 400 Evaluating Student Achievement in Vocational-Technical Education 3

Prereq.: VTE 113. Procedures for evaluating student achievement of instructional objectives with application in vocational subjects that is reflective of BEST Portfolios. Spring. [GR]

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. [GR]

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. On demand.

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. Fall. [GR]

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. Spring. [GR]

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. On demand.

VTE 480 Curriculum Development for Trade Department Heads 3

Curriculum development for trade department heads at Connecticut technical high schools.

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.

VTE 490 Topics in Vocational-Technical Education 1 TO 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. On demand. [GR]

Women, Gender, & Sexuality Studies

1. Jump to level:
2. [200s](#)
3. [300s](#)
4. [400s](#)

200s

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. Spring. Study Area III

WGSS 215 Introduction to Women Writers 3

Introduction to women writers of the world, primarily in the eighteenth, nineteenth, and twentieth centuries. Cross listed with ENG 215. No credit given to students with credit for ENG 215 or WS 215.

WGSS 222 Philosophy and Gender 3

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. Irregular. Study Area III

WGSS 241 Women and American Law 3

Cross Listed with PS 241. See PS 241 for detailed description. No credit given to students with credit for PHIL 241.

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.

300s

WGSS 330 History of Women in the US, 1620-1865 3

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. Cross listed with HIST 331. No credit will be given to students with credit for WS 331 or HIST 331. Spring.

WGSS 334 Women of Medieval Europe 3

Cross listed with HIST 334. See HIST 334 for detailed description. No credit given to students with credit for HIST 334. Fall. [I]

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. Cross listed with HIST 335 No credit will be given to students with credit WS 335 or HIST 335. Spring. [I]

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. Cross listed with ANTH 350. No credit will be given to students with credit for ANTH 350, WGSS 350, or WS 350. Spring.

WGSS 390 Topics in Women, Gender, and Sexuality Studies 3

Prereq.: WGSS 200. Intermediate course exploring specific areas of inquiry and research in women, gender and sexuality studies. Irregular.

400s

400-LEVEL CLASSES ARE FOR UNDERGRADUATE CREDIT ONLY, EXCEPT WHERE NOTED WITH "[GR]"

WGSS 400 Feminist Theory 3

Prereq.: WGSS (was WS) 200 or permission of instructor. Examination of central theoretical and critical concepts, ideas and traditions in the development of feminist theory. NOTE: No credit will be given to students with credit for WS 400. Spring. [GR]

WGSS 430 Internship in Women, Gender, and Sexuality Studies 3

Prereq.: WGSS 200 (formerly WS 200). Students will be placed with an appropriate off-campus agency and will be required to work there from 6 to 8 hours per week. The course and placement are structured to each student's needs. Note: No credit will be given to students with credit for WS 430.

WGSS 435 Images of Gender in the Media 3

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 given to students with credit for WS 435 or COMM 435. Spring.

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. Cross listed with PSY 448. No credit will be given to students with credit for WS 448 or PSY 448.

WGSS 469 Readings in Women, Gender, and Sexuality Studies 3

Prereq.: WGSS 200 (formerly WS 200) and permission of instructor. 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. NOTE: No credit will be given to students with credit for WS 469. [GR]

Word Processing

WP 204 Introduction to Word Processing 1

Introduction to a popular word processing software package. Includes document creation, editing, formatting, printing, archiving, and some specialized software features. Irregular.

Accounting

Department Overview

The accounting program prepares its graduates for professional careers in public, corporate, and governmental accounting, and for advanced graduate study in accounting. The program provides the background necessary in areas of accounting such as financial reporting, auditing, taxation, cost management, budgeting, internal auditing, accounting information systems, and accounting for non-profit organizations.

The accounting program satisfies the business and accounting educational requirements of the Connecticut State Board of Accountancy for eligibility to take the Connecticut CPA examination at graduation. Please note that Connecticut requires 120 hours of university credit, but requires 150 hours to be licensed. Additional courses to meet the 150 hour requirement may be taken at either the undergraduate or the graduate level. Also, 36 of the 150 credit hours must be in "AC" designated courses, and 30 credit hours must be in "BUS" and "ECON" designated courses. The accounting program also satisfies the educational requirements for eligibility to become a certified management accountant or a certified internal auditor.

[Admission Requirements](#)

Academic Programs

Undergraduate Majors

- [Major in Accounting, BS](#)

Minors

- [Minor in Business \(for non-business majors\)](#)

Anthropology

Department Overview

Anthropology means "the study of people." It assumes that generalizing about human life takes an integrated study of human biology and culture, past and present, and simple and complex lifew ays. Anthropology is comprised of four sub-fields. Cultural anthropology describes and explains variation in human cultural and social types. Biological anthropology explains the physical nature and development of humankind. Archaeology considers past human life and how societies grow , change, and become extinct. Linguistics examines human communication processes.

The anthropology major at the University provides students w ith a broad social and behavioral science background and prepares the student for a range of careers, from public service to marketing and international management. The department also offers minors in cultural anthropology, archaeology, practicing anthropology, and biological anthropology. These programs give the student a holistic and cross-cultural perspective to complement most majors.

The Department of Anthropology has a number of special programs and resources. An annual summer archaeological field school provides experience in archaeological excavation and analysis. The microfiche and on-line human relations area files in the Burritt Library Serials department is an easy-to-use system for cross-cultural research. There is also an extensive collection of human skeletal materials and fossil casts for education in biological anthropology. Extensive internship opportunities and summer field schools in cultural anthropology are also available.

Academic Programs

Undergraduate Majors

- [Major in Anthropology, BA \(39 credits\)](#)

Minors

- [Minor in Anthropology \(18 credits\)](#)
- [Minor in Archaeology \(24 credits\)](#)
- [Minor in Biological Anthropology \(18 credits\)](#)
- [Minor in Cross-Cultural Analysis \(18 credits\)](#)
- [Minor in Practicing Anthropology \(18 credits\)](#)

Art

Department Overview

The Department of Art offers two degree programs, a BS Ed in art education for students who wish to pursue a career in teaching art and a BA in art, which provides students with options in studio areas, such as ceramics, design, illustration, painting, photography, printmaking, and sculpture, as well as art history. Study options also exist in new media arts, mural painting, and other new genres. Both conceptual and technical excellence is stressed within a curriculum that encourages diverse forms of creative expression. Study plans are developed on an individual basis consistent with the goals identified by the student and advisor. This allows students the pursuit of diverse interests that match the individual. Recent graduates have begun successful careers as art teachers, and practicing fine and commercial artists. Graduates from our BA program have been accepted in nationally known MFA programs, and our BS in art education alumni are prominent art education leaders throughout the state.

The department houses the Samuel S. T. Chen Fine Arts Center, a gallery exhibiting works by nationally and internationally recognized artists, and providing a venue for student and faculty exhibits. The gallery also provides opportunities to study curatorship, leading to career possibilities in museum studies. Options abound for internships with business and industry, community-based organizations, museums, galleries, and schools.

Academic Programs

Undergraduate Majors

- [Major in Art, BA \(60 credits\)](#)
- [Major in Art Education, BS Ed \(Certifiable for K-12 teaching, 45 credits\)](#)

Minors

- [Minor in Art \(18 credits\)](#)

Masters Degree Programs

- [Master of Science in Art Education](#)

Post-Baccalaureate Teacher Certification

- [Teacher Certification Program in Art Education](#)

Post-Baccalaureate Official Certificate Programs

- [Post Master's Study](#)

Biology

Department Overview

The Department of Biology provides instruction across the entire study of life from molecules to ecosystems. Students will be prepared to enter a wide variety of specialties including health science, physiology, nurse anesthesia, ecology, biodiversity, environmental science, global sustainability and teaching.

Academic Programs

Undergraduate Majors

- [Major in Biology, BS \(Non-teaching\)](#)
- [Major in General Science with Specialization in Environmental Interpretation, BS \(53-57 credits\)](#)
- [Major in General Science with Specialization in Physical Sciences, BS \(54 credits\)](#)

Undergraduate Teacher Certification Programs

- [Major in Biology, BS \(Certifiable for teaching grades 7-12, 32-34 credits in biology\)](#)
- [Major in General Science with Specialization in Biology or Earth Sciences \(Certifiable for elementary education\)](#)
- [Major in General Science with Specialization in General Science, BS \(Certifiable for secondary teaching, 56-59 credits\)](#)

Minors

- [Minor in Biology \(Certifiable for secondary teaching\)](#)
- [Minor in Biology \(Non-teaching, 20 credits\)](#)
- [Minor in General Science \(Certifiable for secondary teaching, 43 credits\)](#)
- [Minor in Gerontology](#)
- [Minor in Science \(24 credits\)](#)

Masters Degree Programs

- [Master of Arts in Biological Sciences](#)
- [Biological Sciences: Ecology and Environmental Science, M.A.](#)
- [Biological Sciences: Global Sustainability, M.A.](#)
- [Master of Science in Biological Sciences: Anesthesia](#)
- [Master of Science in Biological Sciences: General Program](#)
- [Master of Science in Biological Sciences: Health Sciences Specialization](#)
- [Master of Arts in Teaching \(MAT\): Teacher Education with Specializations in Sciences \(7-12\)](#)

Post-Baccalaureate Teacher Certification

- [Certification in Biology for Secondary Education](#)

Post-Baccalaureate Official Certificate Programs

- [Certificate in Pre-Health Studies](#)

Biomolecular Sciences

Department Overview

The Department of Biomolecular Sciences offers instruction in molecular biology, microbiology, cell biology, genetics, development, and physiology that is strongly integrated with the theory and practice of molecular biological research. The program prepares students for entrance into medical, pharmacy and doctoral programs, or for careers in research or industry.

Academic Programs

Undergraduate Major

- [Major in Biomolecular Sciences, BS \(Non-teaching, 35 credits\)](#)
- [Major in Biochemistry, BS](#)

Minors

- [Minor in Biomolecular Sciences \(Non-teaching, 20 credits\)](#)
- [Minor in Gerontology](#)
- [Minor in Science \(24 credits\)](#)

Master's Degree Programs

- [Biomolecular Sciences, MA](#)

Official Certificate Programs

- [Certificate in Cell and Molecular Biology](#)
- [Certificate in Pre-Health](#)

Chemistry & Biochemistry

Department Overview

The Department of Chemistry & Biochemistry at CCSU is professionally accredited by the American Chemical Society (ACS), the world's largest scientific society. We offer degree tracks in both chemistry and biochemistry--including paths to ACS certified degrees--and a minor in chemistry. Our graduates typically enter Ph.D. programs, professional programs (such as medical school), or the chemical industry. Unlike at large schools, where undergraduates typically work for a graduate student, our students work directly with faculty on original research projects. The majority of these students give presentations at regional or national conferences, and many have co-authored peer-reviewed publications. For more information about our program, including updates on recent graduates, please visit the Department website.

Academic Programs

Undergraduate Majors

- [Major in Chemistry, BS](#)
- [Major in Biochemistry, BS](#)
- [Major in General Science with Specialization in Physical Sciences, BS \(54 credits\)](#)

Undergraduate Teacher Certification Programs

- [Major in Chemistry, BS \(Certifiable for secondary teaching, 36 credits\)](#)
- [Major in General Science with Specialization in General Science, BS \(Certifiable for secondary teaching, 56-59 credits\)](#)
- [Major in Interdisciplinary Science: Specialization in Biology or Earth Sciences \(Certifiable for elementary education, 39-42 credits\)](#)

Minors

- [Minor in Chemistry \(Non-teaching, 21 credits\)](#)
- [Minor in Chemistry \(Certifiable for secondary teaching\)](#)
- [Minor in Science \(24 credits\)](#)

Communication

Department Overview

The curriculum of the Department of Communication includes four emphasis areas: media studies; public relations/promotions; organizational communication and media production and performance. Upon graduation students will have the knowledge and skills necessary to better produce and respond to messages regardless of their chosen communication setting. The use of emerging communication technologies is a growing facet of the department's curriculum.

Academic Programs

Undergraduate Majors

- [Major in Communication, BA](#)

Minors

- [Minor in Communication](#)

Masters Degree Programs

- [Masters in Communications, MS](#)

Post-Baccalaureate Official Certificate Programs

- [Certificate in Public Relations/Promotions](#)

Computer Electronics & Graphics Technology

Department Overview

The mission of the Department of Computer Electronics and Graphics Technology is to provide educational opportunities in computer engineering, electronics, graphics, networking, and interrelated technological and managerial disciplines. We prepare students to meet dynamic technological challenges as leaders and members of technical design, engineering, and management teams. The programs respond to an increasing industry demand for highly qualified personnel who have a combination of technical and managerial skills. Therefore, this study includes a comprehensive knowledge of industrial processes and applied technologies, in addition to a background in general education. Providing a broad range of educational and career enhancement opportunities, the department prepares graduates for careers in rapidly changing technical fields.

Academic Programs

Undergraduate Major

- [Major in Electronics Technology, BS \(122 credits\)](#)
- [Major in Computer Engineering Technology, BS \(124 credits\)](#)
- [Major in Industrial Technology, BS \(122 credits\)](#)

Minors

- [Minor in Networking Technology \(18 credits\)](#)

Computer Science

Department Overview

The Department of Computer Science offers a full range of courses for students who plan to enter computing careers or who plan to enter graduate school.

The department offers an honors and an alternative program of study, both leading to a BS degree in computer science. Core courses cover program design, data structures, computer hardware, assembly language, digital design, and systems programming. Advanced courses include artificial intelligence, database design, graphics, networking, security, software engineering, and web-centric computing.

Academic Programs

Undergraduate Majors

- [Major in Computer Science, BS \(Honors\) \(Non-Teaching; CAC/ABET-accredited, 64 credits\)](#)
- [Major in Computer Science, BS \(Alternative, Non-teaching, 38 credits\)](#)

Minors

- [Minor in Computer Science \(18 credits\)](#)

Counseling and Family Therapy

Department Overview

The counseling and family therapy programs at Central Connecticut State University prepare students for professional careers in Marriage and Family Therapy, School Counseling, Rehabilitation Counseling, Drug and Alcohol Recovery Counseling, Mental Health Counseling and Student Development in Higher Education. Courses are designed to develop student competence in the application of theory-based counseling models, to understand the concerns of diverse client populations and to enhance students' personal and professional development. The practicum and clinical internship provide students with valuable opportunities to apply their skills in a field-based setting under close supervision. Students must obtain departmental approval prior to beginning their practicums.

Programs are accessible to full- and part-time students, offering flexible advising hours and classes in the late afternoons and evenings.

Academic Programs

Masters Degree Programs

- [Counselor Education with Specialization in Professional and Rehabilitation Counseling, MS](#)
- [Counselor Education with Specialization in School Counseling, MS](#)
- [Counselor Education with Specialization in Student Development in Higher Education, MS](#)
- [Marriage and Family Therapy, MS](#)

Post-Baccalaureate Official Certificate Programs

- [Post Master's Study in Counselor Education \(Profession; School; Student Development and Higher Education\)](#)
- [Advanced Certificate in Professional Counseling](#)
- [School-Based Marriage and Family Therapy](#)

Criminology and Criminal Justice

Department Overview

The Department of Criminology and Criminal Justice aims to prepare both undergraduate and graduate students for successful careers in criminal justice and related fields. Students who complete our programs are also well prepared to pursue advanced professional degrees. Our programs welcome diversity, encourage creative thought, incorporate advanced technologies, and emphasize critical thinking. Students learn from faculty who are actively engaged in real-world research or currently work in criminal justice organizations.

Academic Programs

Undergraduate Majors

- [Major in Criminology, BA \(39 credits\)](#)

Minors

- [Minor in Criminal Justice \(18 credits\)](#)

Masters Degree Programs

- [Master of Science in Criminal Justice](#)

Graphic/Information Design

Department Overview

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.

The department provides an academic structure for the advancement of graphic and information design instruction and degrees at both the undergraduate and graduate level. The Department of Design (Graphic/Information) is separate from the Departments of Art and of Computer Electronics and Graphics Technology. The faculty and staff are comprised of members with academic background and professional experience in graphic design, fine art, advertising, illustration, information design, communications, marketing, computer science, 3-D imaging, website design, and interactive multimedia design. The department maintains a state-of-the-art print center and laboratories. Upper-level students may be selected (by portfolio) for participation in the following:

- Design Internship experience with graphic design, advertising, publishing, website or multimedia design companies;
- Central Design, student operated full service graphic design studio; and
- International Design Student Exchange.

Graduates of the department are highly successful, working as designers and art directors with nationally known graphic design firms, advertising agencies, corporate design and communication departments, broadcasters, publishers, and website design houses, as well as multimedia and 3-D/animation studios.

Academic Programs

Undergraduate Majors

- [Major in Graphic/Information Design, BA \(36 credits\)](#)

Masters Degree Programs

- [Master of Arts in Information Design](#)

Economics

Department Overview

The Economics Department has a commitment to prepare students to be thoughtful, responsible, successful and involved citizens. The flexibility of the degree makes it ideal for most careers (government, industry, and the non-profit sector) or graduate school (economics, business, law, or public policy).

Academic Programs

Undergraduate Majors

- [Major in Economics, BA \(30 credits\)](#)

Minors

- [Minor in Economics \(18 credits\)](#)

Educational Leadership

Department Overview

The Department of Educational Leadership offers the following programs: MS in educational technology; MS in educational leadership; a Sixth-Year Certificate leading to certification as an intermediate administrator or supervisor; an official certification program in school superintendency; an official certification program in global leadership and literacy; and an Ed.D. program in educational leadership. The department also offers graduate courses in social justice, curriculum design, assessment, research and instructional coaching, and undergraduate/graduate courses in educational technology.

Academic Programs

Masters Degree Programs

- [Master of Science in Educational Leadership](#)
- [Master of Science in Educational Technology](#)

Sixth-Year Certificate

- [Sixth-Year Certificate in Educational Leadership](#)

Doctoral Degree Programs

- [Doctor of Education \(Ed.D.\) in Educational Leadership](#)

Official Certificate Programs

- [Certificate Program in Superintendent of Schools \(Advanced\)](#)
- [Official Certificate Program in Global Leadership and Literacy](#)

Engineering

Department Overview

The Department of Engineering offers the BS degree with majors in engineering or engineering technology.

The department offers civil engineering and mechanical engineering degrees designed to prepare students to become engineering designers and project leaders with the critical thinking and analytical skills necessary for professional engineering practice. Additionally, the Department offers three engineering technology majors designed to prepare students to become active partners with engineers and to be team members of the total technological enterprise that extends from planning and production to construction and/or service. Course requirements for each major are presented below.

Academic Programs

Undergraduate Majors

- [Major in Civil Engineering Technology, BS \(130 credits minimum\)](#)
- [Major in Civil Engineering, BS \(127 credits minimum\)](#)
- [Major in Manufacturing Engineering Technology, BS \(130 credits minimum\)](#)
- [Major in Mechanical Engineering Technology, BS \(130 credits minimum\)](#)
- [Major in Mechanical Engineering, BS \(127 credits minimum\)](#)

Masters Degree Programs

- [Engineering Technology MS](#)

English

Department Overview

The English Department offers courses in English, American and World literature, cinema studies, composition, creative writing, English education, journalism, and linguistics. The department prepares students for employment in areas like teaching, publishing, editing, and professional writing, as well as for participation in the many professions, graduate programs, and civic roles that value critical thinking, careful reading, and effective writing.

Academic Programs

Undergraduate Majors

- [Major in English, BA \(42 credits\)](#)
- [Major in Journalism, BA \(40 credits\)](#)

Undergraduate Teacher Certification Programs

- [Major in English, BS \(Certifiable for elementary education, 39 credits\)](#)
- [Major in English, BS \(Certifiable for secondary education, 39 credits\)](#)

Minors

- [Minor in English \(18 credits\)](#)
- [Minor in Writing \(18 credits\)](#)
- [Minor in Writing for Teachers \(for secondary education English majors only, 18 credits\)](#)
- [Minor in Journalism \(21 credits\)](#)
- [Minor in Cinema Studies \(18 credits\)](#)
- [Minor in Creative Writing \(18 credits\)](#)
- [Minor in Descriptive Linguistics \(21 credits\)](#)
- [Minor in TESOL \(For students completing elementary or secondary certificates, 21 credits\)](#)
- [Minor in Language and Computation \(24 credits\)](#)

Masters Degree Programs

- [English, MA](#)
- [Teacher Education with Specializations in English \(7-12\), MAT](#)
- [Teaching English to Speakers of Other Languages \(TESOL\), MS](#)

Post-Baccalaureate Teacher Certification

- [Teacher Certification in English](#)
- [Teacher Certification in TESOL](#)

Post-Baccalaureate Official Certificate Programs

- [Official Certificate in TESOL](#)

Finance

Department Overview

The finance program prepares graduates for managerial careers and advanced study in finance. Financial professionals evaluate all business and financial risks and returns in business decisions. Using economic theory and the techniques of accounting and statistics, financial managers direct funds acquisition, funds management, and investment. Graduates may pursue careers in corporate financial management, banking, insurance, investments, and government.

[Admission Requirements](#)

Academic Programs

Undergraduate Majors

- [Major in Finance, BS](#)

Minors

- [Minor in Business \(for non-business majors\)](#)

Geography

Department Overview

The Department of Geography is concerned with the science of location. Geography faculty teach students to use maps, air photos, computers, and information about places to understand how people use the land they live on and what makes that land different from other areas. Geography students learn about the nature of places, human impacts on environment, and the proper use of the land. Career opportunities include travel and tourism; environmental protection; urban, regional, and transportation planning; map making; area studies; regional economic development and location analysis; Geographic Information System (GIS); and computer applications. The department also provides internships for students in a variety of town, regional, state, and private agencies, and offers consulting services, workshops, and short courses as part of its outreach program.

Academic Programs

Undergraduate Majors

- [Major in Geography with Specialization in Environmental Geography, BA](#)
- [Major in Geography with Specialization in Geographic Information Science, BA](#)
- [Major in Geography with Specialization in Tourism, BA](#)
- [Major in Geography with Specialization in General/Regional Geography, BA](#)
- [Major in Geography with Specialization in Planning, BA \(39 credits\)](#)

Undergraduate Teacher Certification Programs

- [Major in Social Science with Minor in Geography, BS \(Certifiable in social studies, 54 credits\)](#)

Minors

- [Minor in Geography with Specialization in Planning \(18 credits\)](#)
- [Minor in Environmental Geography \(18 credits\)](#)
- [Minor in Geographic Information Sciences \(18 credits\)](#)
- [Minor in Geography \(18 credits\)](#)
- [Minor in Tourism \(18 credits\)](#)

Masters Degree Programs

- [Geography, MS](#)

History

Department Overview

History is the study of the past, but it has deep significance for the present. Through history we can learn about societies and cultures, understand change and identify continuity. At CCSU, history students are taught the methods, skills and strategies historians employ in evaluating and interpreting historical evidence. They learn to research complex problems, analyze ideas and make informed and coherent arguments. History students pursue a variety of careers and can work in education, government agencies, the legal field, businesses, newspapers and magazines, the film industry, museums, archives, libraries and historic preservation organizations. All of these careers require the skills of research, analysis and writing for which a History major is excellent preparation.

Academic Programs

Undergraduate Majors

- [Major in History, BA \(39 credits\)](#)

Undergraduate Teacher Certification Programs

- [Major in History, BS \(Certifiable for secondary teaching of history and social studies, 57 credits\)](#)
- [Major in History, BS \(Certifiable for elementary education, 39 credits\)](#)
- [Major in Social Sciences, BS](#)

Minors

- [Minor in History \(18 credits\)](#)
- [Minor in Public History \(18 credits\)](#)
- [Minor in Polish Studies \(18 credits\)](#)
- [Minor in Social Studies](#)

Master's Degree Programs

- [History, MA](#)
- [Public History, MA](#)

Post-Baccalaureate Teacher Certification Programs

- [Certificate in History](#)

Post-Baccalaureate Official Certificate Programs

- [Post-Master's Study](#)

Management Information Systems

Department Overview

The Management Information Systems (MIS) department emphasizes the importance of information as an organizational resource to be managed for business decision making. The use of information to make decisions in accounting, management, management information systems, marketing, and finance is stressed.

MIS program graduates are prepared for advanced graduate study as well as employment in many areas including the management of information systems and technology, the development of business systems, business analytics and decision making, data base administration, and application software development. Graduates find careers in diverse industries such as health care, insurance, consulting, manufacturing, government, not-for-profit organizations, and small businesses.

The MIS Minor can be completed by all university students (including School of Business students not majoring in MIS). This MIS minor will complement a student's chosen field of study since information technology is a driving force in the marketplace and, thus, in most careers. The MIS Minor offers students the opportunity to excel in their careers by giving them information systems and technology knowledge and skills widely useful in decision making and problem solving.

[Admission Requirements](#)

Academic Programs

Undergraduate Majors

- [Major in Management Information Systems, BS](#)

Minors

- [Minor in Management Information Systems \(for business majors and non-business majors\)](#)
- [Minor in Business \(for non-business majors\)](#)

Management and Organization

Department Overview

Upon completion of the program, management majors will possess competencies and skills needed for the managerial dimensions of roles they will play in their careers, as well as for graduate study. The program provides a foundation in management theory and practice.

Graduates can expect to pursue careers in such diverse areas as human resources management, entrepreneurship, small business management, healthcare management, international management, not-for-profit management, or other management-oriented program interests. Graduates work in business, government, healthcare, entrepreneurial firms, and not-for-profit organizations.

[Admission Requirements](#)

Academic Programs

Undergraduate Majors

- [Major in Management, BS](#)

Minors

- [Minor in Business \(for non-business majors\)](#)

Manufacturing & Construction Management

Department Overview

The Department of Manufacturing and Construction Management offers the following undergraduate BS degree and graduate MS degree programs:

- BS in Construction Management
- BS in Industrial Technology with specializations in:
 - Manufacturing
 - Environmental and Occupational Safety
 - Technology Management
- BS in Robotics and Mechatronics Engineering Technology
- MS in Construction Management
- MS in Technology Management

The Department of Manufacturing and Construction Management offers programs designed to prepare students for technology-oriented supervisory, management, and leadership positions. The programs respond to an increasing industry demand for highly qualified personnel who have a combination of technical and managerial skills. Therefore, this study includes a comprehensive knowledge of manufacturing and construction processes and applied technologies, in addition to a background in general education. Providing a broad range of educational and career enhancement opportunities, the department prepares graduates for careers in rapidly changing technology fields.

Academic Programs

Undergraduate Majors

- [Major in Construction Management, BS \(78 credits\)](#)
- [Major in Industrial Technology, BS \(63 credits\)](#)
- [Major in Robotics and Mechatronics Engineering Technology, BS \(81 credits\)](#)

Masters Degree Programs

- [Master of Science in Construction Management](#)

Post-Baccalaureate Official Certificate Program

- [Certificate in Construction Management](#)

Marketing

Department Overview

The Department of Marketing offers courses leading to a BS in business administration. Students choosing to major in marketing have the opportunity to custom-design their programs. Non-marketing students, interested in marketing, may select marketing courses that complement their major.

The Department of Marketing's program provides a basic foundation in marketing skills, theory, and best practices, domestic and international. It prepares students for entry-level positions (e.g., sales, customer services, public relations, product management, and market analyst), the opportunity to become a marketing professional, and continuing on to graduate study.

Marketing is a field that offers ambitious students rewarding career opportunities. In fact, about a third of all employees work in marketing-related activities.

[Admission Requirements](#)

Academic Programs

Undergraduate Majors

- [Major in Marketing, BS](#)

Minors

- [Minor in Business \(for non-business majors\)](#)

Mathematical Sciences

Department Overview

The department of mathematics is a dynamic department, with 33 full time faculty members with expertise in mathematics, mathematics education, actuarial science, statistics, data mining, and mathematical physics. Our faculty are dedicated teachers, active researchers, and involved community members.

The programs we offer prepare students for careers in teaching, business, industry, and research. In addition we provide students in the Schools of Engineering and Technology, Business, and Educational and Professional Studies, as well as other departments within the School of Arts and Sciences, with the mathematics and statistics courses needed for success in their fields.

Academic Programs

Undergraduate Majors

- [Major in Mathematics, BA \(38 credits\)](#)
- [Major in Mathematics with Specialization in Actuarial Science, BA \(58 credits\)](#)
- [Major in Mathematics with Specialization in Statistics, BA \(58 credits\)](#)

Undergraduate Teacher Certification Programs

- [Major in Mathematics, BS \(Certifiable for secondary teaching, 48 credits\)](#)
- [Major in Mathematics, BS \(Certifiable for elementary teaching, 33 credits\)](#)

Minors

- [Minor in Mathematics \(For students completing secondary certificates, 19 credits\)](#)
- [Minor in Mathematics \(Non-teaching, 20 credits\)](#)
- [Minor in Statistics \(21 credits\)](#)

Masters Degree Programs

- [Master of Science in Mathematics for Certified Elementary and Middle School Teachers](#)
- [Master of Science in Mathematics for Certified Secondary Teachers](#)
- [Master of Arts in Mathematics: General](#)
- [Master of Arts in Mathematics with Specialization in Computer Science](#)
- [Master of Arts in Mathematics with Specialization in Actuarial Science](#)
- [Master of Arts in Mathematics with Specialization in Statistics](#)
- [Master of Science in Data Mining](#)
- [Master of Arts in Teaching \(MAT\): Teacher Education with Specializations in Mathematics \(7-12\)](#)

Sixth-Year Certificate

- [Certificate in Mathematics Education Leadership](#)

Official Certificate Programs

- [Graduate Certificate in Data Mining](#)

Modern Languages

Department Overview

The Department of Modern Languages offers a wide variety of language, culture, and literature courses that not only provide students with an aesthetic appreciation of the representative languages but also give them a better understanding of self, of other cultures, and of the complexities of human nature. Our overall goal is to prepare students to communicate beyond their native language and to participate effectively and successfully in the modern world.

Language Placement Examination

Every student must demonstrate proficiency in a foreign language equivalent to completion of one year of college-level study as part of general education.

The Department of Modern Languages tests achievement levels in Italian by appointment. Testing for French, German, and Spanish proficiency is done by appointment in The Learning Center, located in Copernicus. Students with skills in languages other than those listed above should arrange with the Department of Modern Languages for verification of their level of proficiency. These examinations serve for both exemption and placement. All students, including native speakers, with two years or fewer of previous foreign language study must take the exams.

Students with three or more years of successful secondary language study in one language are automatically exempt from further required coursework; they should take the exam if they expect to continue study in that language.

To register for an elementary language course, numbered 111 or 118, students may have no more than one year previous study of that language.

Academic Programs

Undergraduate Majors

- [Major in French, BA \(30 credits\)](#)
- [Major in German, BA \(30 credits\)](#)
- [Major in Italian, BA \(30 credits\)](#)
- [Major in Spanish, BA \(30 credits\)](#)
- [International Studies Major](#)

Undergraduate Teacher Certification Programs

- [Major in French, BS \(Certifiable for secondary teaching, 36 credits\)](#)
- [Major in German, BS \(Certifiable for secondary teaching, 36 credits\)](#)
- [Major in Italian, BS \(Certifiable for secondary teaching, 36 credits\)](#)
- [Major in Spanish, BS \(Certifiable for secondary teaching, 36 credits\)](#)

Minors

- [Minor in Modern Language \(18 credits\)](#)

Music

Department Overview

The Department of Music offers a BS in music education and a BA in music with specializations in performance, jazz studies, or theory/composition. Full- and part-time faculty specializations include bass, bassoon, cello, clarinet, composition, computer technology, euphonium, flute, guitar, harp, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, and voice.

Academic Programs

Undergraduate Majors

- [Major in Music, BA \(60 credits\)](#)

Undergraduate Teacher Certification Programs

- [Major in Music Education, BS \(Certifiable for PK-12 teaching, 66 credits\)](#)

Minors

- [Minor in Music \(18 credits\)](#)

Master's Degree Programs

- [Master of Science in Music Education](#)

Post-Baccalaureate Teacher Certification

- [Certification in Music Education](#)

Post-Baccalaureate Official Certificate Program

- [Post-Master's Study in Music Education](#)