Contents

2 Programs of Study
4 Undergraduate Programs
5 Bachelor’s Degree Programs
79 Minors
95 Teacher Education/Certification Programs
97 Graduate Studies
100 Master’s Degree Programs
109 Courses of Instruction
Programs of Study

**BACHELOR’S DEGREES**
B.A.: Bachelor of Arts
B.S.: Bachelor of Science
B.F.A.: Bachelor of Fine Arts
B.M.: Bachelor of Music

**MASTER’S DEGREES**
M.Ed.: Master of Education
M.S.: Master of Science

**COLLEGE HONORS PROGRAM**

**School of Arts and Humanities**

**BACHELOR’S DEGREES**

**Art, B.A.**
options in
Graphic Design
Studio Art

**Art, B.F.A.**
options in
Graphic Design
Graphic Design and Studio Art
(dual option)
Studio Art

**Communication, B.A.**
options in
Communication Studies
Philosophy

**English, B.A.***
options in
Literature
Writing

**Film Studies, B.A.**
options in
Critical Studies
Film Production

**French, B.A.***

**History, B.A.*²**
specializations in
U.S. History
European History
19th-Century Studies
20th-Century Studies
Department Honors Program

**Journalism, B.A.**

**Music, B.A.**
specializations in
Composition
Music History
Music for Elementary Teachers
Music Technology
Music Theory

**Music Education, B.M.***
specializations in
Instrumental
Choral

**Music Performance, B.M.**

**Spanish, B.A.***

**Theatre and Dance, B.A.**
options in
Theatre Arts
specializations in
Acting
Directing
Design and Technical Theatre
Dance
specializations in
Choreography and Performance
Dance Education
Dance Education/Dual Degree

**MINORS**

Art History
Art Studio
Communication
Dance

**English**
Film Studies
French
German
History
Journalism: Broadcast Media
Journalism: Print Media
Medieval and Early Modern Studies
Music
Philosophy
Spanish
Theatre
Writing

**School of Professional and Graduate Studies**

**BACHELOR’S DEGREES**

**Architecture, B.S.**

**Athletic Training, B.S.**

**Education, B.S.***
options in
Early Childhood Development*
Elementary Education*
Secondary Education*
Elementary and Special Education*

**Health Science, B.S.**
options in
Health Promotion and Wellness
specializations in
Community Health
Behavior and Health
Nutrition
Substance Abuse/Addictions

**Nursing, B.S.**
options in
Pre-Licensure Student
RN Completion
Physical Education, B.S.*
options in
Exercise Science
Teacher Certification

Safety and Occupational Health
Applied Sciences, B.S.
DEPARTMENT HONORS PROGRAM

Sustainable Product Design and
Innovation, B.S.

MINORS
Safety and Occupational Health
Applied Sciences
Substance Abuse/Addictions
Sustainable Product Design and
Innovation

GRADUATE STUDIES
Master of Education
Curriculum and Instruction
Educational Leadership
School Counselor
Special Education
Certification is available in each M.Ed.
graduate program.

Master of Science
Safety and Occupational Health
Applied Sciences

Post-Master's Certification
Program
Educational Leadership
School Counselor

Post-Baccalaureate Certification
Program

School of Science
and Social Science

BACHELOR'S DEGREES
Applied Computer Science, B.S.

Biology, B.A./B.S.*
Chemistry, B.A.*/B.S.
Chemistry-Physics, B.S.*
Computer Mathematics, B.S.
Earth/Space Science, B.A.
Economics, B.A.
Engineering, B.S. (transfer program)
Geography, B.A.*
Geology, B.S.*
Management, B.S.
Mathematics, B.A.*
options in
Mathematics Secondary Teaching
Mathematics Middle School/
Junior High
Mathematics Education, B.A.
for Elementary Teachers
Mathematics-Physics, B.S.
Political Science, B.A.
Psychology, B.A.
DEPARTMENT HONORS PROGRAM
Sociology, B.A.*

MINORS
Anthropology
Applied Computer Science
Biology
Chemistry
Criminal Justice Studies
Economics
Geography
Geology
Management
Mathematics

Physics
Political Science
Psychology
Sociology
Statistics

Interdisciplinary Programs

BACHELOR'S DEGREES
American Studies, B.A.
Environmental Studies, B.S.
General Science, B.A.*
options in
General Science
Elementary or Early Childhood Education
Middle School
Holocaust and Genocide Studies, B.A.
Individualized Major, B.A./B.S.
Social Science, B.A.*
Women's and Gender Studies, B.A.

MINORS
American Studies
Environmental Studies
Holocaust and Genocide Studies
International Studies
Women's and Gender Studies

*Majors in which teacher certification is
available.
Note: All elementary, early childhood, and
elementary/special education majors must
incorporate an additional major into their
programs of study.
1 Certification is in Chemistry Education or
Physical Science Education.
2 Certification is in Social Studies.
3 Certification is in Earth Science Education.
Undergraduate Programs

Academic Program Planning

Education in the liberal arts and sciences and in several professional fields is provided through associate and bachelor’s degree programs. These programs include three basic components: **INTEGRATIVE STUDIES REQUIREMENTS**, established by the College, purposefully and intentionally help students engage ethical issues, approach global issues from multiple perspectives, apply diverse perspectives to their thinking and their actions, and analyze key social and environmental issues confronting us all; **MAJOR/OPTION/SPECIALIZATION** or **CONCENTRATION REQUIREMENTS**, specified by discipline faculty, offer depth of scholarship through specialization in a field of interest; and **ELECTIVES**, selected by the student, provide the opportunity to develop a minor, to fulfill teacher certification requirements, or to take courses in other areas for personal and professional growth. Detailed descriptions of the various degree programs are found in the following pages of this catalog.

Because curriculum development is a continuing process, program changes may be made after publication of this catalog. Therefore, the College reserves the right to add, change, or delete curricular offerings and/or make curricular refinements. Sometimes changes are necessitated by agencies that accredit the College or certify students. Check with academic disciplines, the Elliot Center, or the Teacher Education Programs Office to learn of any recent changes.
Bachelor’s Degree Programs

Bachelor’s Degrees
A liberal education emphasizes breadth and balance in developing intellectual resources and cultural perspectives. It encourages the student to achieve the fullest possible development as a person and as a member of society. It also promotes enlightened citizenship and provides basic preparation for students planning to enter professional or graduate schools or embark on a career. Building on an integrated study foundation, this degree allows a specialized emphasis while at the same time encouraging social responsibility.

The general aspects of the curriculum are designed to enhance the student’s capacity for thought and effective expression and facilitate both the expansion and the integration of knowledge. Depth of scholarship is developed in the major field of specialization. The goal of a liberal education is the formulation of a philosophy of life based on knowledge and reflection relevant and appropriate to the contemporary world.

The Bachelor of Arts degree consists of a minimum of 120 credit hours.

The Bachelor of Science degree normally consists of 124 credit hours.

Definitions

Major. A program of study comprising a coherent set of courses and experiences within a discipline, related disciplines, or a professional area, which represents the curricular content of a bachelor’s degree. Normally, a bachelor’s degree major consists of at least 30 credit hours. Courses required in the major may not be used to fulfill Integrative Studies requirements unless specified in the program description.

Option. A coherent subset of courses that constitutes a prescribed track within a major. Normally, an option consists of 12 to 48 credit hours.

Specialization. An area of special interest comprising a cluster of related courses that are selected by the student in consultation with an academic advisor. Normally, a specialization consists of 12 to 20 credit hours within a degree option.

Language Requirement

for Students with Majors in the School of Arts and Humanities

The minimal requirement for all students with a major in American Studies, Art, Communication, English, Film Studies, History, Holocaust and Genocide Studies, Journalism, Music, or Theatre and Dance is one course in a foreign language, normally French, Spanish, or German. Students should complete this requirement as early in their college careers as possible. Those with two or more years of recent high school study in French, Spanish, or German must enroll in 102 or above. Those with three or more years of recent high school study should enroll in 201 or above. Individual student placements will be verified on the basis of a placement test available to students before they register. Students may also satisfy the requirement through AP or CLEP credit.

Those with near-native fluency in a language should consult Modern Languages faculty for appropriate placement.

Students may also fulfill this requirement by enrolling in a study abroad program in a non-English speaking country, provided the program has been approved by their major department in consultation with the National and International Exchange Center.

Students with documented learning disabilities should apply to the Office of Disability Services and then to the chair of Modern Languages to seek a waiver.

101- to 201-level courses completed to satisfy the language requirement may be applied to the Arts and Humanities component of the Integrative Studies Program.
Integrative Studies Program

Students at Keene State College complete two programs of study to earn a degree – the College’s Integrative Studies Program and their major program of study.

Keene State College’s Integrative Studies Program purposefully and intentionally helps students develop an understanding of how they and others engage their worlds. The program provides students with the opportunity to develop the skills necessary for success in academics and careers and preserves the breadth of a liberal arts education that enables students to succeed in a global environment. The integrative teaching and learning process approaches teaching and learning in intentionally connected ways.

Students will connect knowledge and skills from multiple sources and experiences, apply knowledge and skills in varied settings, utilize diverse points of view, and learn how to understand issues contextually. Knowledge in both individual and multiple disciplines is the foundation upon which integrative learning builds. Integrative learning often occurs as students put theory into practice, “making meaning” as students apply abstract concepts in practical settings.

Though they are not required as part of the Integrative Studies Program, students should also consider as part of their learning, developing competence in a second language, participating in a study abroad program, and participating in experiential learning in which disciplinary, interdisciplinary and multidisciplinary knowledge can be applied.

PROGRAM OUTCOMES

The program has three sets of outcomes: disciplinary or interdisciplinary, integrative and skills (reading, writing, quantitative reasoning information literacy, critical thinking, creative thinking, critical dialogue, technological fluency). Specific outcomes and criteria may be accessed on the ISP web and proto pages.

REQUIREMENTS

44 credits minimum

Students complete a total of 44 credits as follows, including a minimum of two courses (8 credits) at the 300 or 400 level. Students may enroll in the upper-level courses once they have completed a minimum of 24 credits of lower-level (100- to 200-level) courses, including ITW 101 and IQL 101 in the Integrative Studies Program. The upper-level requirement must be completed at Keene State College. Students are expected to complete ITW 101 within their first two semesters and IQL 101 within their first three semesters. Keene State College students must meet the quantitative literacy requirement. Most students will meet the requirement by successfully completing an IQL 101 course in their first year at Keene State. Students who successfully complete MATH 120, or MATH 141, or MATH 172, or MGT 202 will meet, in lieu of IQL 101, the quantitative literacy requirement. However, IQL 101 courses do not substitute for MATH 120, or MATH 141, or MATH 172, or MGT 202.

KEENE STATE COLLEGE STUDENTS WILL COMPLETE A TOTAL OF 44 CREDITS AS FOLLOWS:

1. FOUNDATIONS
   8 credits
   
   Essential question:
   How do critical and creative thinking, researching, writing, and evaluating quantitative information inform scholarly endeavors?

   • Thinking and Writing (ITW course prefix)  
     4 credits
   • Quantitative Literacy (IQL course prefix)  
     4 credits
II. DEVELOPING PERSPECTIVES AND BREADTH OF KNOWLEDGE

32 credits

Modes of Inquiry

Essential questions:
How are the arts and humanities constructed and defined and how do they change, shape, provoke, and represent our perceptions and our world?
What assumptions, methodologies, and theoretical constructs define today’s sciences and how are they used to understand our world?

PERSPECTIVES DISTRIBUTION

Four courses in the Arts and Humanities (IA and IH course prefixes)
16 credits

Courses must be taken in four different disciplines.

- Two courses in the Humanities (IH)
- One course in the Fine and Performing Arts (IA)
- One additional course in either the Humanities or the Fine and Performing Arts (IH or IA)

Four courses in the Sciences (IN and IS course prefixes)
16 credits

Courses must be taken in four different disciplines.

- Two courses in the natural sciences (IN course prefix)
- Two courses in the social sciences (IS course prefix)

III. MAKING CONNECTIONS

4 credits

Integrating Modes of Inquiry

One course with a cross-disciplinary, multi-disciplinary or interdisciplinary perspective. (II course prefix)
4 credits

Essential question:
How are the skills, concepts, and values developed across disciplines applied to questions fundamental to today’s interdependent world?

INTEGRATIVE OUTCOMES

The integrative outcomes provide students with the opportunity to learn and discuss overarching themes, perspectives, and paradigms that necessitate their active engagement in the KSC learning environment. In order to achieve this engagement, every course in the Integrative Studies Program must address at least one of the integrative outcomes.

Intellectual/Academic Skills Outcomes:
Critical reading and dialogue, writing, quantitative reasoning, critical and creative thinking, information and technological fluency and skills are the skills students use to communicate what they know. These are skills that lay the foundation for both academic and professional success. In the Integrative Studies Program, faculty work with students to develop these skills at a level commensurate with a baccalaureate degree. They are practiced extensively, across the program, in the context of progressively more challenging problems, projects and expectations.
College Honors Program

The College Honors Program provides academically motivated students with intellectual stimulation and rich experiences for personal and professional growth by offering courses that prepare them to produce exemplary, creative, and challenging work. As an option for meeting the College's liberal arts requirements, it provides an alternative to the Integrative Studies Program and involves both residential and classroom opportunities. In addition to working closely with fellow students and professors to engage in creative and critical inquiry, honors students integrate and expand on what they are learning in Honors courses by participating in enrichment activities and events both on and off campus.

Residential Honors students will be housed in a Living and Learning Community (LLC) in a College residence hall for their first year and may choose to continue in Living and Learning Communities in later years. The director of the College Honors Program serves as the LLC faculty advisor.

A distinctive feature of the College Honors Program is the requirement that students study abroad. Each year travel study courses led by Keene State College faculty will be made available to sophomore Honors students. See HNRS 301 Global Engagement for details. Honors course requirements cannot be met with Advanced Placement credits or with credits from other institutions.

COLLEGE HONORS PROGRAM

44 credits

REQUIRED COURSES:

HNRS TW 101 Honors Thinking and Writing
Three Honors courses (12 credits) in the Arts and Sciences taken from three areas: HNRSA 290 Honors Arts, HNRSH 290 Honors Humanities, HNRSN 290 Honors Natural Sciences, and HNRSS 290 Honors Social Sciences. These Honors courses meet Integrative Studies Program outcomes and Honors Program outcomes appropriate to the area.

HNRS 301 Global Engagement
HNRSI 401 Interdisciplinary Senior Seminar
Integrative Studies Requirements
IQL Quantitative Literacy
Four additional Integrative Studies perspectives courses (16 credits). Students must take one course from each area (Arts, Humanities, Social Sciences, and Natural Sciences).

ADMISSION TO THE COLLEGE HONORS PROGRAM

Students who apply to Keene State College are invited to submit an application and portfolio to the College Honors Program if they have a high school GPA of 3.25 or above. Details of the submission process can be found at the Honors Program website: keene.edu/academics/honors/procedure.cfm. A subcommittee of the Honors Program Advisory Committee reviews portfolios and makes decisions on admission.

Beginning in 2011 early in the spring semester, first year non-Honors students at Keene State College who have completed between 16 and 28 credits and who have a cumulative GPA of 3.50 will be invited to apply by February 15 for admission effective in the fall semester. Students admitted after their first semester need not take an Honors Thinking and Writing course, but will be expected to complete other College Honors Program requirements.

College Honors Program students must maintain a semester grade point average of 3.25 during their first semester. At the end of their second semester, they must have a cumulative GPA of 3.50 in both Honors and non-Honors courses and maintain that in all subsequent semesters in order to graduate with the designation College Honors Program. Students whose GPA falls below 3.25 at the end of the first semester or 3.50 at the end of the second semester will be on Honors probation for the following semester. Those whose semester GPA remains below the standard for two consecutive semesters will be dropped from the Honors Program and will lose Honors scholarship funds. Students have a maximum of two non-consecutive semesters of probation before being dropped from the program.
American Studies

Bachelor of Arts

The American Studies program offers students an interdisciplinary liberal arts education. Students in American Studies engage in a challenging exploration of historical and contemporary American culture and the American multicultural identity, including its past and present values, conflicts, and experiences. Working closely with an advisor who is a core faculty member in American Studies, students design their course of study around five core courses; an individualized set of area requirements in American history, literature, and Arts and/or Social Sciences; and a thesis requirement. American Studies prepares students for career opportunities in elementary and secondary education; graduate school; law school; business; work in libraries, museums, and historic preservation; newspaper, magazine, and broadcast journalism; film or media work; work in federal, state, and local agencies, both public and private; government and politics; nonprofit organizations; writing, editing, and publishing; international relations and diplomacy; public relations and advertising; and social services.

LANGUAGE REQUIREMENT

Each student must demonstrate proficiency in a language other than English as specified by the Language Requirement for Students with Majors in the School of Arts and Humanities. The complete policy statement appears at the beginning of the Bachelor’s Degree Programs section of this catalog.

INTEGRATIVE STUDIES REQUIREMENTS

(minimum) 44 credits

MAJOR REQUIREMENTS

40 credits

At least one American Studies or English course must meet a Differing Cultural Perspectives Requirement. Differing Cultural Perspectives courses investigate discursive traditions that have been historically marginalized. All course substitutions must be approved by the coordinator of American Studies.

Core Courses (20 credits)

II AMST 210 Introduction to American Studies
IIAMST 250 Interpreting American Cultures
AMST 350 Perspectives on American Culture
AMST 495 Seminar
Select one of the following:
   AMST 390 Critical Approaches
   AMST 490 Advanced Special Topics

Area Courses (20 credits)

Select two courses from American history:
   HIST 261 U.S. Social History I: 1603-1865
   HIST 265 Military in U.S. Society I
   HIST 266 Military in U.S. Society II
   HIST 338 European Encounters in the New World
   HIST 360 The American Colonies until 1763
   HIST 361 The American Revolution
   HIST 362 The Early American Republic 1789-1850
   HIST 363 The United States in the Civil War Period: 1850-1876
   HIST 364 19th-Century America
   HIST 365 Gilded Age and Progressive-Era America
   HIST 366 U.S. in Crisis: 1920-1950
   HIST 367 Modern America: 1950-Present

Select one course in American literature:
   ENG 280 Cultural Studies
   ENG 341 Early American Literature
   ENG 344 Studies in American Literature
   ENG 345 Studies in African American Literature (Differing Cultural Perspectives)
   ENG 346 Transcendentalism
   ENG 347 Modern American Indian Literature (Differing Cultural Perspectives)
   ENG 370 Studies in Literatures of the Americas (Differing Cultural Perspectives when appropriate)
Select two courses from Arts and Humanities and/or Social Sciences:

IHAMST 248 Cultures of Plains Indians
IAMU 112 Latin American Music
IAMU 216 History of Rock and Roll
IAMU 218 History of Jazz
IAMU 242 Listening to America
IHENG 240 Readings in American Literature
IIENG 245 African American Literature and Culture
IIFR 240 Franco-American Women's Voices
ISPOSC 210 U.S. Politics
ISPOSC 211 United States: State and Local Politics
ART 214 Modern Art
CJS 101 Introduction to Criminal Justice
ECON 455 U.S. Economic History
PHIL 304 American Philosophy
POSC 316 Constitutional Law
POSC 321 Foreign Policy and Globalization
SOC 270 Urban Society
SOC 345 Sociology of Families
SOC 472 Sociology of Health and Medicine
SOC 475 Social Stratification
SP 330 Latinos in the United States

ELECTIVES
Select courses to reach a total of 120 credits for the degree.

DEGREE REQUIREMENTS
120 credits

Applied Computer Science
Bachelor of Science

The Bachelor of Science in Applied Computer Science provides students with a thorough grounding in computer programming and information science and an introduction to the various branches of computer science. The primary focus is to prepare students to successfully operate as information science (IS) or information technology (IT) professionals, and/or pursue graduate studies in CS or a related field.

INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits

MAJOR REQUIREMENTS
54 credits

Core Courses (20 credits)
MATH 135 Mathematical Foundations for CS
CS 140 Computer Programming I
Select one of the following: CS 160 Microcomputer Systems or CS 150 Web Page Construction
CS 185 Computer Programming II
CS 280 Data Structures and Algorithms

Architecture and Programming Electives (8 credits)
One CS course, approved by student’s advisor, in a second, non-Windows computer operating system or architecture. Current courses that satisfy this requirement are CS210 Midrange Systems, CS 215 Unix System Admin, CS 265 Computer Architecture, and CS 367 Command Language Programming.

One additional CS course in a programming language other than the primary language taken in CS 140, CS 185, or CS 280, and approved by CS advisor. Current courses that satisfy this requirement are CS 205 User Interface and Visual Programming, CS 220 COBOE Programming, CS225 C++ Programming, CS 230 RPG Programming, and CS 310 Assembly Language.
Advanced Electives (24 credits)
Six (6) CS upper-level courses (300 and 400 level) with a minimum of three (3) 400-level courses. Twenty-four (24) total credits, including a maximum of 4 credits of independent study (CS 498). Does not include supervised field experience (CS 493) or cooperative education (CS 494).

Current courses that satisfy this requirement are:
- CS 310 Assembly Language
- CS 320 Operating Systems Design
- CS 340 Internet Programming
- CS 350 Systems Analysis and Project Management
- CS 355 Telecom and Computer Networks
- CS 360 Database Systems
- CS 367 Command Language Programming
- CS 375 Software Engineering
- CS 410 Advanced Software Development
- CS 420 E-Commerce Development
- CS 430 Study of Programming Languages
- CS 440 Software Engineering Project
- CS 460 Data Warehousing and Mining
- CS 462 DBS Project and Advanced SQL
- CS 485 Strategic Information Management
- CS 490 Advanced Special Topics
- CS 495 Seminar
- CS 498 Independent Study

Practical Experience (2 credits)
Choose one:
- CS 293 Supervised Field Experience or CS 493 Advanced Supervised Field Experience (2 credits)

ELECTIVES
Select courses to reach a total of 124 credits for the degree.

Architecture
Bachelor of Science

The Architecture major at Keene State College is a preprofessional four-year program designed to give students a solid foundation in the artistic, scientific, and technical aspects of architecture. The curriculum offers a range of courses in studio design, building science, sustainable design, history/theory, digital technology, and practice. The education of KSC architecture majors, grounded in the liberal arts, focuses on teaching students to become effective, creative problem solvers with the tools to adapt and evolve their career paths to meet the needs of a rapidly changing world. Graduates in architecture are prepared to pursue graduate study or transition directly into careers in architecture, planning, building science, construction management, environmental design, design-build, or other related professions.

INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits

MAJOR REQUIREMENTS
52 credits

Core Courses (32 credits)
ARCH 120 Architectural CAD I (or any higher level Architectural CAD)
ARCH 180 Introduction to Architectural Design
ARCH 230 Architectural Design I
ARCH 260 Sustainable Design and Building Science
ARCH 270 Commercial Construction
ARCH 280 Collaborative Architectural Project
ARCH 355 Architectural History II
ARCH 370 Architectural Systems
Architecture Electives (minimum 8 credits)
ARCH 220 Architectural CAD II
ARCH 235 Architectural Design II
ARCH 275 Residential Construction
ARCH 290 Special Topics
ARCH 320 Architectural CAD III
ARCH 330 Architectural Design III
ARCH 350 Architectural History I
ARCH 360 Solar Design and Building Science II
ARCH 375 Statistics and Structural Analysis
ARCH 430 Architectural Design IV
ARCH 435 Architectural Portfolio Design
ARCH 490 Advanced Special Topics
ARCH 498 Independent Study

Architecture Capstone (4 credits)
ARCH 480 Senior Design Project

Architecture Allied Requirements
IAART 103 Three Dimensional Design
MATH 120 Applied Algebra and Trigonometry (or any higher level MATH)

ELECTIVES
Students are encouraged to take ARCH 494 Advanced Cooperative Education.

MINOR/ADDITIONAL ELECTIVES
Select additional courses of your choice to bring total number of credits earned to 124. Students are encouraged to complete a minor or an organized cluster of courses related to their career interests.

DEGREE REQUIREMENTS
124 credits

Art
Bachelor of Arts

The Bachelor of Arts degree in Art is designed to meet a variety of student needs through courses in art history, painting, sculpture, printmaking, ceramics, drawing, photography, and graphic design. Through the program's flexibility and rich variety, students are encouraged to develop their skills and broaden their knowledge in courses that can lead to graduate school or a variety of careers in visual art and graphic design. The Studio Art option introduces and fosters the individual development of four major areas of study: Painting, Sculpture, Printmaking, Photography, and Ceramics. Throughout introductory, intermediate, and advanced courses, a balance of theoretical and technical knowledge is emphasized. The Studio Art option is designed to enable each student to focus on one of these areas. The Graphic Design option provides students with a foundation in the theory and practice of graphic design. Graphic designers convert concepts into visual language. Graduates from the Graphic Design option are prepared for design-related careers such as publishing, advertising, web design, and multimedia graphics. Graphic designers convert concepts into visual language. Graduates from the Graphic Design option are prepared for design-related careers such as publishing, advertising, web design, and multimedia graphics.

Admissions Criteria
Entrance into the Art major is highly competitive. To become an Art major (Graphic Design and Studio Art options), a portfolio of 10 to 20 pieces of artwork in Graphic Design or Studio Art must be submitted and accepted (see below). Upon acceptance, students will be assigned an Art faculty advisor and within their first year must officially declare their major. Due to the selective nature of the Art program, the number of available openings is limited. All students are accepted to the Art major through the portfolio approval process. It is anticipated that most students who enter the Art major do so directly from high school and will submit a portfolio of work before they begin classes at Keene State College. Transfer students are also required to submit a portfolio to the Art Department as part of the application process. Based on a favorable assessment of their artwork produced at other accredited institutions, transfer students may request a waiver of some requirements. Students who are already enrolled at Keene State College with another major or who have not declared a major must also submit a portfolio to be accepted into the Art major. The portfolio for enrolled students must include work from a minimum of two Keene State College art courses. The portfolio acceptance process for enrolled students is conducted at the beginning of the fall and spring semesters. It is highly recommended that enrolled students submit their portfolios by the beginning of their sophomore year at Keene State College.
Portfolio Requirements

1. Ten to 20 pieces of original artwork, including drawings, in Graphic Design, Studio Art, or both.
2. Criteria used in evaluation includes skill with design, drawing, materials, and creativity.
3. The portfolio should include original artwork in 35mm slide or digital format compatible with Macintosh operating system (jpeg preferred).
4. All slides or discs must be clearly labeled with your name and be numbered.
5. A sheet numbered with each work's title, medium, dimensions, and level of completion (freshman, sophomore, junior, or senior). If the work was completed independently, be sure to clearly state your concept.
6. Please include your name, address, telephone number, and e-mail address.
7. Please include the following information:
   a. Indicate your area of interest with regard to Graphic Design, Studio Art, or both, in relation to your career goals.
   b. List the number and description of all art courses taken on the high school or college level.
   c. List extracurricular activities and interests.
8. Please send portfolio to:
   Art Department Portfolio Review Committee
   Art Department Office
   Keene State College
   229 Main Street
   Keene, NH 03435-2405
9. Application deadline is April 1.

Portfolios without the above information will be automatically placed on a waiting list while all other portfolios are reviewed. After this time, if there are any remaining openings, incomplete portfolios will then be considered.

All portfolios will be accepted, refused, or put on a waiting list. With regard to portfolios on the waiting list, all decisions will be made by May 1.

Art 350 Graphic Design II Portfolio Review

At the end of ART 350 Graphic Design II students will submit a portfolio of work completed during the core Graphic Design courses (ART 151, ART 250, ART 258, and ART 350). A panel of three Graphic Design faculty will review the portfolio and a written evaluation will be supplied to each student. This portfolio review is a graduation requirement for all students in the Graphic Design Option.

Graphic Design Transfer Students

Graphic Design transfer students must take ART 151, ART 250, ART 258, and ART 350. ART 151 and/or ART 250 may be substituted for equivalent courses from an accredited institution; however, ART 258 and ART 350 must be taken at Keene State College. Transfer students will be required to submit a portfolio of quality work from these classes at the completion of ART 350 (see ART 350 Graphic Design II Portfolio Review).

Art Department Fellowships

The Art Department offers five fellowships for outstanding junior and senior Art majors. The stipend is for one academic year and requires some service to the Art Department on a weekly basis. The application process is conducted annually during the spring semester.

Use and Return of Student Artwork

Due to space limitations, 2-D student artwork left behind will be held for one semester and then disposed of, 3-D student artwork must be removed at the end of the semester in which it was completed or it will be disposed of (unless arrangements have been made between the individual instructor and the student).

LANGUAGE REQUIREMENT

The student must demonstrate proficiency in a language other than English as specified by the Language Requirement for Students with Majors in the School of Arts and Humanities. The complete policy statement appears at the beginning of the Bachelor's Degree Programs section of this catalog.

INTEGRATIVE STUDIES REQUIREMENTS

44 credits

MAJOR REQUIREMENTS

48 credits – Studio Art Option
50 credits – Graphic Design Option
Foundation Core (12 credits)
ART 101 Foundations of Design or IAART 100
ART 111 Introduction to Art History or IAART 110
ART 125 Drawing I or IAART 120

An Art major must select one of the following options:

Graphic Design Option (38 credits)
100-level course (2 credits)
ART 151 Technology Workshop

200-level courses (12 credits)
ART 250 Graphic Design I
ART 253 Digital Imaging I
ART 258 Typography I

300-level courses (12 credits)
ART 350 Graphic Design II
ART 354 Web-Based Media I
ART 356 Time-Based Media I

400-level courses (12 credits)
ART 450 Graphic Design III
ART 455 Topics in Graphic Design
ART 459 Graphic Design Portfolio

Studio Art Option (36 credits)
200-level courses (22 credits)
ART 208 Ceramics I
ART 225 Drawing II
ART 226 Painting I
ART 244 Sculpture I
ART 295 Sophomore Studio/Exhibit Practice (2 credits)

Select one from the following Art History courses:
  ART 211 Ancient Art
  ART 212 Medieval Art
  ART 213 Renaissance Art
  ART 214 Modern Art
  ART 290 Topics in Art History
  ART 492 Art History Seminar

300-level courses (8 credits)
ART 333 Printmaking I

Select one from the following:
  ART 308 Ceramics II
  ART 325 Drawing III
  ART 326 Painting II
  ART 334 Printmaking II
  ART 344 Sculpture II

400-level courses (6 credits)
ART 495 Senior Studio/Exhibit Practice (2 credits)

Select one from the following:
  ART 408 Ceramics III
  ART 426 Painting III
  ART 434 Printmaking III
  ART 444 Sculpture III
  ART 490 Advance Studio Topics

ELECTIVES
Select courses to reach a total of 120 credits for the degree.
It is recommended that students in the B.A. program in Studio Art take additional studio art courses at the 300- and 400- level as well as additional Art History courses.
It is recommended that students in the B.A. program in Graphic Design take ART 333 Printmaking I, ART 226 Painting I, and additional 300- and 400-level Graphic Design courses. Students who plan to apply to graduate programs in the visual arts should consider the B.F.A. program.

**DEGREE REQUIREMENTS**

120 credits

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**Art**

**Bachelor of Fine Arts**

The Bachelor of Fine Arts degree program is designed to provide students with an intensely comprehensive course of study consisting of a minimum of 72 credits in visual arts courses. The B.F.A. degree can lead directly to graduate study (M.F.A.) or to professional careers in the Graphic Design field. To be eligible for the B.F.A. degree, students must first be accepted into the B.A. program in Art.

The B.F.A. degree is organized into the following three options:

**Graphic Design**

Following acceptance into the Art Department, students are encouraged to select the B.F.A. option in Graphic Design. Students will consult with their advisor when submitting their Declaration of Major form.

**Studio Art**

**Studio Art and Graphic Design (dual option)**

The Studio Art option and the Studio Art and Graphic Design dual option are highly selective programs. Accepted students will have an individual studio space and work one on one with an Art professor mentor. All accepted candidates will mount a B.F.A. Solo Thesis Exhibition as a graduation requirement. Students may apply to the Studio Art option or the Studio Art and Graphic Design dual option after completion of a minimum of 6 courses (24 credits) that must include the Foundation Core. Studio Art and Graphic Design dual option applicants must take ART 250 Graphic Design I and ART 258 Typography as part of the 24-credit minimum. Students are expected to have maintained a minimum cumulative GPA of 3.0 in those 6 courses. Acceptance to the program is based on an assessment of a portfolio* of artwork from these courses. The portfolio, a written statement of personal educational goals, and an official transcript, must be submitted to the B.F.A. Studio Options Committee. Portfolio reviews for acceptance are conducted each spring prior to the course selection and registration period.

Transfer students are also eligible to apply for the B.F.A. Studio Art option or the B.F.A. Studio Art and Graphic Design dual option provided they meet the admissions standards for the B.A. degree in Art as well as those for the B.F.A. Studio Art degree or the Studio Art and Graphic Design dual option degree. This must include a review by the Art faculty of a completed transfer course evaluation of all previously taken art courses.

Once accepted, all B.F.A. candidates must maintain a minimum cumulative GPA of 3.0 in the major (Art courses). The B.F.A. Studio Options Committee will also conduct mid-level reviews of accepted students during the fall semester. The purpose of the review is to assess the candidate's progress toward the completion of the degree as well as the development of their artwork. Individuals whose GPA falls below the minimum standard or whose artwork is not at the appropriate level for the B.F.A. Studio Art option or the Studio Art and Graphic Design dual option will no longer be eligible for the options and will be returned to the B.A. in Studio Art or B.F.A. in Graphic Design. Students who have not maintained B.F.A. standards in the Studio Art option or the Studio Art and Graphic Design dual option will be allowed to reapply provided the deficiencies have been corrected. B.F.A. candidates in the Studio Art option or the Studio Art and Graphic Design dual option will also meet with the B.F.A. Studio Options Committee after their completion of their B.F.A. Senior Exhibition. The committee will conduct an oral review in which the candidate will outline the rationale followed for their exhibition.

*Portfolio Criteria for B.F.A. in Studio Art or Studio Art and Graphic Design Dual Options*

1. Portfolios must consist of no fewer than 20 pieces of college-level artwork.
2. All work must be properly labeled with the following information:
   a. Name
   b. Medium
   c. Size (slide and digital portfolios only)
   d. Course title and date of execution
LANGUAGE REQUIREMENT
The student must demonstrate proficiency in a language other than English as specified by the Language Requirement for Students with Majors in the School of Arts and Humanities. The complete policy statement appears at the beginning of the Bachelor’s Degree Programs section of this catalog.

INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits

MAJOR REQUIREMENTS
74 credits – Graphic Design
72 credits – Studio Art
74 credits – Studio Art and Graphic Design (dual option)

Foundation Core (12 credits)
ART 101 Foundations of Design or IAART 100
ART 111 Introduction to Art History or IAART 110
ART 125 Drawing I or IAART 120

Graphic Design Option (62 credits)
100-level courses (2 credits)
ART 151 Technology Workshop

200-level courses (20 credits)
ART 250 Graphic Design I
ART 253 Digital Imaging I
ART 258 Typography I
One 200-level Art History course
One 200- or 300-level Studio Art course

300-level courses (24 credits)
ART 333 Printmaking I
ART 350 Graphic Design II
ART 351 History of Graphic Design
ART 354 Web-Based Media I
ART 356 Time-Based Media I
One 300-level Graphic Design course

400-level courses (12 credits)
ART 450 Graphic Design III
ART 455 Topics in Graphic Design
or ART 497 Graphic Design/Studio Internship (total 8 credits)
(Note: Students may take 8 credits of either ART 455 Topics in Graphic Design (different topics) or 8 credits of ART 497 Graphic Design/Studio Internship or a combination of ART 455 and ART 497 for 8 credits total in order to meet this requirement.
ART 459 Graphic Design Portfolio

Studio Art Option (60 credits)
200-level courses (26 credits)
ART 208 Ceramics I
ART 225 Drawing II
ART 226 Painting I
ART 244 Sculpture I
ART 295 Sophomore Studio/Exhibit Practice (2 credits)
Select two from the following:
ART 211 Ancient Art
ART 212 Medieval Art
ART 213 Renaissance Art
ART 214 Modern Art
ART 290 Topics in Art History
ART 492 Art History Seminar

300-level courses (16 credits)
ART 325 Drawing III
ART 333 Printmaking I
Select two from the following:
ART 308 Ceramics II
ART 326 Painting II
ART 334 Printmaking II
ART 344 Sculpture II

400-level courses (18 credits)
ART 495 Senior Studio/Exhibit Practice (2 credits)
ART 496 BFA Senior Studio (2 semesters)
Select two from the following:
  ART 408 Ceramics III
  ART 426 Painting III
  ART 434 Printmaking III
  ART 444 Sculpture III
  ART 490 Advance Studio Topics

It is strongly recommended that BFA Studio Art students repeat either ART 225 Drawing II or ART 325 Drawing III.

Studio Art and Graphic Design Dual Option
(62 credits)

100-level courses (2 credits)
ART 151 Technology Workshop

200-level courses (30 credits)
ART 250 Graphic Design I
ART 253 Digital Imaging I
ART 258 Typography I
ART 295 Sophomore Studio/Exhibit Practice (2 credits)
Select three from the following:
  ART 208 Ceramics I
  ART 225 Drawing II
  ART 226 Painting I
  ART 244 Sculpture I
Select one from the following:
  ART 211 Ancient Art
  ART 212 Medieval Art
  ART 213 Renaissance Art
  ART 214 Modern Art
  ART 290 Topics in Art History
  ART 492 Art History Seminar

300-level courses (20 credits)
ART 333 Printmaking I
ART 350 Graphic Design II
ART 354 Web-Based Media I
ART 356 Time-Based Media I
Select one from the following:
  ART 308 Ceramics II
  ART 325 Drawing III
  ART 326 Painting II
  ART 334 Printmaking II
  ART 344 Sculpture II

400-level courses (10 credits)
ART 495 Senior Studio/Exhibit Practice (2 credits)
ART 496 B.F.A. Senior Studio
ART 459 Graphic Design Portfolio

It is strongly recommended B.F.A. Studio Art and Graphic Design dual option students take a second semester of ART 496 Senior Studio.

ELECTIVES
Select courses to reach a total of 120 credits for the degree.

DEGREE REQUIREMENTS
120 credits
Athletic Training

Bachelor of Science

Keene State College offers a CAATE (Commission on Accreditation of Athletic Training Education) accredited undergraduate athletic training education program designed for those students who wish to pursue certification as an athletic trainer. Students who graduate with a degree in Athletic Training are eligible to take the BOC (Board of Certification) Athletic Training Certification Examination. The program prepares students for athletic training positions in educational, professional sport, military/law enforcement training, performing arts and clinical settings, as well as for graduate programs in Sports Medicine/Athletic Training, Exercise Physiology and Biomechanics, or other Medical and Allied Health fields.

The Athletic Training major is a competitive program, with enrollments limited to 16 per academic year. Because of the professional nature of Athletic Training and its responsibility to the public, the program has established admissions, progression, and graduation standards for student selection and graduation. As such a formal application is REQUIRED.

COMPETENCY REQUIREMENTS FOR ATHLETIC TRAINING

All students majoring in Athletic Training are required to be certified in Standard First Aid and CPR for the Professional Rescuer. Proof of a current certification card must be provided for the application and maintained for courses marked with 1.

FEES

Additional expenses associated with the athletic training education program include maintaining Standard First Aid and CPR for the Professional Rescuer, Hepatitis B immunizations, differential fees for clinical courses, travel expenses to and from off-campus clinical assignments, uniforms or professional attire, professional memberships, and occasional conferences and workshops.

INTEGRATIVE STUDIES REQUIREMENTS

44 credits

Professional practice of Certified Athletic Trainers specifies the importance of understanding basic concepts in psychology. Athletic Training majors are advised to enroll in one psychology course as part of their Integrative Studies Program.

Athletic Training

(including major + allied)

73+12=85

MAJOR REQUIREMENTS

(73 credits)

PE 140 Introduction to Athletic Training (2 credits)
PE 141 Personal Health (2 credits)
PE 200 Applied Kinesiology
PE 201 Physiology of Exercise
PE 240 Emergency Medical Technician 1
PE 241 Techniques of Athletic Taping (1 credit)
PE 242 EMT Practicum 1 (1 credit)
PE 340 Prevention and Care of Athletic Injuries
PE 341 Evaluation of the Lower Extremity and Axial Region
PE 342 Therapeutic Modalities
PE 343 Clinical Exercise Therapy
PE 344 Sports Nutrition
PE 383 Clinical Athletic Training I 1 (1 credit)
PE 384 Clinical Athletic Training II 1 (1 credit)
PE 440 Evaluation of the Upper Extremity and Spine
PE 441 Pharmacology and Pathology for Athletic Trainers
PE 443 Administration of Athletic Training
PE 460 Experimental Design and Analysis for Physical Education
PE 483 Clinical Athletic Training III
PE 484 Clinical Athletic Training IV 1
PE 493 Athletic Training Externship 1 (6 credits)
PE 494 Athletic Training Practicum 1 (2 credits)
The Athletic Training curriculum is tightly structured and has sequential coursework, so it is essential that new students begin the major in their first year at Keene State College. Transfers and other students who begin the major at the sophomore or junior year should plan on staying an additional one to three semesters beyond the traditional four-year schedule to complete the program. Any student who competes in a varsity or club sport will likely complete the Athletic Training major in more than four years because of the conflict of practice times and required athletic training clinical observation education hours. Freshmen who intend to apply to this major must enroll in PE 141 for the fall semester and PE 140 for the fall or spring semester.

ALLIED REQUIREMENTS FOR ATHLETIC TRAINING

12 credits

BIO 230 (Human Anatomy and Physiology I) and BIO 232 (Human Anatomy and Physiology II) are prerequisites for courses in the major for all students majoring in Athletic Training. This sequence is normally started in the spring semester of the freshman year.

The prerequisite for BIO 230 is INCHEM 100, INCHEM 103, or INCHEM 111. Therefore, a chemistry course should be taken during the first semester of the freshman year.

ADMISSION TO THE PROGRAM

TRANSFERS: Transfers with more than 30 credits who have successfully completed Human Anatomy and Physiology I or the equivalent must meet with the Athletic Training program coordinator and complete an Accelerated Transfer Sequence form to determine required coursework for admission and degree requirements. The process for admission for Accelerated Transfers begins during the first week of first quarter, with completed applications due November 1. Transfer students must meet the minimum GPA requirement of a 2.5 from the previous institution. Review of transfer students' applications and official notification of the results of this review would occur before the start of the spring semester.

FRESHMAN/FIRST YEAR: The process for admission begins when the student enrolls in PE 140. Applications for freshman/first-year students are due April 15. Review of freshmen students' applications and official notification of the results of this review would occur during the summer.

Students will receive a formal letter indicating their admission status. If a student is not accepted, the letter will clearly indicate the deficiencies and clearly define how those deficiencies should be addressed. A consultation will be scheduled with the Athletic Training Education Program Director. During that conference, the student will be notified of any course adjustments and indicate their willingness to address the deficiencies in order to reapply. The student will be eligible to reapply for admission during the next academic year's admission period.

ADMISSION CRITERIA

Competitive enrollment requires the student to submit a formal application. Students applying must submit a portfolio documenting each of the following components:

1. Overall GPA of 2.5.
2. Required major and allied courses of a grade C or better.
3. Application.
   a. Performance evaluation by the Keene State College Approved Clinical Instructors
   b. A minimum of 25 observation hours of pre-professional clinical experience in the Keene State College Athletic Training Room.
   c. Successful proof or completion of required competencies including: Proof of Standard First Aid and CPR for the Professional Rescuer; Basic Athletic Training Taping Skills (assessed in PE 241).
   d. Recommendation for admission by two Keene State College faculty or staff.
   e. Students must provide a current physical, proof of immunization (Hepatitis B), and signed copy of the technical standards.

TECHNICAL STANDARDS FOR ADMISSION

The Athletic Training Educational Program at Keene State College is a rigorous and intense program that places specific requirements and demands on the students enrolled in the program. An objective of this program is to prepare graduates to enter a variety of employment settings and to render care to a wide spectrum of individuals engaged in physical activity. 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 [Commission on Athletic Training Education (CAATE)]. The following abilities and expectations must be met by all students admitted to the Athletic Training Educational Program. In the event a student is unable to fulfill these technical standards, with or without reasonable accommodation, the student will not be admitted into the program. Compliance with the program's technical standards does not guarantee a student's eligibility for the Board of Certification (BOC) Athletic Trainer's Certification Exam.
Candidates for selection to the Keene State College Athletic Training Educational Program must demonstrate the following technical standards for admission:

1. The mental capacity 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.

2. Sufficient postural and neuromuscular control, sensory function, and coordination to perform appropriate physical examinations using accepted techniques; and accurately, safely, and efficiently use equipment and materials during the assessment and treatment of patients.

3. The ability to understand and speak the English language at a level consistent with competent professional practice.

4. The 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, the ability to establish rapport with patients and communicate judgments and treatment information effectively.

5. The ability to record the physical examination results and a treatment plan clearly and accurately.

6. The capacity to maintain composure and continue to function well during periods of high stress.

7. The perseverance, diligence, and commitment to complete the athletic training education program as outlined and sequenced.

8. The flexibility and the ability to adjust to changing situations and uncertainty in clinical situations.

9. The affective skills and appropriate demeanor and rapport relating to professional education and quality patient care.

RETENTION GUIDELINES
Clinical Athletic Training I, II, III, IV, AT Practicum require the following:

1. Proof of Standard First Aid and CPR for the Professional Rescuer.

2. Maintain a 2.5 GPA; maintain a 2.5 GPA within the major.

3. Completion of the required Athletic Training major and Allied courses with a grade C or better.

Liability Insurance: Students admitted to and enrolled in Athletic Training major clinical courses, including the externship, are provided medical liability insurance; however, students may opt to purchase additional liability insurance for additional coverage.

Admission to PE 493 Externship: Athletic Training: Due to specific accreditation requirements for affiliated clinical sites, students are required to submit letters of intent to register for PE 493 Externship: Athletic Training following completion of courses leading up to and including junior level courses in the Athletic Training major. Students are required to provide their own transportation for all off-campus clinical experiences. Professional Attire is required (see Fees). The following criteria will be used:

1. Completion of a minimum of 75 credits.

2. Completion of the Athletic Training major required courses listed below with a 2.5 GPA or better.

3. Successful completion of required clinical proficiencies and comprehensive competencies.

4. Proof of Standard First Aid and CPR for the Professional Rescuer and immunizations.

Transcripts will be reviewed prior to placing students in each clinical and the Externship. The Externship Application Deadline for senior fall and spring semesters are March 1 of the junior year. Students must apply for a fall sport rotation or for a winter/spring sport rotation. Transcripts will be reviewed prior to placing students.

DEGREE REQUIREMENTS
128 credits
(Total degree requirements may change pending Integrative Studies requirements.)
Biology

Bachelor of Arts

The Bachelor of Arts in Biology provides an introduction to the discipline and an opportunity to integrate the study of Biology with another field. In contrast to the B.S. program, the B.A. requires fewer credits in both biology and related sciences, permitting a student to complete a second major or additional courses in another discipline such as Chemistry, Psychology, Elementary Education, Journalism, Art, Management, or Computer Science; thus, it satisfies the needs of students with a combination of interests.

INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits

MAJOR REQUIREMENTS
52 credits

Core Courses (24 credits)
BIO 110 Molecules and Cells*
BIO 111 Evolution*
BIO 210 Ecology
BIO 211 Genetics
BIO 212 Cells and Physiology
BIO 495 Senior Seminar

*Students must earn a grade C or higher in both BIO 110 and BIO 111 in order to take any 200-level or higher BIO course.

Upper-Level Courses (12 credits)
Select one course in biological diversity (4 credits) from the following:
BIO 333 Invertebrate Zoology
BIO 334 Vertebrate Zoology
BIO 335 Ornithology
BIO 365 Plant Evolution

Select any two 300- or 400-level BIO courses for an additional 8 credits to bring total credits in biology to 36 credits.

Related Science and Math Courses (16 credits)
INCHEM 111 General Chemistry I
CHEM 112 General Chemistry II
MATH 141 Introductory Statistics
Select one of the following:
INPHYS 141 College Physics I
INGEOL 151 Introductory Physical Geology

Teacher Certification
Dual Major in Education

Secondary Education

ELECTIVES
Select additional courses to reach a total of 120 credits.

DEGREE REQUIREMENTS
120 credits

For a dual major in Education, please refer to the appropriate Education program option.

Biology

Bachelor of Science

The Bachelor of Science program in Biology is designed to stimulate intellectual and personal growth through an examination of the fundamental properties of living systems, the application of experimental and descriptive methods of discovery, and the consideration of the social, ethical, and aesthetic aspects of biological knowledge.
The B.S. program also provides undergraduate preparation for technical employment or post-baccalaureate study in graduate school or for professions such as medicine, dentistry, veterinary medicine, teaching, and natural resource management. A Biology major considering graduate or professional school should confer with a Biology advisor to plan a program to meet the student's specific needs and assure entrance into such a school.

INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits

MAJOR REQUIREMENTS
76 credits

Core Courses (24 credits)
BIO 110 Molecules and Cells*
BIO 111 Evolution*
BIO 210 Ecology
BIO 211 Genetics
BIO 212 Cells and Physiology
BIO 495 Senior Seminar

*Students must earn a grade C or higher in both BIO 110 and BIO 111 in order to take any 200-level or higher BIO course.

Upper-Level Biology Courses (24 credits)
Select one course in biological diversity (4 credits) from the following:
BIO 333 Invertebrate Zoology
BIO 334 Vertebrate Zoology
BIO 335 Ornithology
BIO 365 Plant Evolution

Upper-Level BIO Electives (20 credits)
Select any five 300- or 400-level BIO courses to bring total credits in biology to 48 credits. Students may take BIO 232 Human Anatomy and Physiology II for 4 credits of the upper-level elective BIO credits. Note: This applies to the B.S. degree only.

Related Science/Math Courses (28 credits)
INCHEM 111 General Chemistry I
CHEM 112 General Chemistry II
CHEM 221 Organic Chemistry I
CHEM 222 Organic Chemistry II
INPHYS 141 College Physics I
PHYS 142 College Physics II
MATH 141 Introductory Statistics

ELECTIVES
Select additional courses to reach a total of 124 credits for the degree.

DEGREE REQUIREMENTS
124 credits

Chemistry
Bachelor of Arts

Broadly based in the liberal arts tradition, the B.A. in Chemistry has been designed for students interested in careers in areas that use chemistry as a base, such as the health-related professions, pharmaceutical marketing, secondary science education, chemistry-related industry, and/or entrance to graduate school. By combining this major with any one of a number of majors or minors, considerable flexibility is provided to the student. A specific articulation with the Education department (secondary option) is available and allows students to complete a dual major (B.A. in Chemistry, B.S. in Education) with Chemistry certification.
INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits

MAJOR REQUIREMENTS
60 credits

Core Courses (28 credits)
INCHEM 111 General Chemistry I
CHEM 112 General Chemistry II
CHEM 221 Organic Chemistry I
CHEM 222 Organic Chemistry II
CHEM 251 Quantitative Analysis
CHEM 342 Physical Chemistry II
CHEM 375 Biochemistry

Related Fields (24 credits)
BIO 110 Molecules and Cells
MATH 141 Introductory Statistics
MATH 151 Calculus I
MATH 152 Calculus II
INPHYS 141 College Physics I
PHYS 142 College Physics II

ELECTIVES
For the B.A. in Chemistry, 8 credits of CHEM Electives at the 300 level or above must be completed. Select additional courses to reach a total of 120 credits.

For a dual major in Education, please refer to the Education program, Secondary Education option. In addition, students are required to take Inorganic Chemistry (CHEM 363).

DEGREE REQUIREMENTS
120 credits

Chemistry
Bachelor of Science

The B.S. in Chemistry should serve as a general preparation for a professional scientist. The major was designed according to guidelines from the American Chemical Society (ACS) to be rigorous, yet flexible enough to allow for preparation for immediate employment, graduate study, or work in an allied profession.

From the introductory through the advanced level of courses, students have access to the instrumentation and facilities of the department. The faculty values a hands-on approach to chemical education. The major is structured to provide a strong background for work culminating in a final year, which is flexible enough to allow faculty directed independent research or interdisciplinary study.

Students considering a major in Chemistry should consult a member of the faculty for advice on the sequence of courses, as the courses in related fields described below are prerequisites for upper-level study.

INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits

MAJOR REQUIREMENTS
72 credits

Core Courses (48 credits)
INCHEM 111 General Chemistry I
CHEM 112 General Chemistry II
CHEM 221 Organic Chemistry I
CHEM 222 Organic Chemistry II
CHEM 251 Quantitative Analysis
CHEM 341 Physical Chemistry I
CHEM 342 Physical Chemistry II
CHEM 363 Inorganic Chemistry
CHEM 375 Biochemistry
CHEM 421 Advanced Synthetic Chemistry
CHEM 454 Instrumental Analysis
Select one of the following courses:
   CHEM 321 Organic Chemistry III
   CHEM 333 Medicinal Chemistry
   CHEM 373 Polymer Chemistry

Related Fields (24 credits)
MATH 141 Introductory Statistics
MATH 151 Calculus I
MATH 152 Calculus II
Select one pair from the following:
   INPHYS 141 College Physics I and PHYS 142 College Physics II
   or INPHYS 241 University Physics I and PHYS 242 University Physics II
BIO 110 Molecules and Cells

ELECTIVES
Select additional courses to reach a total of 124 credits.

DEGREE REQUIREMENTS
124 credits

Chemistry-Physics
Bachelor of Science

In today's changing job market, competency in two or more basic fields of science enhances opportunity for employment and professional growth potential. This major fulfills such a need. This interdisciplinary major provides grounding in two related sciences, with balance in both.

INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits

MAJOR REQUIREMENTS
72 credits

The Chemistry/Physics program consists of 32 credits in Chemistry and 20 credits in Physics. For graduate study in either field, a few additional courses may be necessary.

Core Courses (52 credits)
INCHEM 111 General Chemistry I
CHEM 112 General Chemistry II
CHEM 221 Organic Chemistry I
CHEM 222 Organic Chemistry II
CHEM 251 Quantitative Analysis
CHEM 342 Physical Chemistry II
CHEM 363 Inorganic Chemistry
INPHYS 241 University Physics I
PHYS 242 University Physics II
PHYS 260 Electronics
PHYS 342 Modern Physics
CHEM Electives (4 credits; 300-level and above)
PHYS Electives (4 credits; 300-level and above)

Related Courses (20 credits)
MATH 141 Introductory Statistics
MATH 151 Calculus I
MATH 152 Calculus II
MATH 251 Vector Calculus
CS 140 Computer Programming I
ELECTIVES
Select additional courses to reach a total of 124 credits.

For a dual major in Education, please refer to the Education program, Secondary Education option. In addition, students are required to take Molecules and Cells (BIO 110) and Biochemistry (CHEM 375).

DEGREE REQUIREMENTS
124 credits

Communication
Bachelor of Arts

The Communication major is an interdisciplinary program combining courses in Communication, Journalism, and Philosophy. The major is designed to take a broad-based, humanities-centered view of the symbolic ways humans create meaning. The program will focus on the development of skills as students learn to work with various communication tools to improve their own ability to interact effectively with others. Students will also increase their critical awareness as they study the structure, patterns, and effects of communication on both themselves and society. Career options for graduates might include public relations, human resources, advocacy, media entertainment, advertising, or sales.

Students majoring in Communication must complete a minimum of 10 courses (40 credits) in the areas specified below. A grade C or higher must be earned in each course counted toward the major. Communication majors may count courses used for the major toward a minor in Journalism or Philosophy; however, credits may not be counted twice.

LANGUAGE REQUIREMENT
The student must demonstrate proficiency in a language other than English as specified by the Language Requirement for Students with Majors in the School of Arts and Humanities. The complete policy statement appears at the beginning of the Bachelor's Degree Programs section of this catalog.

INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits

MAJOR REQUIREMENTS
40 credits

The application for formal admission to the Communication major typically occurs during the first or second semester of the sophomore year. To be admitted to the major, the student must have completed IHCOMM 171, COMM 175, and IHPHIL 100. The student must earn a grade of at least a C in each of these three courses. The student must provide a transcript showing his or her grades to a Communication advisor. If the grade requirements are met, the advisor will sign the Declaration of Major form that formally admits the student to the major.

Core Courses (16 credits)
IHCOMM 171 Public Speaking
COMM 175 Introduction to Communication Studies
IHPHIL 100 Logical Argumentation
JRN 100 Introduction to Mass Communication

Communication Studies Option (24 credits)
Ethics (4 credits)
Select one of the following:
COMM 220 Ethics in Communication
IHPHIL 220 Ethics
PHIL 222 Media Ethics

Theory (4 credits)
COMM 376 Theory of Communication and Rhetoric

Research Methods (4 credits)
Research Methods courses require students to study and apply at least one of the following methods: rhetorical criticism, survey research, in-depth interviews, focus group interviews, and textual analysis. Students must choose a Research Methods course that corresponds to the type of senior project they intend to complete.
Select one of the following courses:

COMM 380 Analysis of Organizations
COMM 473 Rhetorical Criticism
COMM 490 Advanced Special Topics (appropriate topic)*
COMM 495 Seminar (appropriate topic)*
PHIL 313 Philosophy and the Holocaust
PHIL 370 Philosophy of Language
PHIL 406 Existentialism and Film
PHIL 490 Advanced Special Topics (appropriate topic)*

*Students should receive prior approval for these courses to fulfill the Research Methods requirement.

Electives in the Major (8 credits)
Select two of the following courses, one from each of two different areas (Communication, Journalism, or Philosophy). At least one course must be at the 300 or 400 level.

COMM 250 Children and the Media
COMM 275 Interpersonal Communication
COMM 278 Group Interaction
COMM 290 Special Topics
COMM 371 Speech Writing (Advanced Public Speaking)
COMM 372 Intercultural Communication
COMM 375 Business and Professional
COMM 378 Persuasion
COMM 379 Internship
COMM 380 Analysis of Organizations
COMM 473 Rhetorical Criticism
COMM 478 Rhetorical Theory
COMM 490 Advanced Special Topics
COMM 495 Seminar (appropriate topic)
COMM 498 Independent Study
JRN 130 Writing for the Media
JRN 230 Print Journalism (JRN 130 required)
JRN 311 Mass Media History and Theory
PHIL 200 Philosophy and Critical Analysis
PHIL 231 Comparative Religion
PHIL 240 Skin, Sex, and Genes
PHIL 260 Theories of the Body
PHIL 280 Knowledge and Reality
PHIL 304 American Philosophy
PHIL 308 Contemporary Philosophy
PHIL 313 Philosophy and the Holocaust
PHIL 350 Aesthetics
PHIL 360 Philosophy of Law
PHIL 370 Philosophy of Language
PHIL 406 Existentialism and Film
PHIL 490 Advanced Special Topics
PHIL 498 Independent Study

Capstone (4 credits)
COMM 479 Senior Project

Philosophy Option (24 credits)
The Philosophy option provides students with general coverage of basic philosophical issues while developing student skills in critical and analytical thinking and exposing students to a wide range of historical and ethical manifestations of philosophical beliefs.

Ethics (4 credits)
Select one of the following courses:

COMM 220 Ethics in Communication
IHPHIL 220 Ethics
PHIL 222 Media Ethics

Theory (4 credits)
Select one of the following courses:

PHIL 304 American Philosophy
PHIL 308 Contemporary Philosophy
PHIL 350 Aesthetics

Research Methods (4 credits)
Research Methods courses require students to study and apply at least one of the following methods: rhetorical criticism, survey research, in-depth interviews, focus group interviews, textual analysis. Students must choose a Research Methods course that corresponds to the type of senior project they intend to complete.

Select one of the following courses:
COMM 380 Analysis of Organizations
COMM 473 Rhetorical Criticism
COMM 490 Advanced Special Topics (appropriate topic)*
COMM 495 Seminar (appropriate topic)*
PHIL 313 Philosophy and the Holocaust
PHIL 370 Philosophy of Language
PHIL 406 Existentialism and Film
PHIL 490 Advanced Special Topics (appropriate topic)*

*Students should receive prior approval for these courses to fulfill the Research Methods requirement.

Electives in the Major (8 credits)
Select two of the following courses, one from each of two different areas (Communication, Journalism, or Philosophy). At least one course must be at the 300 or 400 level.

COMM 250 Children and the Media
COMM 275 Interpersonal Communication
COMM 278 Group Interaction
COMM 290 Special Topics
COMM 371 Speech Writing (Advanced Public Speaking)
COMM 372 Intercultural Communication
COMM 375 Business and Professional Communication
COMM 378 Persuasion
COMM 379 Internship
COMM 380 Analysis of Organizations
COMM 473 Rhetorical Criticism
COMM 478 Rhetorical Theory
COMM 490 Advanced Special Topics
COMM 495 Seminar (appropriate topic)
COMM 498 Independent Study
JRN 130 Writing for the Media
JRN 230 Print Journalism (JRN 130 required)
JRN 311 Mass Media History and Theory
PHIL 200 Philosophy and Critical Analysis
PHIL 231 Comparative Religion
PHIL 240 Skin, Sex, and Genes
PHIL 260 Theories of the Body
PHIL 280 Knowledge and Reality
PHIL 304 American Philosophy
PHIL 308 Contemporary Philosophy
PHIL 313 Philosophy and the Holocaust
PHIL 350 Aesthetics
PHIL 360 Philosophy of Law
PHIL 370 Philosophy of Language
PHIL 406 Existentialism and Film
PHIL 490 Advanced Special Topics
PHIL 498 Independent Study

Capstone (4 credits)
COMM 479 Senior Project

ELECTIVES
Select courses to reach a total of 120 credits for the degree.

DEGREE REQUIREMENTS
120 credits
Computer Mathematics

Bachelor of Science

This program provides students with a thorough grounding in both computer science (CS) and mathematics. This nexus between CS and mathematics is both historical and logical; the program capitalizes on this association to provide students with the best opportunity to pursue careers in either field. Graduates of this program are well prepared for entry-level positions in industry and have successfully earned graduate degrees in both mathematics and in computer science.

INTEGRATIVE STUDIES REQUIREMENTS

(minimum) 44 credits

MAJOR REQUIREMENTS

56 credits

Computer Science Core Courses
CS 140 Computer Programming I
CS 150 Web Page Construction
or CS 160 Microcomputer Systems
CS 185 Computer Programming II
CS 280 Data Structures
Select one CS course (in a programming language not already covered) from the following:
  - CS 205 Visual Programming
  - CS 220 COBOL
  - CS 225 C++ Programming
  - CS 230 RPG Programming

Two upper-level (300 or 400) courses approved by CS Advisor

Mathematics Core Courses
MATH 151 Calculus I
MATH 152 Calculus II
MATH 231 Linear Algebra and Differential Equations
MATH 225 Introduction to Abstract and Discrete Mathematics
MATH 241 Probability and Statistics I
MATH 362 Math Modeling and Computing

Physics Core Courses
INPHYS 241 University Physics I

ELECTIVES

Select courses to reach a total of 124 credits for the degree.

DEGREE REQUIREMENTS

124 credits

Earth/Space Science

Bachelor of Arts

This program is designed to prepare candidates for teaching Earth/Space science in grades 7-12. In addition to meeting all of the degree requirements set by Keene State College (Earth/Space, education, and integrative studies), this program will result in certification for secondary school teaching by the state of New Hampshire in a nationally recognized science education program. Graduates of this program will possess the skills and knowledge necessary to be successful secondary teachers who can fill the critical shortage area in this teaching area – not only in New England, but across the country.

INTEGRATIVE STUDIES REQUIREMENTS

44 credits

Specific requirements for Integrative Studies can be found in the appropriate section of the catalog. In addition, asterisked (*) courses listed in the following Major Requirements section are required for the major and may be applied toward the Natural Sciences and Foundations component of the Integrative Studies requirements.
MAJOR REQUIREMENTS
Sixty (60) credits, including courses applied to Integrative Studies. Please note that students seeking certification at the secondary level in Earth and Space Science should refer to the Secondary Education option in the Education major section of the catalog for a list of additional course requirements.

INGEOL 151 Physical Geology
GEOL 206 Oceanography
GEOL 252 Evolution of the Earth
GEOL 301 Mineralogy
GEOL 305 Paleontology
GEOL 306 Sedimentation and Stratigraphy
GEOL 315 Environmental Geology
INMET 225 Meteorology
INCHEM 111 General Chemistry I and Lab *
CHEM 112 General Chemistry II and Lab
INPHYS 141 College Physics I *
BIO 111 Evolution
Math 141 Statistics *

Select one of the following Astronomy courses:
   INASTR 107 Introduction to Astronomy
   ASTR 307 University Astronomy

Select one of the following Mathematics courses:
   Math 120 Algebra and Trigonometry
   Math 130 Precalculus
   Math 151 Calculus I

B.A. WITHOUT CERTIFICATION
120 credits

B.A. WITH CERTIFICATION
126 credits

Economics
Bachelor of Arts

The B.A. in Economics combines rigorous training in economic theory with application to contemporary issues such as globalization, financial market volatility, and the environment. The Economics program is a tight-knit community, and majors and minors can expect to work closely with faculty and with each other. The economic honors society, Omicron Delta Epsilon, organizes field trips to conferences and brings in visiting speakers and alumni. Recent graduates have gone on to careers in business and government, to law school, and to graduate programs in economics and politics, as well as M.B.A. programs.

All majors will complete a four-course economic theory sequence that includes ISECON 104 and ECON 103 (in either order), and ECON 203 and ECON 204 (in either order). It is strongly recommended that students take ECON 203 and ECON 204 soon after the ISECON 104 and ECON 103 prerequisites to get the most benefit from this theoretical background in their elective courses. Both ECON 203 and ECON 204 should be completed by the end of the junior year so that the student is prepared for the ECON 491 senior research project, which is only offered during the fall semester. The ECON 491 requirement cannot be satisfied through independent study. In addition, majors will take ISECON 360 and complete three additional economics electives. ECON 420 is recommended, but not required; skills from ECON 420 are useful in ECON 491, so it is recommended that ECON 420 be taken by the end of the junior year. Employers value ECON 420, and graduate programs in economics will expect it. Finally, each major must complete one course in introductory statistics (MATH 141 or PSYC 251) as well as one course in logical argumentation (IHPHIL 100).

If you plan to continue into any graduate program, it is strongly suggested that you meet with a faculty member by your junior year to ensure that you are adequately prepared. Statistics is the only math preparation required if you intend to pursue an M.B.A., law school, or a graduate program in a field other than economics. However, a graduate program in economics will require calculus and linear algebra as well.
INTEGRATIVE STUDIES REQUIREMENTS

(minimum) 44 credits

MAJOR REQUIREMENTS

44 credits

Core Courses

IHPHIL 100 Logical Argumentation
MATH 141 Introductory Statistics
or PSYC 251 Psychological Statistics
ECON 103 Introduction to Microeconomics
ISECON 104 Introduction to Macroeconomics
ISECON 360 History of Economic Thought
ECON 203 Intermediate Microeconomics
ECON 204 Intermediate Macroeconomics
ECON 491 Economic Research Project

Economics Electives

12 credits of 300- or 400-level Economics courses; it is recommended that one of these electives be ECON 420.

ELECTIVES

Select courses to reach a total of 120 credits for the degree.

DEGREE REQUIREMENTS

120 credits

Education

Bachelor of Science

The education major has four options:

• Early Childhood Development
• Elementary Education
• Secondary Education
• Elementary and Special Education

Additionally, students in two specialized programs that lead to K-12 certification – Physical Education Teacher Certification and Music Education – take courses offered in the program.

Building on the historical legacy of teacher preparation at Keene State College, the Education program mission is to prepare competent, reflective classroom teachers and other professional school personnel who utilize effective teaching practices and who create developmentally appropriate educational environments for diverse learners. We integrate liberal arts knowledge and professional preparation for each program we offer and incorporate state and national standards for each specialty area. Keene State College has been an NCATE accredited institution since 1954; each education program option meets state and national standards and prepares teacher candidates who demonstrate appropriate content knowledge, pedagogical knowledge and skills, ability to impact student learning, and professionalism.

Our curriculum is based on the KSC Teacher Education Conceptual Framework, which states that we prepare teacher candidates who: (1) explore the dynamic nature of the teaching and learning process, (2) demonstrate professional and ethical behaviors that meet high expectations and standards, (3) understand the world from multiple perspectives, and (4) contribute to a just and equitable world. The coursework builds on ecological theories of human development and examines the contexts in which educational systems exist from the perspective of multiple worldviews. Students thereby develop an understanding of themselves as learners and future teachers as they examine the ways in which developmental theories can be helpful in understanding children and curriculum. Field experiences are systematically integrated throughout the program to provide authentic theory-to-practice opportunities for exploring effective pedagogy and assessment strategies.

Admission to Keene State College does not necessarily guarantee admission to Teacher Education, admission to Student Teaching, or eligibility for certification. Students are assigned an official advisor upon acceptance into the
Teacher Education program. Policies and deadlines relating to meeting certification standards are described in *The ROUTE Handbook*, which is available at the KSC Bookstore and online. This handbook provides the prospective Education major and future teacher with detailed information that will assist in program planning and achieving certification. Materials for application to the Teacher Education program are available in the Teacher Education and Graduate Studies Office in Rhodes Hall S111.

**Transfer Credits**

Students who wish to transfer credits into a teacher certification option must apply through the department chair. Transfer students are advised to contact the department chair immediately after acceptance to obtain information about admission to Teacher Education, PRAXIS testing requirements, and transfer equivalencies.

**Liberal Arts Major**

The New Hampshire State Department of Education requires students completing Education majors to also demonstrate depth of knowledge in a content area. Therefore, Education majors must also fulfill requirements of a liberal arts major. Each Education program option has a specific list of the possible liberal arts majors. See the appropriate catalog section for requirements and additional information for each major.

Students seeking certification in Early Childhood (option 1), Elementary (option 2), and Elementary/Special Education (option 4) are required to complete a liberal arts major in one of the following areas:

- American Studies
- Applied Computer Science
- Art (portfolio requirement)
- Biology
- Chemistry
- Chemistry-Physics
- Communication
- Computer Mathematics
- Economics
- English
- Environmental Studies
- Film Studies
- French
- General Science
- Geography
- Geology
- History
- Holocaust and Genocide Studies
- Individualized Major
- Journalism
- Mathematics
- Mathematics-Physics
- Music (audition required)
- Psychology
- Social Science
- Sociology
- Spanish
- Theatre and Dance

Students seeking certification in Middle or Secondary Education (option 3) are required to complete a liberal arts major in one of the following areas:

- Biology
- Chemistry
- Chemistry-Physics
- English
- General Science
- Geography
- Geology
- History
Mathematics
Modern Languages (French or Spanish)
Physical Science
Social Science

The following statement will be inserted in place of the secondary requirements for each of the above liberal arts majors: For a dual major in Education, please refer to the appropriate Education program option.

Students seeking certification to become a K-12 Music Educator or K-12 Physical Educator will complete the Music Education or Physical Education Teacher Certification major. See the appropriate catalog section (Music or Physical Education) for these program requirements.

INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits
All education majors must meet the New Hampshire General Knowledge Standards for teachers. In order to accomplish this goal, Education majors are advised to take courses focusing on literature, history, and geography as part of their Integrative Studies program. Some Education options require specific courses outside of the Education major; these courses may be included in the student's Integrative Studies program (if appropriate courses are available).

EDUCATION OPTIONS AND REQUIREMENTS
(Numbering conventions: middle digit 0=open to all options (but not necessarily required); 1= early childhood only; 2=elementary only; 3=middle school/secondary only; 4=K-12 Music only)

1. Early Childhood Development Option
(48 credits, plus liberal arts major)
This option provides students with a multidisciplinary understanding of early childhood development and prepares them for employment in public education (K-3) and in the early care and education field. The program includes theory and practice with children from infancy through third grade and fulfills requirements for Birth to Age Eight teacher certification.

Option Requirements:
EDUC 100 Issues in Education (2 credits)
EDUC 200 Social Contexts of Education
EDSP 202 Development, Exceptionality, and Learning
MATH 171 Structure of Number Systems
A course in Children's Literature
EDUC 311 Early Childhood Methods I: Infant/Toddler/Preschool (8 credits)
EDUC 312 Early Childhood Methods II: Primary Grades (K-3) (8 credits)
EDUC 400 Student Teaching (12 credits)
EDUC 410 EC Student Teaching Seminar (2 credits)

2. Elementary Education Option
(48 credits, plus liberal arts major)
This option provides students with a multidisciplinary understanding of teaching and learning in the elementary grades and prepares them to teach in elementary schools and in nondepartmentalized middle schools. The program includes theory and practice with children from kindergarten to grade 6 and fulfills requirements for Elementary Education teacher certification.

Option Requirements:
EDUC 100 Issues in Education (2 credits)
EDUC 200 Social Contexts of Education
EDSP 202 Development, Exceptionality, and Learning
MATH 171 Structure of Number Systems
MATH 172 Application of Number Systems
EDUC 321 Elementary Methods I: Integrating Literacy, Social Studies, and the Arts (8 credits)
EDUC 322 Elementary Methods II: Integrating Math, Science, and Literacy (8 credits)
EDUC 400 Student Teaching (12 credits)
EDUC 420 ELED Student Teaching Seminar (2 credits)

3. Secondary Education Option
(34 credits, plus liberal arts major)
This option prepares students to teach middle and high school students in the following disciplines: Biology, Chemistry, Earth/Space Science, English, General Science, Mathematics, Modern Languages, Physical Science, or Social Studies.
**Option Requirements (34 credits):**
EDUC 100 Issues in Education (2 credits)
EDUC 231 Curriculum for a Diverse World
EDUC 331 Secondary Methods I
EDUC 332 Secondary Classroom Management (2 credits)
EDSP 333 Secondary Special Education Issues (2 credits)
EDUC 431 Secondary Methods II
EDUC 432 Educational Theories/Trends
EDUC 400 Student Teaching (12 credits)

**4. Special Education Option**

**Elementary and Special Education**

(70 credits, plus liberal arts major)

This option is designed to develop background knowledge and skills in identifying, assessing, and teaching students with mild to moderate special needs in the elementary school setting (K-8). Emphasis is on inclusion of students into regular education programs to the extent possible and collaboration with other professionals and support personnel. Coursework and field experiences incorporate K-12 background. Program leads to Elementary Education and K-12 Special Education Certification. For Secondary Special Education and post-baccalaureate options, see note below.

Special Education courses within this program are open to Teacher Education majors if prerequisites are met. All courses are 4 credits unless otherwise specified.

**Option Requirements:**
EDUC 100 Issues in Education (2 credits)
EDUC 200 Social Contexts in Education
EDSP 202 Development, Exceptionality, and Learning
MATH 171 Structure of Number Systems
MATH 172 Application of Number Systems (substitutes for IQL requirement)
EDUC 321 Elementary Methods I (8 credits)
EDUC 322 Elementary Methods II (8 credits)
EDSP 250 Context for Special Education
EDSP 350 Curriculum Design for Students with Special Needs
EDSP 352 Behavior and Social Supports (2 credits)
EDSP 354 Assessment in Special Education (2 credits)
EDSP 356 Practicum and Methods in Special Education (8 credits)
EDUC 405 Student Teaching (Elementary) (6 credits)
EDSP 405 Student Teaching (6 credits)
EDSP 450 SPED Student Teaching Seminar (2 credits)

**NOTE:** Post-Baccalaureate Certification for Elementary and Secondary Special Education

The Special Education option is available at the post-baccalaureate level for students who are already certified in elementary education or secondary education. Students seeking the post-baccalaureate certification may use 8 credits of designated undergraduate coursework (EDSP 250 and EDSP 350) toward their post-baccalaureate certification. Refer to Advanced Studies in Education, Post-Baccalaureate Special Education Certification for program requirements and additional information.

**DEGREE REQUIREMENTS**

124 credits minimum
Degree requirements may exceed 124 credits, depending on the choice of content area major.

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**Engineering**

*(Transfer Programs)*

These programs prepare students to transfer to engineering schools after completing integrative studies requirements and foundation courses in Mathematics, Physics, Chemistry, and Computer Science at Keene State. Students are given personal advising and assistance in placement at the engineering school of their choice. The College at present has a transfer agreement at Clarkson University in Potsdam, New York. In both 2+2 and 3+2 programs, students are encouraged to complete certain engineering science introductory courses at the engineering school during the summer following their sophomore year.
INTEGRATIVE STUDIES REQUIREMENTS  
(minimum) 44 credits

MAJOR REQUIREMENTS

2+2 Program (28 credits)
Students transferring after two years at Keene State College receive the appropriate bachelor's degree from their engineering school upon completion of engineering program requirements. Completion of engineering requirements usually takes between two and three years.

The following course list is a general guide. Additional courses are taken in specialty areas such as Chemistry, depending on the prospective engineering field, or to meet requirements of a particular engineering school.

Mathematics Courses
MATH 151, 152, and 251 Calculus Sequence
MATH 231 Linear Algebra and Differential Equations

Physics Courses
INPHYS 241, PHYS 242, University Physics I, II

Computer Science Courses
CS 140 Computer Programming I

3+2 Program (40 credits)
Students spend three years at Keene State and two years in engineering school and receive a B.S. in Math/Physics from Keene State College and an appropriate B.S. in Engineering. Keene State has a formal 3+2 transfer agreement with Clarkson University in Potsdam, New York. Students who wish to continue receiving Financial Aid must postpone graduation from Keene State until all requirements are fulfilled at both institutions.

CS 140 Computer Programming I
MATH 151, 152, and 251 Calculus Sequence
MATH 231 Linear Algebra and Differential Equations
INPHYS 241, PHYS 242, University Physics I, II
PHYS 260 Electronics
PHYS electives (8 credits, at the 300 level or higher)

English

Bachelor of Arts

The English program encourages students to develop sophisticated ways of understanding, creating, and responding to texts. English majors and minors study the historical development of literary and rhetorical traditions, of literatures written in English, as well as world and European literatures in English translation. Students in the literature option read a wide range of literature from various cultures and historical periods. Students in the writing option also read a great deal of literature and study literary method, but focus their coursework on the writing of poetry, fiction, and creative nonfiction. English/Secondary Education majors must choose the Literature option and take one additional course, ENG 312 Descriptive Grammar.

The English faculty emphasizes critical thinking, the analysis of texts, clear and effective writing, aesthetic appreciation, and theoretical sophistication. We value small class sizes and personal contact between faculty and students, and we work closely with students as academic advisors to plan the course of study. Faculty members also guide students to consider such opportunities as a semester of study abroad or a writing internship.

In addition to fostering a lifelong appreciation of literature and language and a high degree of literacy, a degree in English provides a range of personal and professional opportunities. Surveys of employers consistently stress the value of the skills we teach: the ability to communicate effectively with others, to think critically and creatively, to read carefully, and to write with clarity and purpose. English majors go on to graduate and professional schools; they work in the field of teaching; they become writers; and they are employed in publishing, journalism, business, public relations, library science, and many other fields.
LANGUAGE REQUIREMENT
Each student must demonstrate proficiency in a language other than English as specified by the Language Requirement for Students with Majors in the School of Arts and Humanities. The complete policy statement appears at the beginning of the Bachelor’s Degree Programs section of this catalog.

INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits

MAJOR REQUIREMENTS
40 credits

1. LITERATURE OPTION
Students choosing the Literature option in English must complete a minimum of 10 courses.
ENG 215 Literary Analysis (must be taken before completing 9 credits toward the major)
ENG 315 Literary Form and History (prerequisite: completion of ENG 215)
ENG 395 Sequence I
ENG 495 Sequence II
Six additional English courses: one at the 200 level, four at the 300 level, and one at the 400 level – either ENG 402 or ENG 490. (At least four of these six courses must be in literature.) One course must be in pre-1800 literature (may be satisfied with an appropriate sequence). One course must be a Differing Cultural Perspectives course (may be satisfied with an appropriate sequence).

Additional Requirement for English/Secondary Education majors: ENG 312 Descriptive Grammar

2. WRITING OPTION
Students electing the writing option in English must complete a minimum of 10 courses. Students may not pursue both the Writing option and the Writing minor. English/Secondary Education majors may not choose the Writing option.
Choose one course from:
IAENG 204 Creative Writing
ENG 202 Creative Nonfiction Writing
ENG 208 Topics in Writing
Also required:
ENG 215 Literary Analysis (must be taken before completing 9 credits toward the major)
ENG 315 Literary Form and History (prerequisite: completion of ENG 215)
ENG 402 Theory and Practice
ENG 405 Writing Portfolio (must be completed in senior year)
Three ENG electives in literature at the 300 or 400 level, including one pre-1800 literature and one Differing Cultural Perspective course.
Choose two additional writing courses at the 300 level or 400 level (other than ENG 405)
ENG 301 Fiction Workshop
ENG 302 Poetry Workshop
ENG 303 Nonfiction Workshop
ENG 306 Autobiography Workshop
ENG 308 Advanced Topics in Writing
ENG 497 Writing/Publishing Internship
Courses that meet the pre-1800 requirement:
ENG 321 English Literature: Beginnings to 18th Century
ENG 323 Medieval Literature
ENG 324 Chaucer
ENG 341 Early American Literature
ENG 326 English Renaissance Literature
ENG 327 Shakespeare: Poetry and Plays
Courses that meet the Differing Cultural Perspectives requirement:
IHAMST 248 Cultures of Northern Plains Indians
IIEENG 245 Readings in African American Literature and Culture
IHENG 252 Literature of the Holocaust
ENG 345 Studies in African American Literature
ENG 347 Modern American Indian Literature
ENG 370 Studies in Literatures of the Americas
When appropriate, the following courses may be used to fulfill the pre-1800 literature or the Differing Cultural Perspectives requirement:

- IHENG 220 Readings in British Literature
- IHENG 240 Readings in American Literature
- IHENG 250 Readings in Continental Literature
- IHENG 260 Readings in World Literature
- ENG 290 Topics
- ENG 330 Studies in British Literature
- ENG 344 Studies in American Literature
- ENG 350 Studies in Continental Literature
- ENG 360 Studies in World Literature
- ENG 370 Studies in Literature of the Americas
- ENG 381 Women Writers
- ENG 390 Studies
- ENG 395: Advanced Sequence I
- ENG 490 Advanced Studies
- ENG 495: Advanced Sequence II

ELECTIVES
Select courses to reach a total of 120 credits for the degree.

DEGREE REQUIREMENTS
120 credits

Environmental Studies
Bachelor of Science

The Environmental Studies (ENST) major provides students with a conceptual framework and set of skills needed to make effective, relevant, and sustaining contributions to society with respect to environmental issues, both as professional practitioners and as individual citizens. Through field and inquiry-based projects in the regional setting, students gain knowledge and develop skills in investigating environmental issues and formulating solutions.

Students intending to major in Environmental Studies are encouraged to select a faculty advisor and formally declare their major as early as possible, preferably by the end of their first year. In addition, ENST majors are strongly encouraged to undertake a disciplinary minor to develop an area of specialization, which will help with postgraduate placement.

INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits

The following ISP courses are recommended (but not required) for ENST majors:

Natural Science Perspectives:
- INGEOL 151 Physical Geology
- INCHEM 103 Fundamentals of Chemistry

Social Science Perspectives:
- ISECON 104 Introduction to Macroeconomics
- ISGEOG 204 Physical Geography

Quantitative Literacy:
- MATH 141 Statistics

Students are encouraged to consult with their advisor regarding the selection of ISP courses that would best complement their interests.

MAJOR REQUIREMENTS
44 credits

- IENST 151 The Environment of Central New England
- IENST 152 Principles of Sustainability
- ENST 251 Matter and Energy in the Environment
- ENST 252 Ecology of a Changing Planet
- ENST 253 Environmental Governance
- ENST 395 Junior Seminar
- ENST 495 Senior Seminar
Select one of these human dimensions courses:
- ENST 304 Environmental Law and Regulation
- ENST 308 Environmental Issue Management
- ENST 404 Risk and the Environment
- ENST 431 Environmental Policy Analysis

Select one of these environmental science courses:
- ENST 312 Energy and Sustainability
- ENST 352 Conservation of Ecological Systems
- ENST 452 Ecosystems and the Environment
- ENST 460 Groundwater in the Environment

Select two additional courses at the 300 level or above in ENST. The following courses may be substituted to meet this requirement (note that these courses have pre-requisites that are not part of the ENST major, but may be part of the ISP):
- ECON 340 Environmental Economics
- GEOG 330 Natural Resource Management
- GEOG 332 Global Water Resources
- GEOG 324 Vector GIS
- GEOG 327 Environmental Remote Sensing
- POSC 315 Environmental Policy
- SOC 380 Environmental Sociology

Still other courses, for example special topics courses, may also be substituted to meet this requirement with the approval of the Environmental Studies Department Chair.

1 Students must earn a grade C or higher in ENST 251, ENST 252, and ENST 253 in order to take ENST 395.

ELECTIVES
Select courses to reach a total of 124 credits.

DEGREE REQUIREMENTS
124 credits

Film Studies

Bachelor of Arts

The Film Studies major balances theoretical and applied course work. Options offer opportunities to prepare for employment in a variety of fields; graduates most often go on to further study or careers in the analysis and/or production of film and television or to careers in areas of the business world such as personnel, counseling, advertising, public relations, and sales.

LANGUAGE REQUIREMENT
The student must demonstrate proficiency in a language other than English as specified by the Language Requirement for Students with Majors in the School of Arts and Humanities. The complete policy statement appears at the beginning of the Bachelor's Degree Programs section of this catalog.

INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits

MAJOR REQUIREMENTS
42-46 credits

The Film Studies major provides Critical Studies and Film Production students alike with a strong visual, analytical, and aesthetic background as a common basis for each specialization. The Critical Studies option offers students an extensive range of courses in film history and theory, treating film as a liberal arts discipline, a mass medium, and a technique of expression. Moderate requirements in film production supplement the primary emphasis on analysis of specific genres, directors, historical periods, and national cinemas. The Film Production option provides students with intensive hands-on instruction in motion picture production. Courses emphasize technical and aesthetic aspects of narrative filmmaking, including scriptwriting, directing, cinematography, editing, and sound.

Film Studies Admission Criteria
As cultural interest in motion picture analysis and production increases, entrance into the Film Studies major at Keene State College is becoming similarly competitive. In response, the Film Department has implemented a portfolio process to facilitate
admission into the program and application for its annual scholarship award. Upon acceptance to the College, any prospective Film Studies student must submit an application via the following process:

I. Film Studies will not request a portfolio submission for 2011 applicants.
   a. A completed Film Program Application form (available online).
   b. Two letters of recommendation (in Word format if submitted electronically).
   c. Submission of one (1) analytical essay on a topic in film criticism, and/or one (1) properly formatted screenplay of no less than 30 pages, and/or one (1) 3- to 5-minute video of the applicant’s work in Quicktime format accompanied by a brief synopsis of the filmmaker’s intention behind the video. All written materials should be in Word format if submitted electronically.

It is preferred that applicants send all portfolio materials in electronic format attached in a single e-mail to: tcook@keene.edu. If necessary, physical samples (papers, DVDs, etc.) may be sent to:

KSC FILM – MS 4000
ATTN: Application Committee
229 Main Street
Keene, NH 03435

Application deadline is March 1. Portfolios will be reviewed and applicants notified of Committee decisions no later than April 1.

II. To retain Film Studies major status, a student must achieve an average grade of B or higher in FILM 250, FILM 270, and FILM 271, at which point the student must declare an option within the Film Studies major (either Critical Studies or Film Production) and formally apply to the chosen option as follows:

III. Applying to the Critical Studies Option:
   Students electing to follow the Critical Studies option within the Film Studies major must fulfill the following criteria:
   a. Submission for critical assessment of a coursework portfolio comprised of one paper completed for FILM 270 or FILM 271.
   b. Submission of a Letter of Intent that states the student’s intention to major in Critical Studies.
   c. Interview with a Film Studies full-time faculty member, whose approval of portfolio is required for admission.

IV. Applying to the Film Production Option:
   Students electing to follow the Film Production option within the Film Studies major must fulfill the following criteria:
   a. Submission for critical assessment of a coursework portfolio comprised of one project completed for FILM 250.
   b. Submission of a Letter of Intent that states the student’s intention to major in Film Production.
   c. Interview with a Film Studies full-time faculty, whose approval of portfolio is required for admission.

V. Retention Criteria
   Following application to the Film Studies program and acceptance into the major (and/or subsequent option), students must maintain a GPA within the program curriculum of 2.50 (BC), with a minimum grade of C in any required FILM course (those fulfilling either a Core or Option requirement). Students falling below this minimum will be placed on a one-semester probation, after which, if grade criteria have not been met, students will be dismissed from the program. Students may apply for acceptance to the Film Studies program a maximum of two times (thus, students accepted into the program but later dismissed may reapply once). Further applications will not be permitted.

VI. Transfers and Lateral Option Moves
   Students transferring to Keene State College and wishing to declare Film Studies as their major, and students already matriculated at Keene State College and wishing to change their major to Film Studies, must follow all previously listed criteria and guidelines, including portfolio process. Any student wishing to change options within the program must redeclare and formally resubmit per the established application guidelines (Section III: Applying to the Critical Studies Option or Section IV: Applying to the Film Production Option).

**Core Courses (26 credits)**

FILM 240 Introduction to Digital Media Management
FILM 250 Film Production I
FILM 270 Introduction to Film Analysis
FILM 271 Introduction to Film History
FILM 353 Cinema and Diversity
FILM 355 Film Theory
FILM 495 Seminar
Critical Studies Option (16 credits)
FILM 352 Topics in Film Studies (8 credits)
FILM 495 Seminar
FILM 499 Senior Research Project

Film Production Option (20 credits)
FILM 350 Film Production II
FILM 351 Intermediate Production Studio
FILM 440 Advanced Production Techniques
FILM 450 Film Production III
FILM 451 Film Production IV

Electives
Select courses to reach a total of 120 credits for the degree.

Degree Requirements
120 credits

French
Bachelor of Arts

This major allows students to acquire an active command of written and spoken French, with a knowledge of historical and contemporary issues in the French-speaking world. It is designed to complement programs such as Education, English, Film Studies, History, Management, and Music. French majors must study in France or Québec during their junior year through our exchange program with the University of Rennes (France) or the Québec-New England Exchange Program or through other approved programs. Students planning to study abroad must consult with the National and International Exchange Center and French faculty before departure to arrange for program approval and transfer of credit.

New students who have had no prior French should register for FR 101. Students with one or two years of successful high school study or one college semester should register for FR 102. Students with three or more high school years or two college semesters should register for FR 201. Students must consult French faculty to find the most appropriate level.

Language Requirement
The student must demonstrate proficiency in a language other than English as specified by the Language Requirement for Students with Majors in the School of Arts and Humanities. The complete policy statement appears at the beginning of the Bachelor’s Degree Programs section of this catalog. A student majoring in French satisfies this requirement by virtue of completing course requirements for the major.

Dual Major in Education
Students pursuing a dual major in Education will refer to the appropriate Education option. Also, students seeking teacher certification in French or Spanish, or Elementary Education majors whose second major is in French or Spanish are required to take and pass the Praxis II Content Knowledge Test before they begin student teaching as well as the Official ACTFL Oral Proficiency Interview (OPI). The (OPI) must be completed no later than 30 days following the student’s return from study abroad.

Integrative Studies Requirements
(minimum) 44 credits

Major Requirements
44 credits
ML 101 The World of Language
FR 202 Intermediate French II
or An approved FR 290 Intermediate Special Topics
or IIFR 240 Franco-American Women’s Voices
FR 315 Conversation in French
FR 316 Composition in French
FR 325 Introduction to French Literature
FR 330 The French-Speaking World
FR 350 Study Abroad – 12 credits during a full semester –usually 4 courses
FR 405 Contemporary French Usage (Prerequisite: FR 315 and FR 316)
  or FR 410 Advanced French Grammar
  or An approved FR 490 (Advanced Special Topics)
  or FR 498 (Advanced Independent Study)
FR 495 Seminar

ELECTIVES
Select courses to reach a total of 120 credits for the degree.

DEGREE REQUIREMENTS
120 credits

General Science

Bachelor of Arts

The B.A. in General Science provides a broad-based foundation in three major areas: Earth/Space Science, Life Science, and Physical Science. This major would provide general science knowledge for working in science museums, zoos, science camps, or state or national parks. It is an ideal major for the preservice elementary or middle school teacher as it addresses national recommendations for improving science education with an activity and hands-on focus. The middle school option meets N.H. state certification requirements for grades 5-9.

For a dual major in Education (option 2 or 3 below), please refer to the appropriate Education program option.

INTEGRATIVE STUDIES REQUIREMENTS
(44 credits)

MAJOR REQUIREMENTS
All students must complete the core courses and select one of the program options.

Core Courses (28 credits)
INASTR 101 Introduction to Astronomy
BIO 110 Molecules and Cells
BIO 111 Evolution
INGEOL 151 Physical Geology
GEOL 206 Oceanography
INMET 225 Meteorology
Select one from:
  MATH 120 Applied Algebra and Trigonometry
  MATH 130 Precalculus
  MATH 151 Calculus I

Option 1: Bachelor of Arts (48 credits)
In addition to the core courses, the following must be taken:
MATH 141 Introductory Statistics
BIO 210 Ecology
INCHEM 111 General Chemistry I
CHEM 112 General Chemistry II
CHEM 221 Organic I
CHEM 222 Organic II
GEOL 252 Evolution of the Earth
INPHYS 141 College Physics I
PHYS 142 College Physics II

In addition to the requirements listed above for option 1, complete a specialization (three or more additional courses at the 300 level or higher) in one of the following areas: Biology, Chemistry, Environmental Studies, or Geology.

Option 2: Elementary or Early Childhood Education Option (20 credits)
(For teacher certification requirements for a dual major, see the requirements for the B.S. degree for Elementary or Early Childhood Education options in the catalog.)
In addition to the core courses, the following must be taken:
INCHEM 103 Fundamentals of Chemistry
INPHYS 201 Phenomenal Science
GS 301 The Web of Science

In addition to the requirements listed above for option 2, select two additional science courses (8 credits) at the 200 level or higher in either the same or different areas of the following sciences: Biology, Chemistry, Environmental Studies, and/or Geology.

**Option 3: Middle School Option (32 credits)**
(For teacher certification requirements for a dual major, see the requirements for the B.S. degree for the Secondary Education option in the catalog.)

In addition to the core courses, the following must be taken:
INCHEM 111 General Chemistry I
CHEM 112 General Chemistry II
BIO 210 Ecology
MATH 141 Introductory Statistics
INPHYS 201 Phenomenal Science
INPHYS 210 History of Science

In addition to the requirements listed above for option 3, complete a specialization (two or more additional courses at the 200 level or higher) in one of the following areas: Biology, Chemistry, Environmental Studies, or Geology.

**DEGREE REQUIREMENTS**

B.A. in General Science (option 1)
120 credits (76 major)

B.A. in General Science/Education, dual major (options 2 and 3), Elementary (option 2)
136 credits (48 major, 48 elementary education)

Middle School (option 3)
130 credits (60 major, 34 education)

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**Geography**

*Bachelor of Arts*

Geography is an empowering discipline that examines the Earth through the lens of human-environment interaction. Geography is recognized for both its physical and its cultural attributes. The physical realm examines the Earth’s dynamic systems and landscape evolution while the cultural realm focuses on human interaction to the constantly changing forces of nature. Major topics of study include population distributions, climate change, technology, language, urbanization, globalization, resource management, and environmental impacts. Geospatial technologies, including GIS, remote sensing, and computer mapping, form an integral component of analysis.

Abundant employment opportunities are available for geographers in local, state, and federal agencies concerned with such issues as regional planning, geopolitics, economic development, and environmental impact. Industry and business employs geographers as market researchers, analysts, and consultants. The U.S. Department of Labor has identified spatial technologies and expertise (geography/GIS) as one of the three primary areas of employment opportunity for the 21st century. Geography students who complete the teacher education option are eligible for Secondary Social Studies certification.

The geography major requires 40 credits of geography courses. One statistics course is recommended. Students considering graduate work in geography should develop strong skills in GIS.

For a dual major in Education, please refer to the appropriate Education program option. Geography is an approved major for students seeking Secondary Social Studies certification will need to take the following additional certification requirements:

Certification as a Social Studies Teacher
• Dual Major in Education
  Secondary Education
• Additional Major Requirements
  IHHIST 161 or HIST 161
  IHHIST 162 or HIST 162
  IHHIST 111 or HIST 111
  IHHIST 112 or HIST 112
Select one of the following:
  ISPOSC 210 U.S. Politics
  ISPOSC 220 Global Politics
Select one of the following:
  100- to 200-level course in Sociology
  ISANTH 110 Cultural Anthropology
  ISECON 104 Macroeconomics
  PSYC 101 General Psychology

INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits

MAJOR REQUIREMENTS
40 credits
ISGEOG 203 The Human Cultural Mosaic
ISGEOG 204 Physical Geography
GEOG 395 Seminar I
GEOG 495 Seminar II
Select one of the following regional courses:
  GEOG 340 Topics in Regional Geography
  GEOG 341 Geography of the U.S. and Canada (recommended for Teacher Certification)
  GEOG 371/571 Geography Field Studies
Select two of the following systematic fields of geography:
  GEOG 303 The Politics of Place
  GEOG 304 Population Geography
  GEOG 305 The Global Economy
  GEOG 307 Urban Geography and Planning
  GEOG 330 Natural Resource Management
  GEOG 332 Global Water Resources
Select two of the following geographic skills courses:
  GEOG 321 Geospatial Technology for K-12 (recommended for teacher certification candidates only)
  GEOG 323 Land Surveying and Cartography
  GEOG 324 Vector GIS
  GEOG 325 Cartographic Design and Analysis
  GEOG 326 Raster GIS
  GEOG 327 Environmental Remote Sensing

ELECTIVES
One additional course in Geography, bringing total to 40 credits in Geography.
Select additional courses to reach a total of 120 credits.

DEGREE REQUIREMENTS
120 credits

Geology
Bachelor of Science

Geology is the study of the Earth and its environs. It involves detailed consideration of planet Earth's interior and
its surface, as well as consideration of the hydrosphere, atmosphere, and setting in space. These studies are central
to an understanding of the Earth's past, present, and future environments and the interrelationship between Earth
and humanity. Students graduating from this program are prepared for traditional positions with oil and mining
companies and state and federal geological surveys; for positions in the rapidly growing fields of environmental
geology, hydrogeology, resource planning, and engineering and consulting firms; or to enter graduate study. By completing the Teacher Education option, students are prepared for certification as Earth Science Education teachers in secondary schools.

**INTEGRATIVE STUDIES REQUIREMENTS**

*(minimum) 44 credits*

**MAJOR REQUIREMENTS**

64 credits

**Core Courses (28 credits)**

INGEOL 151 Physical Geology
GEOL 252 Evolution of the Earth
GEOL 301 Mineralogy
GEOL 302 Igneous and Metamorphic Petrology
GEOL 305 Paleontology
GEOL 306 Sedimentation and Stratigraphy
GEOL 403 Structural Geology

**Upper-Level Elective Courses (12 credits)**

Choose a minimum of three additional 300- or 400-level GEOL courses from the following list to bring total credits in Geology to 40 credits:

- GEOL 309 Geomorphology
- GEOL 310 Glacial Geology
- GEOL 315 Environmental Geology
- GEOL 412 Environmental Geochemistry
- GEOL 460 Hydrogeology
- GEOL 490 Advanced Special Topics (1-4 credits)
- GEOL 498 Independent Study (1-4 credits)

**Related Science/Math Courses (24 credits)**

INCHEM 111 General Chemistry I and Lab*
CHEM 112 General Chemistry II and Lab
INPHYS 141 College Physics I*
* or INPHYS 241 University Physics I*
PHYS 142 College Physics II
* or PHYS 242 University Physics II
MATH 151 Calculus I

*These courses may also be counted toward filling the Integrative Studies Program Natural Science Perspective course requirements.

Select one of the following:

- MATH 141 Introductory Statistics
- MATH 152 Calculus II

Geology majors are strongly advised to take one of the following Geography courses:

- GEOG 324 Vector GIS**
- GEOG 325 Map Analysis and Cartographic Design**
- GEOG 326 Raster GIS**
- GEOG 327 Remote Sensing in the Environment

**These courses list ISGEOG 204 as a prerequisite. Students who take ISGEOG 204 may also count ISGEOG 204 in the Integrative Studies Program Social Science Perspectives area.

**ELECTIVES**

Select additional courses to reach a total of 124 credits for the degree. For teacher preparation in Earth Science Education refer to the appropriate offering in the Education listing in the catalog.

**DEGREE REQUIREMENTS**

124 credits
Health Science

Bachelor of Science

Health Science is an interdisciplinary program grounded in the liberal arts. The major is comprised of courses in Health Promotion, Nutrition, Substance Abuse and Addictions, Physical Activity, Biology, Chemistry, and Psychology. Students learn how environmental, socioeconomic, and personal factors influence the health of individuals and populations. All Health Science majors complete the Health Science core, which focuses on health and health promotion. To complete the Health Science major, students select one of three options: Health Promotion and Wellness, Nutrition, or Substance Abuse and Addictions. Prospective students should meet with a faculty advisor during their first semester to review the application process that is required for each of the options within Health Science. Specific requirements and standards are listed for each of the options.

INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits

MAJOR REQUIREMENTS
70-92 credits

Core Courses (24 credits)
HLSC 101 Health and Wellness
HLSC 285 Health in Society
HLSC 380 Addiction and Compulsive Behaviors
HLSC 385 Behavior Change
HLSC 485 Health Promotion Practice
HLSC 494 Health Science Capstone OR HLSC 495 Seminar: Health Science Research

1. Health Promotion and Wellness Option (46 to 50 credits)
The Health Promotion and Wellness option offers two specializations: Community Health and Behavior and Health. Students select one of the specializations and complete option requirements and specialization requirements. Health Promotion and Wellness option graduates work to change policies, environments, attitudes, and behaviors that affect health. The Community Health specialization prepares students for professional careers in community health education, global health, or for graduate programs in public health or health education. The Behavior and Health Specialization prepares students for such graduate programs as Health Psychology, Pain Management, or Behavioral Health.

The application process for admission to the Health Promotion and Wellness option should be initiated during the first semester for students intending to major in Health Science and typically completed by the end of the second semester. Each student should meet with a Health Science faculty advisor and take HLSC 101 Health and Wellness. The review of applications and notification of the results of this review will be made following the second semester. If a student is not accepted, he or she should schedule a consultation with his or her Health Science faculty advisor. During the conference, the student will be notified of any areas of deficiency that need to be addressed. Once admitted, the student must officially declare his or her major through a faculty advisor.

Admission Criteria
Overall GPA of 2.5, major GPA of 2.5, and a grade C or higher in HLSC 101 Health and Wellness is required. For transfer students, equivalent transferred courses may be considered if approved by health science faculty.

Health Promotion and Wellness Requirements (6 credits)
HLSC 214 Nutrition Fundamentals
HLSC 365 Exercise Science and Application (2 credits)

Allied Discipline Requirements (20 credits)
BIO 230 Human Anatomy and Physiology I and Lab
BIO 232 Human Anatomy and Physiology II and Lab
INCHEM 100 Introduction to Chemistry
IHCOMM 171 Public Speaking
PSYC 101 General Psychology

Allied discipline courses are prerequisites for courses in the major. The BIO sequence should be started in the second semester of the first year.

Community Health Specialization Requirements (20 credits)
HLSC 305 Epidemiology in Health Science
Select one from the following three courses:
- HLSC 318 Nutrition throughout the Lifespan
- PSYC 311 Child and Adolescent Psychology
- PSYC 314 Adulthood and Aging
- HLSC 330 Health Psychology
- IIENST 152 Principles of Sustainability
- MATH 141 Introductory Statistics OR MATH 242 Applied Statistics

**Behavior and Health Specialization Requirements (24 credits)**
Select one from the following three courses:
- HLSC 318 Nutrition throughout the Lifespan
- PSYC 311 Child and Adolescent Psychology
- PSYC 314 Adulthood and Aging
- HLSC 330 Health Psychology
- PSYC 221 Social Psychology
- PSYC 242 Personality
- PSYC 253 Brain and Behavior
- PSYC 345 Abnormal Psychology

**ELECTIVES**
Select courses to reach a total of 124 credits for the degree. Please meet with a faculty advisor for selecting electives.

**DEGREE REQUIREMENTS**
124 credits

2. Nutrition Option (68 credits)
The Nutrition option is currently granted initial accreditation by the Commission on Accreditation for Dietetics Education of the American Dietetic Association, 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6995. This option provides the basic academic preparation necessary to become a registered dietitian (RD). Certification as an RD is often mandatory for professional positions and requires completion of an approved postgraduate supervised practice program.

Typically, a student who successfully completes the ADA-approved curriculum, an ADA-accredited internship or pre-professional practice program, and the registration examination becomes qualified as a health professional responsible for services in areas such as nutrition service-related management, clinical or community dietetics, education, consultation, private practice, and research.

The application process for admission to the Nutrition option occurs during the first semester for freshmen and transfers. Each student should meet with a faculty advisor and take HLSC 101 Health and Wellness. The review of applicants and notification of the results of this review will be made by the end of that semester. If a student is not accepted, he or she should schedule a consultation with one or more members of the Health Science Admissions Committee. During the conference, the student will be notified of any areas of deficiency that need to be addressed. Once admitted, the student must officially declare his or her major through a faculty advisor.

**Admission Criteria**
Students must have an overall GPA of 2.8. Application for permanent admission to the option is typically completed at the end of the student’s first year. After completion of the following courses with an average of B or higher (3.0), students interested in pursuing the Nutrition option must submit an application for permanent admission to the Health Science Nutrition option:

- HLSC 101 Health and Wellness
- HLSC 125 Nutrition and the Profession
- INCHEM 103 Fundamentals of Chemistry

For transfer students, equivalent transferred courses may be considered if approved by the Admissions Committee.

**Application Process**
The application process for admission to the Nutrition option occurs just after grades are finalized in the spring semester. The following steps should be followed by all students interested in applying to the Nutrition option:

- Arrange an appointment with an advisor in the Nutrition option and complete a Declaration of Major form that is then submitted to the Registrar’s office.
- Complete the following introductory courses required before the “official” application for permanent admission to the Nutrition option will be considered: HLSC 101 Health and Wellness, HLSC 125 Nutrition and the Profession, INCHEM 103 Fundamentals of Chemistry. An overall GPA of 2.8 and an average grade of B or better in those courses previously listed are required for application submission.
If the above criteria are met, applications can be officially submitted for permanent admission to the option. Applications should be submitted to the Nutrition option program director immediately upon completion of the spring semester. Applications need to be postmarked by one week following the last day of final exams in the spring semester. Enrollment in additional Health Science/Nutrition option major courses will not be allowed if application has not been made.

The review of applications and notification of the results of this review will be made in writing before the start of the fall semester. Students who have met the application criteria will be considered admitted to the option. The overall GPA of these students will then be monitored by their Nutrition option advisor to assure that it remains at the 2.8 or higher level.

Students who are not admitted into the Nutrition option or do not submit application materials to the option by due dates will be deregistered from HLSC 215 and/or HLSC 216. These students will be able to adjust their schedule using the online registration process at least 1 week prior to the start of classes. If a student is not permanently accepted into the Nutrition option they should complete the following steps:

1. If the student desires to continue to pursue the option, schedule a consultation with her/his Nutrition option advisor. During this conference, the student will be notified of any areas of deficiency, which need to be addressed.

2. If the student does not desire to continue to pursue the Nutrition option, complete a new “Declaration of Major” form removing them from the Nutrition option. If the student does not complete this step, their advisor will notify the Registrar’s office to change their major to “undeclared.”

3. If interested and if deficiencies are addressed, the student can reapply one time at the conclusion of the following fall semester.

Nutrition Option Requirements (40 credits)

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<th>Course</th>
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<tbody>
<tr>
<td>HLSC 125 Nutrition and the Profession</td>
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<td>HLSC 215 Nutrition Science and Application</td>
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<td>HLSC 216 Current Topics in Food Culture</td>
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<td>HLSC 310 Food Science</td>
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<td>HLSC 313 Foodservice Management</td>
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<td>HLSC 318 Nutrition throughout the Lifespan</td>
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<tr>
<td>HLSC 365 Exercise Science and Application</td>
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<tr>
<td>(2 credits)</td>
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<tr>
<td>HLSC 410 Experimental Foods</td>
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<tr>
<td>(2 credits)</td>
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<tr>
<td>HLSC 415 Nutritional Biochemistry</td>
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<tr>
<td>HLSC 416 Medical Nutrition Therapy</td>
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<td>HLSC 473 Practicum: Nutrition</td>
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</tbody>
</table>

The following courses are required for American Dietetic Association accreditation:

Allied Discipline Requirements (28 credits)

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>BIO 230 Human Anatomy and Physiology I and Lab</td>
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<td>BIO 232 Human Anatomy and Physiology II and Lab</td>
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<tr>
<td>BIO 240 Cell and Microbial Biology</td>
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<tr>
<td>INCHEM 103 Fundamentals of Chemistry and Lab</td>
</tr>
<tr>
<td>CHEM 220 Fundamental Organic Chemistry and Lab</td>
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<tr>
<td>IHCOMM 171 Public Speaking</td>
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<tr>
<td>PSYC 101 General Psychology</td>
</tr>
</tbody>
</table>

Allied Discipline courses are prerequisites for courses in the major. The BIO sequence should be started in the second semester of the first year.

DEGREE REQUIREMENTS

128 credits (Integrative Studies + HLSC core + Option + Allied)

3. Substance Abuse/Addictions (46 credits)

The Substance Abuse/Addictions option at Keene State College is an academic program with practical training in preparation for further studies in the field or entry-level employment in Substance Abuse/Addictions. The program provides students with a theoretical understanding of substance abuse and addictions and an introduction to counseling, treatment, and related practices. The curriculum emphasizes research, theory, and practice regarding the continuum of care in addictions. Students can specialize in the area of prevention or treatment in course selection and internship placement.

Depending on the criteria of each state, the work in this Substance Abuse/Addictions program may be applied toward becoming a licensed or certified alcohol and drug abuse counselor or prevention specialist. However, this process is pursued separately through the students’ State Bureau of Substance Abuse, Prevention, and Treatment Services.

The application process for admission to the Substance Abuse/Addictions option should be initiated during the first semester for students intending to major in Health Science and typically completed by the end of the second semester. Each student should meet with a Health Science faculty advisor and take HLSC 101 Health and Wellness. The review of applications and notification of the results of this review will be made following the second semester. If a student is not accepted, he or she should schedule a consultation with his/her Health Science faculty advisor. During the conference, the student will be
notified of any areas of deficiency that need to be addressed. Once admitted, the student must officially declare his or her major through a faculty advisor.

**Admission Criteria**

Overall GPA of 2.5, major GPA of 2.5, and a grade C or higher in HLSC 101 Health and Wellness is required. For transfer students, equivalent transferred courses may be considered if approved by Health Science faculty.

**Substance Abuse/Addiction Requirements (26 credits)**

- HLSC 200 Alcohol and Other Drugs: The Fundamentals
- HLSC 214 Nutrition Fundamentals
- HLSC 365 Exercise Science and Application (2 credits)
- HLSC 382 Addiction Counseling and Management
- HLSC 386 Chemical Dependency Diagnosis and Treatment
- HLSC 492 Internship in Substance Abuse and Addictions

Select one of the following:
- HLSC 489 Drug Abuse Prevention
- HLSC 491 Advanced Drug Treatment Methods

**Allied Discipline Requirements (20 credits)**

- IHCOMM 171 Public Speaking
- PSYC 101 General Psychology
- BIO 230 Human Anatomy and Physiology I and Lab
- BIO 232 Human Anatomy and Physiology II and Lab
- INCHEM 100 Introduction to Chemistry

Allied Discipline courses are prerequisites for courses in the major. The BIO sequence should be started in the second semester of the first year.

**ELECTIVES**

Select courses to reach a total of 124 credits for the degree.

**DEGREE REQUIREMENTS**

124 credits

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**History**

*Bachelor of Arts*

As a field of study, History provides students with many of the necessary skills for a productive professional career and an intellectually fulfilling life. Toward these ends, the History major attempts to provide students with the ability to think and read critically and analytically, to form sound opinions and support them with logical arguments based on documentary evidence, to communicate ideas effectively, and to conduct historical research. The History major further attempts to provide students with a body of historical knowledge that will enable them to understand contemporary events of local, national, and global importance, as well as to understand and appreciate the various cultures and civilizations that make up the world community. Above all, the History major helps to provide students with the means for lifelong learning.

By combining the development of specific skills with the acquisition of a body of historical knowledge, the History major prepares students for successful careers in primary and secondary education (history and social studies), business and industry, and governmental service. The major also prepares students for graduate study in history, law, and other academic and professional fields.

Students majoring in History are required to complete 36 credit hours in History, 20 credits of which must be in one of the following areas of specialization:

1. U.S. History
2. European History
3. 19th-Century Studies
4. 20th-Century Studies
At least 16 of the 20 credit hours toward the area of specialization must be at the 300 level (or higher). At least 4 of the 20 credit hours must be at the 400 level.

Students majoring in History must also complete History 200: Reading and Writing in History. Note: History 200 must be completed before any student (major or nonmajor) completes 13 credit hours in History.

Students of History are strongly advised to acquire reading proficiency in at least one foreign language. Reading knowledge of at least one foreign language is essential for all students who intend to apply to graduate school.

**LANGUAGE REQUIREMENT**
The student must demonstrate proficiency in a language other than English as specified by the Language Requirement for Students with Majors in the School of Arts and Humanities. The complete policy statement appears at the beginning of the Bachelor's Degree Programs section of this catalog.

**INTEGRATIVE STUDIES REQUIREMENTS**
*(minimum) 44 credits*

History courses completed to fulfill major requirements may also count toward fulfillment of Integrative Studies in Humanities.

History majors preparing for certification as comprehensive Social Studies teachers will refer to the Education section of the catalog for the appropriate program to follow and must complete the additional courses listed below.

- One course in U.S. history
- One course in non-U.S./world history
- ISECON 104 Macroeconomics
- Select one of the following:
  - ISGEOG 101 Introduction to World Geography
  - GEOG 105 Geography for Teachers
- Select one of the following:
  - 100- to 200-level course in Sociology
  - ISANTH 110 Cultural Anthropology
- Select one of the following:
  - ISPOSC 210 U.S. Politics
  - ISPOSC 220 Global Politics
  - PSYC 101 General Psychology

**MAJOR REQUIREMENTS**
*36 credits*

- 4 credits at the 100 level
- 8 credits at the 200 level, including History 200
- 16 credits at the 300 level
- 8 credits at the 400 level

20 credit hours must be completed in one of the following areas of specialization:

1. U.S. History
2. European History
3. 19th-Century Studies
4. 20th-Century Studies

At least 16 credit hours toward the area of specialization must be at the 300 level (or higher) and at least 4 of the 20 credit hours must be at the 400 level.

All History majors must complete 8 credit hours in non-U.S./non-European history.

**ELECTIVES**
Select courses to reach a total of 120 credits for the degree.

**DEGREE REQUIREMENTS**
*120 credits*
History Honors Program

Motivated history majors may have the opportunity to participate in an advanced program of study concentrating on professional research and writing skills. Students who meet the program requirements and high disciplinary standards as determined by the faculty of the History Department will graduate with Honors in History. The program will require students to engage in an intensive study of relevant primary and scholarly secondary sources, formulate an original argument, and defend it in a substantial thesis project. Students who participate in the History Honors Program must complete all requirements for the History major, including a sequence of Honors Independent Studies over the course of two semesters, beginning the first semester of their senior year. These courses may be applied for course credit within the History major.

Admission to the Honors Program will be based on the following criteria:

1. Students must have a minimum 3.2 GPA overall and a minimum 3.5 GPA in the major.
2. Prior to the end of their junior year, students will submit writing samples, which will be evaluated by the department as a whole; approval of the writing sample will be based on criteria agreed on by the members of the department.
3. Students must have a thesis proposal approved by the members of their Honors committee before the end of the schedule adjustment period during the first semester of their senior year. Each student's honors committee will be composed of three members—one primary and two secondary advisors. The precise composition of the committee will be agreed on by the student and faculty members.

Participation in the History Honors Program will culminate in an oral defense of the Honors thesis, which will be adjudicated by the student's committee members. Following the defense, committee members will meet privately to determine the outcome of the defense. Members can choose between three outcomes: pass with honors, pass with no honors, fail.

Students whose defense of their Honors theses passes with honors, and who have maintained a minimum major GPA of 3.5 and a minimum overall GPA of 3.2, will graduate with Honors in History.

Students taking part in the program will take two Honors designated courses in sequence, starting the first semester of their senior year. Honors students will be required to take HIST 498 Honors Thesis Research (4 credits) first semester senior year and conclude with HIST 498 Honors Thesis Writing (4 credits) during the second semester of their senior year. These classes will be conducted under the current program rubric as Independent Studies. In HIST 498 Honors Thesis Research, students will conduct intensive research into their approved topic, being directed by and reporting progress to their Honors Committee, in a form deemed suitable by the members of the committee (e.g., bibliographical essays, annotated bibliography, scholarly book reviews, etc.). In HIST 498 Honors Thesis Writing, students will compose an honors thesis, under the supervision of their Honors Committee, which will be evaluated in accord with professional scholarly standards. HIST 498 Honors Thesis Writing will culminate, as explained above, in an oral defense adjudicated by the members of their Honors Committee. Both HIST 498 Honors Thesis Research and HIST 498 Honors Thesis Writing will receive letter grades.

Under certain circumstances, to be determined by the department, students can apply to the History Honors Program one semester early in order to complete the sequence of required courses before the final semester of their senior year.

Holocaust and Genocide Studies

Bachelor of Arts

Students examine both the Holocaust and the broader topic of genocide. The graduate in Holocaust and Genocide Studies is prepared to support curriculum development in the social studies and history and to pursue careers in social and governmental service. The major also prepares students for graduate studies in history, as well as Holocaust and genocide studies, and for other postgraduate work, such as law.

The program in Holocaust and Genocide Studies is rooted in the conviction that the Holocaust was a cataclysmic episode in the course of Western history impacting culture, society, politics, ethics, science, and religion, and that there is no discipline in the academy untouched by its shadow. In a world still tormented by mass murder and genocide, the program also rests on the moral imperative that learning from both the past and present may serve as a basis of hope for the future. The program combines historical background with an interdisciplinary exploration of both the Holocaust and other genocidal events through film, literature, philosophy, psychology, sociology, religious studies, women's studies, and other offerings. With an understanding of such issues as prejudice, discrimination, and racism, students are equipped to analyze contemporary political situations, think critically about ethical responsibility, and respond actively to injustice.

Students selecting a Holocaust and Genocide Studies major are required to complete 36 credit hours in the field, 12 of which (e.g., three courses) are specified below. Of the remaining six course electives (24 credits), one must be a Holocaust elective (4 credits) and one must be a genocide elective (4 credits), as designated by course title (see below). Three of the six electives (12 credits) must be at the 300 level or higher.
INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits

LANGUAGE REQUIREMENT
The student must demonstrate proficiency in a language other than English as specified by the Language Requirement for Students with Majors in the School of Arts and Humanities. The complete policy statement appears at the beginning of the Bachelor’s Degree Programs section of this catalog.

HOLOCAUST AND GENOCIDE STUDIES
(12 credits required)
IHHS 252/IHHIST 252 The Holocaust
IHHS 255 Genocide
HGS 495 Seminar or HGS 499 Senior Project
Of the remaining six courses (24 credits), one must be a Holocaust elective (4 credits) and one must be a genocide elective (4 credits), as specified by course title. Three electives (12 credits) must be at the 300 level or higher.

Holocaust-Specific Electives
IHHS 251/IHENG 251 Literature of the Holocaust
IHHS 254/IWWS 254 Women in the Holocaust
HGS 289 Teaching the Holocaust and Genocide (may count for Holocaust or Genocide, not both)
HGS 290 Special Topics (Holocaust must be specified by course title)
HGS 313/PHEL 313 Philosophy and the Holocaust
HGS 326/SOC 326 Sociology of the Holocaust
HGS 340 Film and the Holocaust
HGS 353/IHIST 353 Nazi Germany and the Holocaust
HGS 356 The Holocaust and the Christian World
HGS 490 Advanced Special Topics (Holocaust must be specified by course title)
HGS 497 Internship (Holocaust must be specified by course title)
HGS 498 Independent Study (Holocaust must be specified by course title)

Genocide-Specific Electives
HGS 289 Teaching the Holocaust and Genocide (may count for Holocaust or Genocide, not both)
HGS 290 Special Topics (Genocide must be specified by course title)
HGS 327/SOC 327 Sociology of Genocide
HGS 374 Comparative Genocide
HGS 427/SOC 427 Sociological Topics in Genocide
HGS 490 Advanced Special Topics (Genocide must be specified by course title)
HGS 497 Internship (Genocide must be specified by course title)
HGS 498 Independent Study (Genocide must be specified by course title)

OTHER ELECTIVES:
IHPHIL 220 Ethics
PHIL 231 Comparative Religion
IHHS 232 Introduction to Judaism
IHHS 233 A History of the Jews
IHHIST 253 The Second World War
HHHHS 256 Religion and Violence
HHIST 351 19th-Century Germany
HGS 373/IHIST 373 Race, Disability, and Eugenics

DEGREE REQUIREMENTS
120 credits

Individualized Major

Bachelor of Arts or Bachelor of Science

An individualized major is composed of an interdisciplinary program of studies, appropriately designed (1) to enhance the student’s ability to integrate and synthesize content and/or method from two or more academic disciplines and (2) to satisfy an individual student’s educational interests or career objectives. It must be identified by a title and a combination of courses that is different from existing undergraduate majors and program outcomes.
Students at Keene State College are expected to declare a major by the time they have accumulated 60 credits. The minimum number of credits is 120 credits for a Bachelor of Arts degree and 124 credits for a Bachelor of Science degree, with a minimum of 44 Integrative Studies program credits and a minimum of 36 credits of major courses. Whereas major requirements are usually established by the academic discipline, the Individualized Major program of study is designed by the student in consultation with a faculty advisory committee, subject to approval by the associate vice president for Academic Affairs.

In the event students choose to complete the Individualized Major as a second major, a total of 8 credits from the other major may be applied to the individualized major.

A. Processing the Individualized Major
1. Advisory Committee. The student selects an Advisor of Record from the principal discipline and an additional faculty member from each secondary discipline represented in the individualized major. All committee members must be full-time faculty.
2. A meeting of the committee is called to discuss the proposed major and to assist the student in designing the program of studies.
3. The proposed Individualized Major must be signed by the student and cosigned by members of the Advisory Committee prior to approval by the associate vice president for Academic Affairs.
4. Copies of the approved proposal will be distributed to the student, each member of the advisory committee and the Registrar. The original will be retained in the Office of the Associate Vice President for Academic Affairs.

B. Completing and Modifying the Individualized Major
1. The student is responsible for (a) completing all Transitional General Education Program requirements, (b) progressing through the Individualized Major program as approved by the advisory committee and the associate vice president for Academic Affairs, and (c) enrolling in sufficient electives to fulfill credit requirements for the degree.
2. All changes to the Individualized Major program must be cosigned by the Advisory Committee members and approved by the associate vice president for Academic Affairs. These amendments must be in writing and accompanied by appropriate rationale.

Program Requirements
Each program of study is divided into Integrative Studies requirements, major requirements, and electives.

INTEGRATIVE STUDIES REQUIREMENTS  
(minimum) 44 credits
Integrative learning is a process by which students connect knowledge and skills from multiple sources and experiences, apply knowledge and skills in varied settings, utilize diverse points of view, and understand issues contextually.
This program reflects Keene State College's institutional values (through the integrative outcomes), provides and develops the experiences necessary for success in an academic environment (the skills outcomes), and preserves the breadth of a liberal arts education that should enable our graduates to succeed in a global environment (the perspectives and interdisciplinary outcomes). The integrative teaching and learning process approaches teaching and learning in intentionally connected ways.

Students participating in an integrative learning experience see connections in seemingly disparate information; adapt skills learned in one situation to problems encountered in another; demonstrate a breadth of outlook and an awareness of complex interdependencies; judge/decide (synthesize); take into account different dimensions of a problem, seeing it from different perspectives, making conceptual links; connect skills and knowledge from multiple sources and experiences; utilize diverse and contradictory points of view; and understand contextual frames.

Knowledge in both individual and multiple disciplines is the foundation upon which integrative learning builds. Integrative learning often occurs as learners put theory into practice, "making meaning" as they apply abstract concepts in practical settings.

Students should also consider as part of their course of study developing competence in a second language and including an experiential learning experience in which discipline-based knowledge can be applied.

MAJOR REQUIREMENTS  
(minimum) 36 credits
Must include program objectives and learning outcomes; consist of a minimum of 36 credits, of which a minimum of 20 credits must be in courses at the 300 or higher level; include courses from a minimum of two academic disciplines, with a combination of a minimum of five courses (a minimum of 20 credits) in one discipline and minimum of four courses (a minimum of 16 credits) in the other discipline; and may include a maximum of 12 credits of Independent Study courses.
If a student chooses to complete an Individualized Major as a second major, a maximum of eight credits from the original major may be applied to the Individualized Major.

**ELECTIVES**

Select courses to reach a total of 120 credits for a B.A. and 124 for a B.S. Electives are selected by the student and are usually related to personal and professional interests.

**DEGREE REQUIREMENTS**

120-124 credits

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**Journalism**

*Bachelor of Arts*

The Journalism major at Keene State College provides and maintains an intellectual environment dedicated to the investigation of the roles of the mass media in contemporary society within a liberal arts perspective. The major provides students with a theoretical understanding of the media and prepares them for careers in the field by enabling them to build both print and electronic media skills in an applied setting. The curriculum emphasizes the concepts of press objectivity, fairness, accuracy, freedom of speech, and freedom of the press, as well as the development of analytical writing, research, production, and presentation skills.

The curriculum covers the skill areas of journalistic writing, editing, electronic journalism, and news production. It includes at least 40 credit hours of study within Journalism. A grade C or higher must be earned in each Journalism course or Journalism course substitution counted toward the major.

**LANGUAGE REQUIREMENT**

The student must demonstrate proficiency in a language other than English as specified by the Language Requirement for Students with Majors in the School of Arts and Humanities. The complete policy statement appears at the beginning of the Bachelor's Degree Programs section of this catalog.

**INTEGRATIVE STUDIES REQUIREMENTS**

(minimum) 44 credits

**MAJOR REQUIREMENTS**

40 credits

**Section A: Core (28 credits)**

JRN 100 Intro to Mass Communication  
JRN 130 Writing for the Media  
JRN 230 Print Journalism  
JRN 235 Broadcast Journalism  
JRN 255 Digital Journalism  
JRN 323 Journalism Law and Ethics  
JRN 280 Media Production, 2 credits (2 semesters)

**Section B: Advanced Study (8 credits)**

Select two of the following:  
JRN 330 Public Affairs Reporting  
JRN 335 TV Journalism  
JRN 430 Feature Writing  
JRN 435 Community TV News

**Section C: Electives (4 credits)**

Courses selected in Section B may not be used as an elective in Section C.

Select one course from the following:  
IHJRN 267 Issues in the Media  
IJJRN 268 Environmental Issues and the Media  
JRN 282 Equinox Editor  
JRN 294 Cooperative Education  
JRN 311 Mass Media History and Theory  
JRN 330 Public Affairs Reporting
JRN 335 TV Journalism
JRN 365 Photojournalism
JRN 380 Internship
JRN 430 Feature Writing
JRN 435 Community TV News
JRN 450 News Editing and Management
JRN 467 Specialized Journalism
JRN 498 Independent Study

**ELECTIVES**
Select courses to reach a total of 120 credits for the degree.

**DEGREE REQUIREMENTS**
120 credits

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**Management**

*Bachelor of Science*

This career-oriented program, emphasizing management skills and building on a solid foundation in the liberal arts and sciences, is designed to prepare individuals for management careers in industrial or public organizations and for graduate work.

The management curriculum develops an analytical and integrative viewpoint toward management through study in the humanities and social sciences. It provides a broad conceptual framework within which a manager will be able to develop alternative approaches to attaining given goals. Students develop the strong administrative, quantitative, and communications skills that modern managers must possess.

MATH 102 Mathematics for Management is required for students with deficiencies in math as assessed by the Management Department and the Math Center. Students interested in pursuing a Master of Business Administration degree are encouraged to take MATH 141 Introductory Statistics.

**INTEGRATIVE STUDIES REQUIREMENTS**
(minimum) 44 credits

**MAJOR REQUIREMENTS**
60 credits

A grade C or higher is required in MGT 101, MGT 202, MGT 213, and MGT 301.

MGT 101 Introduction to Management
MGT 202 Quantitative Decision-Making*
MGT 213 Financial Accounting
MGT 214 Managerial Accounting
MGT 301 Organizational Theory and Behavior
MGT 319 Financial Management
MGT 331 Principles of Marketing
MGT 381 Management Information Systems
MGT 451 Social, Legal, and Political Environment of Business
MGT 491 Business Policy and Strategy
MGT electives (8 credits at 300 or 400 level)

Credits earned in MGT 493, MGT 494, and MGT 498 may not be applied to the MGT electives requirement.

* May be used to fulfill IQL 101 Integrative Studies requirement.

**ALLIED DISCIPLINE REQUIREMENTS**
16 credits

IHCOMM 171 Public Speaking**
CS 101 Introduction to Computer Information Processing
ISECON 104 Introduction to Macroeconomics**
ECON 103 Introduction to Microeconomics

** May be used to fulfill an Integrative Studies requirement.
**ELECTIVES**
Select courses to reach a total of 124 credits for the degree.

**DEGREE REQUIREMENTS**
124 credits

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**Mathematics**

*Bachelor of Arts*

The Bachelor of Arts in Mathematics provides students breadth and depth through an integrated approach to the study of mathematics. The program prepares students for either an immediate career (especially teaching) or graduate school.

A decision to undertake the Mathematics major should be made no later than the beginning of the sophomore year if the program is to be completed in four years. Students entering as Mathematics majors should take MATH 151 Calculus I as soon as possible.

**INTEGRATIVE STUDIES REQUIREMENTS**
(minimum) 44 credits

**MAJOR REQUIREMENTS**

**Mathematics Option (48 credits)**

*Core Courses*
- MATH 151 Calculus I
- MATH 152 Calculus II
- MATH 225 Introduction to Abstract and Discrete Mathematics
- MATH 231 Linear Algebra and Differential Equations
- MATH 241 Probability and Statistics I
- MATH 330 Abstract Algebra
- MATH 350 Real Analysis
- MATH 400 Capstone in Mathematics

Select one course from the pure area:
- MATH 320 Geometry
- MATH 337 Number Theory
- MATH 490 Topics in Pure Mathematics

Select one course from the applied area:
- MATH 242 Applied Statistics
- MATH 251 Vector Calculus
- MATH 341 Probability and Statistics II
- MATH 361 Differential Equations
- MATH 362 Math Modeling/Numerical Methods

Plus both of the following courses:
- CS 140 Computer Programming I
- INPHYS 241 University Physics I

**Mathematics Secondary Teaching Option (minimum) 48 credits**

*Core Courses*
- MATH 151 Calculus I
- MATH 152 Calculus II
- MATH 225 Introduction to Abstract and Discrete Mathematics
- MATH 231 Linear Algebra and Differential Equations
- MATH 241 Probability and Statistics I
- MATH 320 Geometry
- MATH 330 Abstract Algebra
- MATH 350 Real Analysis
- MATH 378 Technology for Teachers
- MATH 475 Issues and Trends in Math Education
Plus one course from the applied area:
  MATH 242 Applied Statistics
  MATH 251 Vector Calculus
  MATH 341 Probability and Statistics II
  MATH 361 Differential Equations
  MATH 362 Math Modeling/Numerical Methods

Plus the following course:
  INPHYS 241 University Physics I

Teacher Certification
Students selecting this option must meet the requirements for secondary teacher certification. Refer to the Teacher Education section of this catalog (Dual Major in Education – Secondary Education Option) for information on these requirements, including courses that are to be included as part of the Integrative Studies Program requirements.

Mathematics Middle School/Junior High Teaching Option (minimum) 44 credits

Core Courses
MATH 151 Calculus I
MATH 152 Calculus II
MATH 175 Data Analysis for Teachers
MATH 225 Introduction to Abstract and Discrete Mathematics
MATH 231 Linear Algebra and Differential Equations
MATH 275 Geometry for K-8 Teachers
MATH 337 Number Theory
MATH 375 Algebraic Concepts for K-8 Teachers
MATH 378 Technology for Teachers
MATH 475 Issues and Trends in Math Education

Plus one of the following courses:
  MATH 225 Introduction to Abstract and Discrete Mathematics
  MATH 270 Mathematical Thinking

Plus one additional mathematics course at the 300 level or above, including IIMATH 310 or IIMATH 315.

Teacher Certification
Students selecting this option must meet the requirements for secondary teacher certification. Refer to the Teacher Education section of this catalog (Dual Major in Education – Secondary Education Option) for information on these requirements, including courses that are to be included as part of the Integrative Studies Program requirements.

Electives
Select courses to reach a total of 120 credits for the degree.

Degree Requirements
120 credits

Mathematics Education for Elementary Teachers
Bachelor of Arts

This program is designed to prepare candidates for grades K-8 elementary school teaching with a specialization in mathematics. In addition to meeting all the degree requirements set by Keene State College (mathematics, education, and integrative studies) and the certification requirements for elementary school teaching by the state of New Hampshire, graduates of the program will possess the skills and knowledge necessary to be successful elementary teachers who could also serve as elementary school mathematics specialists in school districts.

Integrative Studies Requirements
(minimum) 44 credits

For teacher preparation in this major, refer to the Teacher Education section of this catalog for other courses that are to be included in the Integrative Studies Program and to meet the requirements for certification.

Major Requirements
(minimum) 40 credits
Core Courses
MATH 151 Calculus I
MATH 171 Structure of Number Systems
MATH 175 Data Analysis for Teachers
MATH 270 Mathematical Thinking
MATH 275 Geometry for K-8 Teachers
MATH 337 Number Theory
MATH 375 Algebraic Concepts for K-8 Teachers
MATH 378 Technology for Teachers
MATH 475 Issues and Trends in Math Education
One mathematics elective at the 200 level or higher, or MATH 152 Calculus II.

ELECTIVES
Select courses to reach a total of 120 credits for the degree.

DEGREE REQUIREMENTS
120 credits

Mathematics-Physics
Bachelor of Science
This interdisciplinary program provides sufficient groundwork in both mathematics and physics for employment in industry, the commercial sector, or further study in graduate school. In order to complete the program within four years, the student should begin the Physics sequence in the spring of the first year of studies. Calculus I should be selected as soon as possible.

Students who are interested in an engineering degree may elect this program, complete major requirements over three years, transfer to an engineering school of choice, and be awarded both the B.S. in Mathematics-Physics from Keene State and the appropriate engineering bachelor’s degree.

The program is comprised of 20 credits of Mathematics, 24 credits of Physics, 4 credits of Computer Science, and 8 credits of Chemistry.

INTEGRATIVE STUDIES REQUIREMENTS
44 credits

MAJOR REQUIREMENTS
56 credits
MATH 151, 152, and 251 Calculus I, II, and Vector Calculus
MATH 231 Linear Algebra and Differential Equations
MATH 361 Differential Equations
INPHYS 241, PHYS 242 University Physics I and II
PHYS 260 Electronics
PHYS 342 Modern Physics
PHYS electives (8 credits, 300 level or higher)

Related Fields
CS 140 Computer Programming I
INCHEM 111, CHEM 112 General Chemistry I, II

ELECTIVES
Select courses to reach a total of 124 credits for the degree.

DEGREE REQUIREMENTS
124 credits
Music
Bachelor of Arts

This program provides a broad foundation in music and is also appropriate for students planning on graduate study. Five specializations are available:

- Composition
- Music History
- Music for Elementary Teachers
- Music Technology
- Music Theory

A grade C or higher must be earned in each music course counted toward the major.

Following an audition for acceptance into the Music degree program, the choice of specialization is determined in consultation with a Music faculty advisor, but all students should begin the theory/aural skills sequence in the first year. All students must pass a basic piano proficiency test and a basic aural skills test before the end of the sophomore year.

MID-LEVEL REVIEW
All music majors must complete a Mid-Level Review prior to the junior year. The Review is normally conducted during the student’s fourth semester of study, with adjustments made for transfer credits, participation in national and international exchange programs, and official leaves of absence. The Mid-Level Review consists of an application (information form, transcript, and reflective essay) and an assessment meeting between the candidate and the Faculty Review Panel. Application forms and additional information are available from the Music Department Office.

The purpose of the Mid-Level Review is three-fold: 1) to assess the student’s academic progress, 2) to assess the student’s artistic progress, and 3) to advise the student on academic, artistic, and career goals. Music Education and Music Performance majors whose academic record and/or artistic growth are not at an appropriate level based on state and national standards cannot continue in either of those two Bachelor of Music degree programs, but may continue to be a music major in the Bachelor of Arts in Music program.

LANGUAGE REQUIREMENT
The student must demonstrate proficiency in a language other than English as specified by the Language Requirement for Students with Majors in the School of Arts and Humanities. The complete policy statement appears at the beginning of the Bachelor’s Degree Programs section of this catalog.

INTEGRATIVE STUDIES REQUIREMENTS
44 credits

MAJOR REQUIREMENTS
48-53 credits (Four credits will be applied to Integrative Studies requirements.)

Core Courses (36 credits)
IAMU 114 Music Cultures of the World (also meets ISP requirement)
MU 100 Music Workshop (6 semesters)
MUA 101, 102, 201, 202, 301, and 302 Applied Music (6 semesters)
MU 118, 119 Functional Piano I and II (2 credits each) Piano majors may substitute MU 181 Accompanying for MU 118 and MU 119 for a total 4 credits.
MU 151, 152, 251, and 252 Music Theory I-IV (2 credits each) Students who do not pass the theory placement test given at the time of their audition are advised to seek a private tutor to eliminate this deficiency before starting the sequence of theory classes.
MU 161, 162, 261, and 262 Aural Skills I-IV (1 credit each)
MU 172, 173, 174, 175, 177, or 178 Ensembles (1 credit each, total 4 credits). Pianists/organists may substitute up to two semesters of MU 171 (Piano Ensemble) for these ensembles.
MU 281 Aural Proficiency Exam (0 credit)
MU 282 Mid-Level Review (0 credit)
MU 283 Piano Proficiency Exam (0 credit)
MU 310 Western Music Before 1700 (2 credits)
MU 312 Western Music After 1700

Specialization (select one):
Composition (16 credits)
MU 211 Intro to Electronic Music (2 credits)
MU 213 Composition I (2 credits)
MU 214 Composition II (2 credits)
MU 301, 302, and 401 Applied Composition (2 credits each)
MU 495 Seminar in Music (4 credits)

A student completing the Composition specialization is encouraged to consider the following courses as potential open electives:

MU 222 Musical Improvisation (1 credit)
MU 223 String Methods I (1 credit)
MU 225 Brass Methods I (1 credit)
MU 227 Woodwind Methods I (1 credit)
MU 229 Percussion Methods I (1 credit)
MU 315 Conducting I (2 credits)
MU 495 Seminar in Music (may repeat for 4 credits)

Music History (14 credits)
MU 495 Seminar in Music (4 credits, repeated once for 8 credits total)
Select at least 6 credits from the following:
IAMU 112 Latin American Music
IAMU 115 Women in Music
IAMU 216 History of Rock and Roll
IAMU 218 History of Jazz
MU 222 Musical Improvisation (1 credit)
MU 235 Performance Literature (2 credits)
IAMU 242 Listening to America
MU 298 Independent Study (1-6 credits)
MU 315 Conducting I (2 credits)
MU 495 Seminar in Music (may repeat for 4 credits)
MU 498 Independent Study (1-6 credits)

Music for Elementary Teachers (12 credits)
MU 207 Teaching Music to Children (4 credits)
Select at least 8 credits from the following:
MU 105 Voice Class I (1 credit)
MU 110 Guitar Class I (1 credit)
IAMU 112 Latin American Music
MU 222 Musical Improvisation (1 credit)
MU 223 String Methods I (1 credit)
MU 225 Brass Methods I (1 credit)
MU 227 Woodwind Methods I (1 credit)
MU 229 Percussion Methods I (1 credit)
MU 237 Vocal Pedagogy (2 credits)
MU 298 Independent Study (1-6 credits)
MU 315 Conducting I (2 credits)
MU 498 Independent Study (1-6 credits)

Music Technology (14-17 credits)
MU 211 Introduction to Electronic Music (2 credits)
MU 213 Composition I (2 credits)
MU 214 Composition II (2 credits)
MU 411 Electronic Music Projects (1 credit each, total 3 credits)
MU 497 Internship in Music Technology (1-4 credits)
Technology Electives from CS, FILM, TAD

Music Theory (12 credits)
MU 495 Seminar in Music (4 credits, repeated once for 8 credits total)
Select at least 4 credits from the following:
MU 211 Intro to Electronic Music (2 credits)
MU 213 Composition I (2 credits)
MU 214 Composition II (2 credits)
MU 222 Musical Improvisation (1 credit)
MU 298 Independent Study (1-6 credits)
MU 495 Seminar in Music (may repeat for 4 credits)
MU 498 Independent Study (1-6 credits)
ELECTIVES
Select courses to reach a total of 120 credits for the degree. Electives must include 12 credits outside of Music.

DEGREE REQUIREMENTS
120 credits

Music Education
Bachelor of Music

The Music Education curriculum prepares teachers and supervisors of music for kindergarten through grade 12. This major presupposes a high level of interest in and aptitude for music. An audition is required before admission to the program. Upon entering the program, students declare a primary instrument or voice. All students must pass a basic piano proficiency test and a basic aural skills test before the end of the sophomore year or they will not be permitted to enroll in junior year courses in Music Education. Students must work closely with their advisors in planning for completion of this tightly structured program.

Fourteen credits in Applied Music, including a 30- to 40-minute senior recital, must be in the primary instrument or voice and must be completed before student teaching. Participation in at least one large ensemble appropriate to the student’s program (chosen from MU 172, MU 173, MU 174, MU 175, MU 177, or MU 178) is required each semester of applied music study, with the exception of the semester of student teaching.*

A grade C or higher must be earned in each music course counted toward the major.

*Pianists/organists may substitute up to two semesters of MU 171 Piano Ensemble for these ensembles.

MID-LEVEL REVIEW
All music majors must complete a Mid-Level Review prior to the junior year. The Review is normally conducted during the student’s fourth semester of study, with adjustments made for transfer credits, participation in national and international exchange programs, and official leaves of absence. The Mid-Level Review consists of an application (information form, transcript, and reflective essay) and an assessment meeting between the candidate and the Faculty Review Panel. Application forms and additional information are available from the Music Department Office.

The purpose of the Mid-Level Review is three-fold: 1) to assess the student’s academic progress, 2) to assess the student’s artistic progress, and 3) to advise the student on academic, artistic, and career goals. Music Education and Music Performance majors whose academic record and/or artistic growth are not at an appropriate level based on state and national standards cannot continue in either of those two Bachelor of Music degree programs, but may continue to be a music major in the Bachelor of Arts in Music program.

LANGUAGE REQUIREMENT
The student must demonstrate proficiency in a language other than English as specified by the Language Requirement for Students with Majors in the School of Arts and Humanities. The complete policy statement appears at the beginning of the Bachelor’s Degree Programs section of this catalog.

INTEGRATIVE STUDIES REQUIREMENTS
44 credits

All Music Education majors must meet the New Hampshire General Knowledge Standards for teachers (ED 609). In order to accomplish this goal, Music Education majors are advised to take courses focusing on literature, history, and geography as part of their Integrative Studies Program.

MAJOR REQUIREMENTS
98-99 credits (Four credits will be applied to Integrative Studies requirements.)

Teacher Education (22 credits)
EDUC 100 Issues in Education (2 credits)
EDSP 202 Development, Exceptionality, and Learning
MU 356 General Music K-12 Practicum (1 credit)
MU 359 Ensemble Music Practicum (1 credit)
MU 475 Music Student Teaching – Elementary (6 credits)
MU 476 Music Student Teaching – Secondary (6 credits)
MU 477 Music Student Teaching Seminar (2 credits)

Music Courses (76-77 credits)
IAMU 114 Music Cultures of the World (also meets ISP requirement)
MU 100 Music Workshop (6 semesters)
MUA 101, 102, 201, 202, 301, 302, and 401 Applied Music (2 credits each)
MU 118 and 119 Functional Piano I and II (2 credits each)(Piano majors may substitute MU 181 Accompanying for MU 118 and MU 119 for a total 4 credits.)
MU 151, 152, 251, and 252 Music Theory I-IV (2 credits each). Students who do not pass the theory placement test given at the time of their audition are advised to seek a private tutor to eliminate this deficiency before starting the sequence of theory classes.
MU 161, 162, 261, and 262 Aural Skills I-IV (1 credit each)
MU 172, 173, 174, 175, 177, or 178 Ensembles (1 credit each, total 7 credits)
MU 220 Technology for Music Educators
MU 222 Musical Improvisation (1 credit)
MU 225 Brass Methods I (1 credit)
MU 227 Woodwind Methods I (1 credit)
MU 229 Percussion Methods I (1 credit)
MU 231 Guitar Methods (2 credits) (Guitar majors substitute MU 326)
MU 281 Aural Proficiency Exam (0 credit)
MU 282 Mid-Level Review (0 credit)
MU 310 Western Music Before 1700 (2 credits)
MU 312 Western Music After 1700
MU 315, 316 Conducting I and II (2 credits each)
MU 357 General Music K-12**
MU 358 Choral Music Education (2 credits)**
MU 360 Instrumental Music Education (2 credits)**
**Student GPA must average 2.50 to qualify for student teaching.

Specialization (select one):

**Instrumental (6 credits)**
MU 105 Voice Class (1 credit)
MU 172 Concert Choir (1 credit)
MU 224 String Methods II (1 credit)
MU 226 Brass Methods II (1 credit)
MU 228 Woodwind Methods II (1 credit)
MU 230 Percussion Methods II (1 credit) (Percussionists substitute a Music elective)

**Choral (7 credits)**
MUAS 101, 102, and 201 Applied Music (1 credit each, 3 credits total; secondary instrument)
MU 237 Vocal Pedagogy (2 credits)
MU 238 Vocal Diction (2 credits)

DEGREE REQUIREMENTS
138-139 credits

Music Performance

Bachelor of Music

This major emphasizes performance proficiency and applied study of a major instrument or voice. It prepares students for careers in performance, independent teaching, or graduate study leading to the Master of Music degree.

Upon successful completion of an audition into the program, students declare a primary instrument or voice; 32 credits of Applied Music must then be taken in the primary instrument or voice. All students must pass a basic piano proficiency test and a basic aural skills test before the end of the sophomore year or they will not be permitted to proceed with the junior recital. A 30- to 40-minute recital on the primary instrument in the junior year and a 60- to 70-minute recital in the senior year are required. Participation in at least one large ensemble appropriate to the student's program (chosen from MU 172, MU 173, MU 174, MU 175, MU 177, or MU 178) is required each semester of applied music study.*

A grade C or higher must be earned in each music course counted toward the major.

*Pianists/organists may substitute up to two semesters of MU 171 Piano Ensemble for these ensembles.
MID-LEVEL REVIEW
All music majors must complete a Mid-Level Review prior to the junior year. The Review is normally conducted during the student’s fourth semester of study, with adjustments made for transfer credits, participation in national and international exchange programs, and official leaves of absence. The Mid-Level Review consists of an application (information form, transcript, and reflective essay) and an assessment meeting between the candidate and the Faculty Review Panel. Application forms and additional information are available from the Music Department Office.

The purpose of the Mid-Level Review is three-fold: 1) to assess the student’s academic progress, 2) to assess the student’s artistic progress, and 3) to advise the student on academic, artistic, and career goals. Music Education and Music Performance majors whose academic record and/or artistic growth are not at an appropriate level based on state and national standards cannot continue in either of those two Bachelor of Music degree programs, but may continue to be a music major in the Bachelor of Arts in Music program.

LANGUAGE REQUIREMENT
The student must demonstrate proficiency in a language other than English as specified by the Language Requirement for Students with Majors in the School of Arts and Humanities. The complete policy statement appears at the beginning of the Bachelor’s Degree Programs section of this catalog.

INTEGRATIVE STUDIES REQUIREMENTS
44 credits

MAJOR REQUIREMENTS
83-85 credits (Four credits will be applied to Integrative Studies requirements.)
IAMU 114 Music Cultures of the World (also meets ISP requirement)
MU 100 Music Workshop (8 semesters)
MUAP 101, 102, 201, 202, 301, 302, 401, and 402 Applied Music (4 credits each; primary instrument)
MUAS 101, 102, 201, and 202 Applied Music (1 credit each, 4 credits total; secondary instrument)
MU 118 and 119 Functional Piano I and II (2 credits each)
(Piano majors may substitute MU 181 Accompanying for MU 118 and MU 119 for a total 4 credits)
MU 151, 152, 251, and 252 Music Theory I-IV (2 credits each) Students who do not pass the theory placement test given at the time of their audition are advised to seek a private tutor to eliminate this deficiency before starting the sequence of theory classes.
MU 161, 162, 261, and 262 Aural Skills I-IV (1 credit each)
MU 172, 173, 174, 175, 177, or 178 Ensembles (1 credit each, total 8 credits)
MU 222 Musical Improvisation (1 credit)
MU 281 Aural Proficiency Exam (0 credit)
MU 282 Mid-Level Review (0 credit)
MU 283 Piano Proficiency Exam (0 credit)
MU 310 Western Music Before 1700 (2 credits)
MU 312 Western Music After 1700
MU 315 Conducting I (2 credits)
MU 495 Seminar in Music (4 credits)

And

Vocalists Take:
MU 235 Performance Literature (2 credits)
MU 237 Vocal Pedagogy (2 credits)
MU 238 Vocal Diction (2 credits)

Instrumentalists Take:
Select one of the following:
MU 235 Performance Literature (2 credits)
MU 326 Applied Pedagogy (2 credits)

DEGREE REQUIREMENTS
123-125 credits

Nursing
Bachelor of Science
Nursing is an interdisciplinary program grounded in the liberal arts. The major offers two options: a Pre-Licensure option and an RN Completion option. Pre-licensure students are undergraduates who do not have an RN license. RN Completion students are those who hold an associate’s degree in nursing from a community college and a license
to practice as a registered nurse. The integrated curriculum is designed to provide meaningful learning experiences for Pre-Licensure students and RN Completion students and to ensure that graduates possess the knowledge, skill, and disposition mastery expectations of the State of New Hampshire Board of Nursing (BON) and the Commission on Collegiate Nursing Education (CCNE). The program of study in nursing, with the identified course learning outcomes, expectations, and cumulative semester competencies, is designed to reflect the academic integrity expectations of all Keene State College programs while also achieving the requirements of state and national accreditation for our nursing graduates. The Nursing major has a competitive enrollment process. As such, a formal application is REQUIRED.

FEES
Additional expenses associated with the Nursing program include payment for immunizations, differential fees for clinical courses, travel expenses to and from off-campus clinical assignments, uniforms, professional memberships, and occasional conferences and workshops.

Admission Criteria
There are two pathways for admission to the Nursing major at Keene State College. Students must apply for declaration as pre-nursing candidates (Pre-Licensure nursing candidates) during their first two years of undergraduate study at the college and then apply for, and be admitted to, the Nursing major in the fall of their junior year. Alternatively, candidates who have completed an associate’s degree in nursing with credentials as a licensed registered nurse (RN Completion students) must apply for admission to the Nursing, Bachelor of Science program. Entering first-year, transferring, or matriculated Keene State College students must apply for and be accepted as declared pre-nursing candidates following advisement with a Nursing program faculty advisor. Declaration as a pre-nursing candidate will support effective advisement practices, academic progress, and student program planning through this structured curriculum during the student’s first two years at the College. Declaration as a pre-nursing candidate, however, does not guarantee admission to the Nursing major. Pre-nursing candidates must complete an application and be accepted into the Nursing major in the fall of their junior year.

The Nursing major is a highly competitive program, with enrollments limited to 48 candidates per year. Applications for admission to the Nursing major must be received by the Nursing Department by October 1 each year for the next January admission cycle. Previously unlicensed nursing candidates are eligible to sit for the RN licensure exam following the completion of their fourth semester in the Nursing major.

Because of the professional nature of nursing and its responsibility to the public, the Nursing Department has established the following admissions, progression, and graduation standards for student selection and graduation.

Pre-nursing candidate declaration:
Entering first-year candidates or transferring first- or second-year students must meet minimum entry requirements of the college. Admitted students with a high school GPA of 3.25 or collegiate GPA of 2.5 or higher, with appropriate curriculum (as determined by Nursing Department faculty), will be eligible.

To be accepted, interested, eligible candidates shall complete a declaration application and meet with Nursing faculty to confirm pre-nursing eligibility, which supports candidate advisement for prerequisite and allied course requirement completion.

Admission to the Nursing major:
Pre-nursing Candidate Admission Track (referred to as Pre-Licensure nursing candidates by accrediting bodies):
• Applicants must maintain a cumulative 2.5 grade-point average to be eligible for consideration.
• A grade C or better must be obtained in all allied discipline requirements.
• Students must apply for entry to the Nursing major while they are in the process of completing the admission requirements in the fall of their junior year. If admitted, the student must provide a final transcript, verifying completion of required and allied coursework, prior to course enrollment in January of their junior year.

Transferring, Licensed Nursing Candidate Admission Track (referred to as RN completers by accrediting bodies):
• All applicants must have an unencumbered New Hampshire license as an RN.
• All applicants must be accepted into KSC and then complete an application for acceptance to the Nursing major.
• All criteria above must also be met by RN completion students.

Additional expectations and responsibilities for program progression and fees:
Students are responsible for the purchase of uniforms and expenses associated with required criminal background checks prior to clinical placement.

Students must provide proof of immunization prior to clinical placement. Immunizations include: Tb, Varicella, MMR, Hepatitis B series (HEPVAC). HEPVAC requires that the series start around the time of application submission to ensure the six-month series is entirely complete by January.

Students must be provide proof of certification in cardiopulmonary resuscitation for health care providers at the point of application and must maintain certification until after graduation.
Travel outside of the Keene area may be required for clinical experiences, and students are responsible for their own transportation.

For the RN Completion option, the courses listed under the option requirements must be completed at Keene State College.

Students must maintain a cumulative GPA of 2.5 for required nursing courses and allied discipline requirements for credit toward the Bachelor of Science degree in Nursing.

A minimum of 124 credit hours are required to complete the degree.

**INTEGRATIVE STUDIES REQUIREMENTS**
(minimum) 44 credits

**MAJOR REQUIREMENTS (76-96 CREDITS)**

**Allied Discipline Requirements:**
44 credits

- BIO 230 Human Anatomy and Physiology I
- BIO 232 Human Anatomy and Physiology II
- BIO 241 Medical Microbiology
- HLSC 101 Health and Wellness
- HLSC 214 Nutrition Fundamentals
- HLSC 285 Health in Society
- HLSC 305 Epidemiology in Health Science
- INCHM103 Fundamentals of Chemistry
- IHSP101 Elementary Spanish I OR IHSP102 Elementary Spanish II
- ISPSYC 312 Lifespan Development
- MATH 141 Introductory Statistics

**Pre-Licensure Student Option:**
52 credits

- NURS 301 Introduction to Professional Nursing (2 credits)
- NURS 302 Introduction to Patient-Centered Care
- NURS 303 Pharmacology and Pathophysiology
- NURS 304 Clinical: Patient-Centered Care
- NURS 305 Evidence-Based Practice
- NURS 306 Legal and Ethical Foundations
- NURS 307 Clinical: Evidenced-Based Practice
- NURS 401 Collaborative Care of Populations
- NURS 402 Specialty Nursing Practice
- NURS 403 Clinical: Specialty Settings
- NURS 404 Nursing Leadership
- NURS 405 Nursing Research
- NURS 406 Clinical: Advanced Care (6 credits)

**RN Completion Option:**
32 credits

- NURS 301 Introduction to Professional Nursing (2 credits)
- NURS 302 Introduction to Patient-Centered Care
- NURS 305 Evidence-Based Practice
- NURS 306 Legal and Ethical Foundations
- NURS 401 Collaborative Care of Populations
- NURS 402 Specialty Nursing Practice
- NURS 403 Clinical: Specialty Settings (2 credits)
- NURS 404 Nursing Leadership
- NURS 405 Nursing Research

**ELECTIVES**

Select courses to reach a total of 124 credits for the degree.

**DEGREE REQUIREMENTS**
124-140 credits
Physical Education

Bachelor of Science

This interdisciplinary program provides students with multidimensional professional preparation in Physical Education. The Physical Education major is completed by selecting one of the following two options: Teacher Certification or Exercise Science. An application process is required for each of the options in the major. Specific requirements and standards are listed for each of the two options.

MAJOR REQUIREMENTS

1. Teacher Certification Option (84 credits)
This option is designed to prepare students to teach Physical Education in public schools and meets all current requirements by the State of New Hampshire for certification in physical education for grades K to 12. An admission process is required for the major. A decision to major in Physical Education should be made no later than the fall semester of the freshman year. For transfers and students who begin at a later time, additional time to meet degree requirements can be expected.

The application process for admission to the Teacher Certification option begins fall semester of the freshman year. The review of applicants and the official letter of notification of the results of this review would occur at the conclusion of the spring semester of the freshman year. If not accepted, the student will be eligible to reapply for admission during the next year’s admission period. Students applying are expected to have completed PE 100 and a minimum of 4 credits of PE major skills coursework. Transfer students may be eligible to apply for admission after one semester at KSC, which must include 3 credit hours of PE major skills coursework.

Admission Criteria
Students must submit a portfolio as evidence of each of the following expectations:

Personal Identity: Biographical Information

Program Planning and Academic Progress: Overall GPA of 2.5, major GPA of 2.5, and grade C or higher in the following PE courses:
- PE 100 Foundations (2 credits)
- PE 260 Total Fitness (2 credits)
- PE 278 Racquet Sports (2 credits)
- PE 286 Basketball (1 credit)
- PE 288 Soccer/Speedball (1 credit)

Teaching Skills: Demonstration of basic competencies in planning, instruction, reflection, and assessment.

Professional Orientation: Documentation of progress in professional role modeling, professional writing, and professional experience.

NOTE: Acceptance into Teacher Education is a separate process and is required of all students. Refer to Dual Major in Education.

INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits

All Physical Education majors in the Teacher Certification option must meet the New Hampshire General Knowledge Standards for Teachers (ED 609). In order to accomplish this goal, Physical Education Teacher Certification majors are advised to take courses focusing on literature, history, and geography as part of their Integrative Studies Program.

ALLIED REQUIREMENTS FOR TEACHER CERTIFICATION OPTION
12 credits

BIO 230 (Human Anatomy and Physiology I) and BIO 232 (Human Anatomy and Physiology II) are prerequisites for courses in the major for all students majoring in Physical Education Teacher Certification option. This sequence is normally started in the spring semester of the freshman year.

The prerequisite for BIO 230 is INCHEM 100, INCHEM 103, or INCHEM 111. Therefore, a chemistry course should be taken during the first semester of the freshman year.

COMPETENCY REQUIREMENTS FOR TEACHER CERTIFICATION OPTION

All students majoring in Physical Education with an option in Teacher Certification are required to be certified in Standard First Aid and CPR for the Professional Rescuer for courses marked with an (*).
Physical Education Teacher Certification Requirements
72 credits
EDUC 100 Issues in Education (2 credits)
EDSP 202 Development, Exceptionality, and Learning
PE 100 Foundations of Physical Education (2 credits)
PE 200 Applied Kinesiology
PE 201 Physiology of Exercise
PE 360 Teaching Physical Education
PE 361 Adapted Physical Education
PE 362 Organization and Administration of Physical Education Programs
PE 363 Evaluation of K-12 Physical Education Learners (2 credits)
PE 375 Practicum: Teaching-Elementary *
PE 376 Practicum: Teaching-Secondary *
PE 475 Student Teaching: Elementary * (6 credits)
PE 476 Student Teaching: Secondary * (6 credits)
PE 477 Student Teaching Seminar

Skills and Techniques
18 credits in the following courses, which must be taken in sequence as follows:

Freshman Year:
PE 260 Total Fitness and Conditioning Fall (2 credits)
PE 288 Soccer/Speedball Fall (1 credit)
PE 278 Racquet Sports Spring (2 credits)
PE 286 Basketball Spring (1 credit)

Sophomore Year:
PE 255 Developmental Movement Fall (2 credits)
PE 265 Secondary Activities Fall (1 credit)
PE 287 Softball Fall (1 credit)
PE 283 Gymnastics Spring (2 credits)
PE 285 Volleyball Spring (1 credit)

Junior Year:
PE 261 Fitness Curriculum for K-12 Learners Fall (1 credit)
PE 282 Track and Field Fall (1 credit)
PE 256 Rhythms Spring (2 credits)
PE 268 Outdoor Skills Spring (1 credit)

DEGREE REQUIREMENTS
124 credits
(Total degree requirements may change pending Integrative Studies requirements.)

2. Exercise Science Option (64-77) credits
This option is designed for students who are interested in studying the body as it pertains to human movement and the changes that occur in the body in response to exercise. It is intended for students who would like to pursue a career in exercise science, sports medicine, or allied health. Exercise Science is a multidisciplinary science-based program, which is fast growing and ever changing. Exercise Scientists use their knowledge of the human body and exercise leadership skills to help people improve physical performance, fitness, and quality of life. Exercise Science is an area of study that prepares students for a variety of professions that include competitive sports, community recreation, health and wellness, rehabilitation, and medicine. The Exercise Science option has some flexibility where students must choose a concentration that best accomplishes their career objectives.

The application process for admission to the Exercise Science option begins fall semester of the freshman year. The review of applicants and the official letter of notification of the results of this review would occur at the conclusion of the spring semester of the freshman year. If not accepted, the student will be eligible to reapply for admission during the next year's admission period. Students applying are expected to have completed HLSC 101, PE 250, and PE 191, obtaining a grade C or better in each of the courses listed. Transfer students may be eligible to apply for admission after one semester at KSC, but must have completed INCHEM 100 Introduction to Chemistry or an equivalent course and BIO 230 Human Anatomy and Physiology I or an equivalent course before applying.
Admission Criteria

Academic Progress
Overall GPA of 2.5, major GPA of 2.5 and a grade C or higher in the following courses:
HLSC 101 Health and Wellness
PE 191 Standard First Aid/CPR
PE 250 Concepts of Exercise Training

Professional Recommendations: Two recommendations for admission by KSC faculty (minimum one faculty member recommendation from outside of the Physical Education Department).

Professional Orientation: Documentation of progress in professional role modeling, professional writing, and professional experience.

Retention Standards
Enrollment in PE 372, PE 472, and PE 492 requires the following standards:
1. Student must receive a grade C or better in all required Exercise Science option courses.
2. Student must maintain a cumulative GPA of 2.5 and a major GPA of 2.5.

INTEGRATIVE STUDIES REQUIREMENTS

(minimum) 44 credits
All Physical Education majors in the Exercise Science option must follow guidelines provided in the KSC catalog for completion of the Integrative Studies Program.

ALLIED REQUIREMENTS FOR EXERCISE SCIENCE OPTION

(12-16 credits)
BIO 230 (Human Anatomy and Physiology I) and BIO 232 (Human Anatomy and Physiology II) are prerequisites for courses in the major for all students majoring in Physical Education Exercise Science option. This sequence is normally started in the spring semester of the freshman year.

The prerequisite for BIO 230 is INCHEM 100, INCHEM 103, or INCHEM 111. Therefore, a chemistry course should be taken during the first semester of the freshman year. Also, ISPYSC 100 is required in order to fulfill prerequisites in the health concentration of the Exercise Science option.

Exercise Science Option Requirements (41-49 credits)
HLSC 101 Health and Wellness
PE 191 Standard First Aid/CPR (1 credit)
PE 200 Applied Kinesiology
PE 201 Physiology of Exercise
PE 250 Concepts of Exercise Training
PE 332 Exercise Testing and Programming(**)
PE 335 Advanced Strength and Conditioning(**)
PE 344 Sports Nutrition
PE 372 Practicum: Exercise Leadership(**)
PE 460 Experimental Design and Analysis in PE
PE 472 Exercise Science Externship(**) (4-12 credits) or PE 492 Exercise Science Seminar(**)

(**) Students are required to have current certification in Adult CPR and First Aid.

Specialization Requirements
Complete one of the following in the concentration areas:

Health Specialization (12 credits):
HLSC 285 Health in Society
HLSC 330 Health Psychology or IIPE 310 The Psycho-Social Aspects of Sport
HLSC 431 Stress Management

Coaching Specialization (11 credits):
PE 210 Introduction to Coaching (3 credits)
MGT 260 Sports Management or IIPE 310 Psycho-Social Aspects of Sport
PE 371 Coaching Practicum

Open Electives
Select courses to reach a minimum total of 124 credits for the degree.

DEGREE REQUIREMENTS

124 credits
Political Science

Bachelor of Arts

The Political Science major provides students with an understanding of politics and government as practiced in the United States and throughout the world, a knowledge of global political relationships, opportunities to develop skills that are useful both in the course of participating first-hand in politics and in the rigorous analysis and communication of complex information, familiarity with methods used in the study of political science, and preparation for professional careers in law, government, international affairs, and the teaching of politics and the social sciences.

Students pursuing a major in political science should receive a grade C or higher in each course that counts toward the major.

INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits

MAJOR REQUIREMENTS
(minimum) 36 credits

Core Courses (20 credits)
- ISPOSC 210 U.S. Politics
- ISPOSC 220 Global Politics
- ISPOSC 230 Foundations of Political Thought
- POSC 301 Writing and Research
- POSC 401 Keystone in Political Science

In addition students must take another 16 credits in the discipline at the 200-level or higher, at least 8 of which must be at the 300 level or higher.

ELECTIVES
Select courses to reach a total of 120 credits for the degree.

DEGREE REQUIREMENTS
120 credits

Psychology

Bachelor of Arts

The psychology program prepares students for success in a graduate program in psychology and/or a career in a psychology related field. The program exposes students to the methodologies, problems, bodies of knowledge, and broad range of perspectives found currently in psychology. Students majoring in psychology will gain an understanding of (1) the applied fields in psychology, (2) individual differences, (3) the biological basis of behavior, and (4) the social basis of behavior.

Core courses in the major provide students with the fundamentals for understanding psychology as a science. Elective courses expand and enhance students’ knowledge through a variety of topics such as child and adolescent psychology, counseling, motivation, personality, culture and psychology, and ethology. Psychology majors also have the opportunity to be involved in practica that provide them with real-world experiences working in the field of psychology. They may also conduct independent research with faculty members exploring topics beyond the available curriculum. Especially motivated students may participate in the honors program in which they develop, carry out, and present a research project.

Psychology majors are employed in diverse fields and many go on to attain masters and doctoral degrees. The program prepares them to meet those challenges.

INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits
MAJOR REQUIREMENTS
40 credits

Admission to the Major
The application process for formal admission to the Psychology major occurs during the first or second semester of the sophomore year, e.g., upon completion of PSYC 101, PSYC 251, and either PSYC 242 or PSYC 253. To be admitted to the major, the student must achieve a minimum GPA of 2.5 and no less than a grade C in any of these three courses, and must be in good academic standing with the College. Before declaring a Psychology major, the student must submit a transcript showing his or her grades in these courses to a Psychology advisor for review. If the grade requirements are met, the advisor will sign the declaration of major form, formally admitting the student into the Psychology program. Non-majors will not be allowed to enroll in PSYC 252 Research Methods in Psychology.

Core Courses (24 credits)
PSYC 101 General Psychology
PSYC 251 Psychological Statistics*
PSYC 252 Research Methods in Psychology
PSYC 253 Brain and Behavior
PSYC 382 History of Psychology
PSYC 495 Seminar

*Students who have already completed MATH 141 may not take PSYC 251 for college credit. These students will use their grade in MATH 141 for admission to the major. Any of these students admitted to the major must take a 4-credit PSYC elective in place of PSYC 251 to fulfill the psychology major credit requirements.

Psychology Electives (16 credits)
Select at least two courses from one of the following groups (8 credits) and at least one course from each of the remaining groups (8 credits):

Group 1
PSYC 242 Personality
PSYC 340 Psychological Testing
PSYC 345 Abnormal Psychology
PSYC 444 Counseling
PSYC 447 Clinical Psychology

Group 2
PSYC 221 Social Psychology
PSYC 311 Child and Adolescent Psychology
PSYC 314 Adulthood and Aging
PSYC 332 Ethology
PSYC 425 Psychology of Women

Group 3
PSYC 321 Culture and Psychology
PSYC 355 Psychology of Learning
PSYC 357 Cognitive Processes
PSYC 451 Motivation
PSYC 453 Sensation and Perception

OPEN ELECTIVES
Select courses to reach a total of 120 credits for the degree.

DEGREE REQUIREMENTS
120 credits

Psychology Honors Program
Motivated psychology students may participate in an advanced program of research culminating in graduation with Honors in Psychology. This program allows students to pursue supervised research or applications of psychology in greater depth than provided in course offerings. Students electing to participate in this program complete all requirements for the Psychology major plus 2 credits of PSYC 496 Honors Seminar and 6 credits of PSYC 499 Honors Research during the two semesters of the senior year. These credits may be in lieu of or in addition to open elective credits used to fulfill the requirements for the Psychology major.

Admission to the Honors Program is based on:
1. Self-nomination after completion of 80 credits with an overall grade point average of 3.20.
2. **Support of an Honors Committee** consisting of a faculty sponsor and two other faculty members, one of whom may be from a department other than Psychology. The Honors Committee will review the student’s project proposal at the time of enrollment in PSYC 496 and PSYC 499 and, if they approve it, accept the student into the Honors Program.

3. **Completion of, or enrollment in, at least five psychology courses**, including PSYC 251 Psychological Statistics and PSYC 252 Research Methods. Final admission requires successful completion of those Psychology courses enrolled in at the time of application for admission to the Honors Program.

**At the end of the senior year, each participant:**

1. Submits a final written report on the Honors work for approval by his or her Honors Committee.

2. Presents the results of his or her work and responds to questions about the project and its relationship to the larger body of psychological knowledge, in a colloquium open to the public.

3. The student’s Honors Committee votes on whether or not to accept the Honors project.

Students successfully completing all facets of the Honors Program and having an average of 3.20 overall and 3.20 in Psychology will graduate with Honors in Psychology.

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**Safety and Occupational Health Applied Sciences**

**Bachelor of Science**

This major prepares students for a variety of occupational safety and health program management positions in the private and public sector. Emphasis is placed on critical thinking, hazard identification and prioritization, problem solving, cost effectiveness, professional skills in programmatic management, and safety and environmental regulatory compliance. Graduates will have the capacity to pursue graduate study, participate in applied research, or transition directly into careers in loss control, risk management, organizational safety, and consulting.

**INTEGRATIVE STUDIES REQUIREMENTS**

*(minimum) 44 credits*

**MAJOR REQUIREMENTS**

*(48 credits)*

**Core Courses (20 credits)**

SAFE 101 Safety Awareness  
SAFE 202 Occupational Safety  
SAFE 302 Law and Ethics in Safety  
SAFE 303 Safety and Health Standards  
SAFE 305 Health Hazard Identification

**Safety Electives (16 credits)**

Select *four* of the following *(two* must be 300 level or above):

SAFE 203 Fire and HAZMAT Response  
SAFE 204 Human Factors in Safety  
SAFE 205 Behavioral Based Safety  
SAFE 290 Special Topics in Safety  
SAFE 301 Loss Prevention  
SAFE 304 Environmental Regulation (IDSS)  
SAFE 401 Industrial Hygiene  
SAFE 402 Critical Incident Response  
SAFE 490 Adv Special Topics in Safety  
SAFE 495 Safety Seminar

**ALLIED REQUIREMENTS**

*12 credits*

MGT 101 Intro to Management  
MGT 324 Human Resource Management  
*(Strongly recommended, but not required.)*  
INCHEM 103 Fundamentals of Chemistry

**SAFETY CAPSTONE**

*4 credits*
SAFE 497 Innovative Safety Leadership

**HONORS PROGRAM**

4-8 credits  
*(Selective enrollment; see below for requirements.)*

SAFE 491 Honors Research  *(Can be used as Safety Electives.)*

**INTERNSHIPS**

*(Highly recommended.)*

SAFE 200 Safety Internship 2-8 credits  *(Open Elective Credit only.)*
SAFE 400 Adv Safety Internship 2-8 credits  *(Open Elective Credit only.)*

**OPEN ELECTIVES**

Select additional courses of your choice to bring total number of credits earned to 124.

**DEGREE REQUIREMENTS**

124 credits

**Safety Honors Program**

Motivated Safety students can participate in an advanced program of research through independent study projects and internship experiences. This program recognizes and formalizes outstanding academic achievement, culminating with graduation with Honors in Safety. This program allows students to pursue supervised research or applications of safety in greater depth than provided in principal course offerings during their final years as an undergraduate at Keene State College. Students electing to participate in this program complete all requirements for the Safety major plus 4 credits of SAFE 401 Industrial Hygiene and 8 credits of SAFE 491 Honors Research during the two semesters of the senior year. These credits may be in lieu of, or in addition to, elective credits used to fulfill the requirements for the Safety major.

**Admission to the Safety Honors Program is based on:**

1. **Self-nomination** after completion of 75 credits, consistent with the RHO SIGMA KAPPA National Safety Honor Society requirements, students will hold an overall grade point average of 3.0 and a grade point average in the Safety and Occupational Health Applied Sciences major of 3.4 or better.

2. **Support of an Honors Committee** consisting of three full-time tenure-track Safety faculty selected by the Safety Faculty. Students accepted into the Safety Honors Program will participate in research projects funded by external grants. Honors Program capacity may fluctuate due to availability of research project positions. To maintain program capacity, final selection will be based on students with the highest overall GPA at the time of application to the program.

3. **Completion of, or enrollment in, all SAFE Core Courses.** Final admission requires successful completion of those Safety courses enrolled in at the time of application for admission to the Honors Program.

**At the end of the senior year, each participant:**

1. Submits a final written report (or publication-ready document) on the Honors work for approval by his or her Honors Committee.

2. Presents the results of his or her work and responds to questions about the project and its relationship to the safety profession.

3. The student’s Honors Committee votes on whether or not to accept the Honors project.

Students are encouraged to apply for applicable undergraduate research grant funding.

Students successfully completing all facets of the Honors Program and having an average of 3.00 overall and 3.40 in Safety Studies will graduate with Honors in Safety.

Students in the Honors Program may also apply for 500-level course offerings, upon approval of the Safety and Occupational Health Applied Sciences faculty.

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**Social Science**

**Bachelor of Arts**

This program provides a broad overview of several liberal arts and sciences. Among other purposes, it is useful as pre-law preparation and graduate work in the policy studies areas. This major also prepares students to be eligible for social studies teacher certification at the secondary level.
INTEGRATIVE STUDIES REQUIREMENT
(minimum) 44 credits

MAJOR REQUIREMENTS
(56 credits)

Foundation Courses (32 credits)
IHHIST 161 U.S. Perspectives to 1877
IHHIST 162 U.S. Perspectives since 1877
SOSC 201 Global Studies I
ISPOSC 210 U.S. Politics
  or ISPOSC 220 Global Politics
  or ISPOSC 230 Foundations of Political Thought
ISGEOG 100 Introduction to Geography
  or ISGEOG 101 World Regional Geography
ISECON 104 Introduction to Macroeconomics
100- or 200-level course from ANTH, PSYC, SOC, ISANTH, ISPSYC, or ISSOC
Math Requirement – select one of the following:
  Math 141 or Math 175
  (Either can serve as IQL.)

Upper Division Courses (24 credits)
SOSC 301 Global Studies II
16 additional credits at the 300 to 400 level in at least two of the following disciplines:
ANTH, ECON, GEOG, HIST, POSC, PSYC, SOC, or SOSC
SOSC 495 Social Science Senior Seminar

ELECTIVES
Select courses to reach a total of 120 credits for the degree.

DEGREE REQUIREMENTS
120 credits

Sociology
Bachelor of Arts

The Sociology program offers students knowledge and resources to search systematically for answers to questions about society. Sociology students develop a sociological imagination, which is the ability to grasp the close relationship between personal experiences and the larger social world. Our majors study social and cultural forces that shape individual and group behavior using a variety of scientific methods such as surveys, interviews, observation, and content analysis. By studying and critically assessing sociological theories, sociology students also describe, interpret, and explain how the world works.

Core courses provide excellent training in sociological concepts, theories, and methods. Electives focus on topics like the environment, popular culture, families, inequalities, race and ethnicity, crime and deviance, anthropology, and global society. Sociology majors may also engage in community research, service-learning projects, internships, and travel through coursework. Students with a bachelor's degree in sociology are well prepared for graduate and professional studies and careers using their interpersonal skills and specialized knowledge in the areas of education, social services, human rights, health and wellness, justice, advocacy, and research.

INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits

MAJOR REQUIREMENTS
36 credits
To receive a degree in Sociology, a student must earn a grade C or better in the following core courses: SOC 201, SOC 301, SOC 303, and SOC 305. Courses may be retaken as needed to meet this requirement.

Core Courses
SOC 201 Introduction to Sociology Major
ISANTH 110 Cultural Anthropology
  or ISANTH 111 Archeology and Physical Anthropology
SOC 301 Sociological Research Methods
SOC 303 Sociological Quantitative Analysis
SOC 305 Sociological Theory
Select one of the following:
  HGS 427/SOC 427 Sociological Topics in Genocide
  SOC 450 Mind, Self, and Society
  SOC 455 The Body and Sexuality in Society
  SOC 461 White-Collar Crime
  SOC 472 Sociology of Health and Medicine
  SOC 475 Social Stratification
  SOC 480 Political Sociology
  SOC 485 Science and Society
  SOC 490 Advanced Topics in Sociology

Sociology Electives
Twelve (12) credits in Sociology Elective courses must be taken. Four (4) credit hours of Anthropology courses can be used to satisfy this requirement.

ELECTIVES
Select courses to reach a total of 120 credits for the degree.

DEGREE REQUIREMENTS
120 credits

Spanish
Bachelor of Arts
This major allows students to acquire an active command of written and spoken Spanish, with a knowledge of historical and contemporary issues in the Spanish-speaking world. It is designed to complement programs such as Film Studies, English, History, Management, Music, and Education. Spanish majors must study in Spain or Latin America through our exchange programs or through other approved programs. Students planning to study abroad must consult with the National and International Exchange Center and Spanish faculty before departure to arrange for program approval and transfer of credit.

New students who have had no prior Spanish should register for SP 101. Students with one or two years of successful high school study or one college semester should register for SP 102. Students with three or more high school years or two college semesters should register for SP 201. Students must consult Spanish faculty to find the most appropriate level.

LANGUAGE REQUIREMENT
The student must demonstrate proficiency in a language other than English as specified by the Language Requirement for Students with Majors in the School of Arts and Humanities. The complete policy statement appears at the beginning of the Bachelor's Degree Programs section of this catalog. A student majoring in Spanish satisfies this requirement by virtue of completing course requirements for the major.

Dual Major in Education
Students pursuing a dual major in Education will refer to the appropriate Education option. Also, students seeking teacher certification in French or Spanish, or Elementary Education majors whose second major is in French or Spanish are required to take and pass the Praxis II Content Knowledge Test before they begin student teaching as well as the Official ACTFL Oral Proficiency Interview (OPI). The OPI must be completed no later than 30 days following the student's return from study abroad.

INTEGRATIVE STUDIES REQUIREMENTS
(minimum) 44 credits

MAJOR REQUIREMENTS
48 credits
ML 101 The World of Language
SP 202 Intermediate Spanish II
  or An approved SP 290 Intermediate Special Topics
SP 315 Conversation in Spanish
SP 316 Composition in Spanish
SP 325 Introduction to Spanish Literature  
SP 330 Latinos in the United States  
SP 350 Study Abroad – 12 credits during a full semester – usually four courses  
SP 405 Contemporary Spanish Usage (Prerequisite: SP 315 and SP 316)  
SP 410 Advanced Spanish Grammar  
—or an approved SP 490 Advanced Special Topics  
or SP 498 Independent Study  
SP 495 Seminar  

**ELECTIVES**  
Select courses to reach a total of 120 credits for the degree.  

**DEGREE REQUIREMENTS**  
120 credits  

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**Sustainable Product Design and Innovation**  
*Bachelor of Science*  

The Sustainable Product Design and Innovation major at Keene State College is a pre-professional four-year program offering a cross-disciplinary curriculum to give the student a solid foundation in the artistic, scientific, and technical aspects of product design and the social and scientific aspects of sustainability concerns. Product Design involves the synthesis of consumer needs and production capabilities in the creation of new products and their affiliated services. The integrated sustainability issues link the multitude of human factors, environmental, and resource depletion concerns to the decision-making process. The curriculum draws from five disciplines: art, management, mathematics, safety, and industrial/product design to build the student’s capacity in design theory and practice, material sciences, production processes, digital technology, and the quantitative and qualitative issues of sustainability and business practices.  

The Sustainable Product Design and Innovation major is designed to provide students with a hands-on project-based learning curriculum focusing on real-world applications grounded in a liberal arts foundation. The emphasis on innovation complimented with business management encourages creative problem-solving and entrepreneurship, providing students with the tools to adapt and evolve their career paths to meet the needs of a rapidly changing world. Integrated sustainability values prepare students for engagement in the product realization arena in the “lean” and “green” global production economy. Graduates are prepared to pursue graduate study or transition directly into careers in product design/engineering, technology/evaluation, planning, supply, production, quality control, technical services, marketing, sales, or other related professions.  

**INTEGRATIVE STUDIES REQUIREMENTS**  
*(minimum) 44 credits*  

**MAJOR REQUIREMENTS**  
64 total credits: 56 credits plus 8 credits applicable to Integrative Studies  

**SPDI Core Courses** (28 credits)  
SPDI 110 Electricity and Electronics Fundamentals  
SPDI 152 Product Design I  
SPDI 180 Metal Processes and Prototyping  
SPDI 252 Product Design II  
SPDI 253 Materials: A Life-Cycle View  
SPDI 221 Three-Dimensional CADD  
SPDI 352 Product Design III  

**Management Core Courses** *(12 credits plus 4 credits in Integrative Studies)*  
MGT 101 Introduction to Management  
MGT 202 Quantitative Decision-Making *(Course may be used to satisfy an IQL Integrative Studies Program requirement)*  
MGT 213 Financial Accounting  
Choose *one* of the following courses:  
MGT 331 Principles of Marketing  
MGT 446 Competitive Manufacturing Management  

**SPDI/Management Electives** *(Select 4 credits from the following courses.)*  
SPDI 121 Drafting, Sketching, and CADD
SPDI 170 Introduction to Woodworking Technology
SPDI 270 Woodworking Processes
SPDI 280 CAD/CAM: Using MasterCAM
MGT 451 Social, Legal, and Political Environment of Business
SPDI 290 Special Topics
SPDI 298 Independent Study
SPDI 490 Advanced Special Topics
SPDI 495 Seminar
SPDI 498 Independent Study

Required Allied Discipline Courses (8 credits plus 4 credits Integrative Studies*)
IA ART103 Three-Dimensional Design*
SAFE 204 Human Factors in Safety
Select at least one of the following MATH courses:
MATH 120 Applied Algebra and Trigonometry
MATH 130 Precalculus
MATH 151 Calculus I

SPDI Capstone Course (4 credits)
SPDI 400 Manufacturing Enterprise

Internships and/or Cooperative Education Experiences are recommended:
SPDI 294 Cooperative Education (count toward elective credit)
SPDI 494 Advanced Cooperative Education (count toward elective credit)

ELECTIVES
Select additional courses of your choice to bring total number of credits earned to 124. Students are encouraged to complete a minor or an organized cluster of courses related to their career interests.

DEGREE REQUIREMENTS
124 credits

Theatre and Dance

Bachelor of Arts

Department of Theatre and Dance Mission Statement
The Department of Theatre and Dance is dedicated to providing a comprehensive course of study that balances theory and practice within a sound liberal arts education. Because of the collaborative nature of these disciplines, our students gain practical experience in all facets of production and critical engagement. As artists and teachers, our primary focus is to encourage and guide our students as they experience and question the world through theatre and dance.

The Theatre and Dance major gives students the opportunity to specialize in Acting, Directing, Design and Technical Theatre, and Dance. The Acting and Directing concentrations offer advanced performance work, with core course sequences and a wide variety of individual courses in specialized areas. The Design and Technical Theatre concentration allows students to study design and theatre technology within the framework of both theoretical and practical courses, using the sophisticated facilities of the Redfern Arts Center on Brickyard Pond as a laboratory. The Dance option focuses primarily on modern dance technique and theory, choreography, dance history, and performance.

The ideal graduate of the Theatre and Dance program will be well prepared for a lifetime of appreciation, participation, and further study in these performing arts.

INTEGRATIVE STUDIES REQUIREMENTS
44 credits (minimum)

LANGUAGE REQUIREMENT
The student must demonstrate proficiency in a language other than English as specified by the Language Requirement for Students with Majors in the School of Arts and Humanities. The complete policy statement appears at the beginning of the Bachelor's Degree Programs section of this catalog.

THEATRE AND DANCE (TAD) REQUIREMENTS
A major in Theatre and Dance must fulfill the core requirements and all of the requirements for one of the specializations within the Theatre Arts option or the Dance option.
Integrative Studies Opportunities for Theatre and Dance

IATAD 100 Theatre: The Art of Imagination
IATAD 102 Acting: Identity in a Diverse Society
IATAD 113 Dance as a Way of Knowing
IATAD 370 Playwriting

MAJOR REQUIREMENTS
51-53 credits (minimum)

TAD Core Courses (17 credits)
TAD 101 Acting I or IATAD 102 Acting: Identity in a Diverse Society
TAD 112 Modern Dance/Composition I or IATAD 113 Dance as a Way of Knowing
TAD 121 Introduction to Technical Theatre
TAD 123 Theatre Lab I
TAD 124 Theatre Lab II (repeatable)
TAD 162 Design for the Performing Arts
TAD 397 Production Process (repeatable)

Theatre Arts Option

Acting Specialization (36 credits)
TAD 231 Theatre History/Literature I
TAD 232 Theatre History/Literature II
TAD 205 Theatre Movement (new number)
TAD 206 Acting II
TAD 282 Voice and Diction
TAD 301 Acting III
TAD 302 Acting IV
TAD 398 Applied Performance (1-4 credits, depending on the depth of the students’ responsibility in performance. It may be necessary for students to take this course more than once for a total of 4 credits.)
TAD 491 Advanced Acting/Directing Performance Process

Directing Specialization (36 credits)
TAD 231 Theatre History/Literature I
TAD 232 Theatre History/Literature II
TAD 206 Acting II
TAD 227 Stage Management
TAD 303 Directing I
TAD 490 Special Topics
TAD 491 Advanced Acting/Directing Performance Process
Select one of the following design courses:
TAD 361 Scenic Design
TAD 362 Lighting Design
TAD 363 Costume Design

Design and Technical Theatre Specialization (36 credits)
TAD 231 Theatre History/Literature I
TAD 232 Theatre History/Literature II
TAD 223 Theatre Technology Workshop (repeatable)
TAD 224 Design Studio (repeatable)
An additional 2 credits in either Technology Workshop or Design Studio
TAD 265 Rendering for the Theatre
TAD 397 Production Process (only 1 credit required.)
TAD 398 Performance Process (only 1 credit required)
TAD 361 Scenic Design
TAD 362 Lighting Design
TAD 363 Costume Design
TAD 493 Design/Technical Portfolio

Dance Option
The requirements and number of credits needed for each of the three specializations within this option are listed separately.

Choreography and Performance Specialization (34 credits)
TAD 235 Dance History
TAD 398 Performance Process (2 credits)
TAD 318 Research in Choreography (May be repeated once for credit.)
TAD 495 Dance History Seminar (4 credits)

Select 20 credits from the following:
TAD 212 Modern Dance/Composition II (May be repeated once for credit.)
TAD 217 Ballet/Experiential Anatomy
TAD 311 Modern Dance/Composition III (May be repeated once for credit.)
TAD 312 Modern Dance/Composition IV (May be repeated once for credit.)
TAD 411 Modern Dance/Composition V (May be repeated once for credit.)
TAD 412 Modern Dance/Composition VI (Senior majors or with permission of instructor.)

**ELECTIVES**
Select courses to reach a total of 120 credits for the degree.

**DEGREE REQUIREMENTS**
120 credits

*Dance Education Specialization (34 credits)*
This TAD major specialization is appropriate as a second major for students completing the Elementary Education or Early Childhood Development options in the Education major. However, an Education major is not required.

TAD 212 Modern Dance/Composition II (May be repeated once for credit.)
TAD 216 Jazz Dance
TAD 217 Ballet/Experiential Anatomy
TAD 235 Dance History
TAD 398 Performance Process (2 credits)
TAD 312 Modern Dance/Composition IV (May be repeated once for credit.)
TAD 318 Research in Choreography (May be repeated once for credit.)
TAD 412 Modern Dance/Composition VI (Senior majors or with permission of instructor.)
TAD 496 Dance Education Internship I (May be repeated for credit.)
TAD 497 Dance Education Internship II (May be repeated for credit.)

**ELECTIVES**
Select courses to reach a total of 120 credits for the degree.

**DEGREE REQUIREMENTS (for a B.A.)**
120 credits

**DEGREE REQUIREMENTS (for a B.S., in combination with an education major)**
139 credits

*Dance Education Specialization/Dual Degree (36 credits)*
This specialization, in conjunction with Elementary Education or Early Childhood Development, leads to two degrees, a B.A. in TAD and a B.S. in education, totaling 144 credits. In addition to certification in Elementary Education or Early Childhood Development, it also leads to certification in K-12 dance education, but requires three internships and may require an additional term.

TAD 212 Modern Dance/Composition II (May be repeated once for credit.)
TAD 216 Jazz Dance
TAD 217 Ballet/Experiential Anatomy
TAD 235 Dance History
TAD 398 Performance Process (2 credits)
TAD 312 Modern Dance/Composition IV (May be repeated once for credit.)
TAD 318 Research in Choreography (May be repeated once for credit.)
TAD 412 Modern Dance/Composition VI (Senior majors or with permission of instructor.)

Six credits from:
TAD 496 Dance Education Internship I (May be repeated for credit.)
TAD 497 Dance Education Internship II (May be repeated for credit.)

**ELECTIVES**
Select courses to reach a total of 144 credits for the degree.

**DEGREE REQUIREMENTS**
144 credits
Women’s and Gender Studies

Bachelor of Arts

Women’s and Gender Studies is an interdisciplinary field that examines feminist and queer theoretical perspectives on the intersections of race/ethnicity, class, gender, sexuality, nationality, religion, and other identities. This major teaches students to think critically about the social construction of identity and the politics of knowledge production. Students will use these critical-thinking skills to understand people’s lives within a global context and analyze the systems of oppression that contribute to continuing economic, political, and cultural inequalities. Women’s and Gender Studies majors will be encouraged to apply theoretical knowledge and work toward social justice by engaging in a number of experiential educational opportunities.

The Women’s and Gender Studies Department offers students an interdisciplinary liberal arts education that prepares them for a variety of careers, including, but not limited to, education, health, media, public relations and human resources, social and governmental service, policy work, and political advocacy. A student with a bachelor's degree in Women's and Gender Studies will be well-prepared for graduate studies as well as other post-graduate work, such as law or social work. Working closely with an advisor who is a core faculty member in Women's and Gender Studies, students design their course of study around three core courses, an individualized set of interdisciplinary topics and theory courses, and a set of disciplinary courses. The Women's and Gender Studies major allows students to engage with theoretical and experiential knowledge that ranges between and across the academic disciplines.

INTEGRATIVE STUDIES REQUIREMENTS

(minimum) 44 credits

MAJOR REQUIREMENTS

36 credits

Core Courses (12 credits)
- IIWGS 101 Introduction to Women's and Gender Studies
- WGS 201 Feminist Practices
- WGS 495 Women's and Gender Studies Senior Capstone

WGS Interdisciplinary Topics (8 credits)
Select two of the following:
- IIWGS 210 Abortion
- IIWGS 220 Starved and Stuffed
- IIWGS 230 Sexuality and Spirituality
- IIWGS 240 Gender and the Media
- IIWGS 254/IHGS 254 Women in the Holocaust
- IIWGS 290 Special Topics
- IIWGS 300 Women of Color Feminisms
- WGS 298 Independent Study

WGS Interdisciplinary Theory (8 credits)
Select two of the following:
- WGS 301 Feminist Theories
- WGS 302 Queer Theory
- WGS 303 Borderlands: Latina Feminist Theories
- WGS 490 Advanced Special Topics
- WGS 498 Advanced Independent Study

Other Disciplinary Electives (8 credits)
Select two of the following:
- ANTH 315 Gender and Culture
- ENG 203 Women's Writing
- ENG 381 Women Writers
- FILM 495 Feminist Film Theories (specified in title)
- IAMU 115 Women in Music
- IFILM 310 Women and Cinema
- IIFR 240 Franco-American Women’s Voices
- IEDUC 306 Women in Education
- IHLSC 350 Women and Health: Witches, Harlots, and Healers
- PHIL 240 Skin, Sex, and Genes
PHIL 260 Theories of the Body  
PSYC 425 Psychology of Women  
SOC 320 Women, Gender, and Society  
SOC 345 Sociology of Families  
SOC 455 The Body and Sexuality in Society  

ELECTIVES  
Select courses to reach a total of 120 credits for the degree.

DEGREE REQUIREMENTS  
120 credits
Minors

A minor is a coherent set of courses (normally 20 to 24 credits) in a discipline or related disciplines other than the major. The major includes, but is not limited to, required components such as an option and a specialization. Courses used to complete major requirements may also be used to complete requirements for the minor, as determined by each program.

Courses used to satisfy requirements for the minor may also be used to satisfy Integrative Studies requirements when such courses meet the established criteria for Integrative Studies. Credits earned in courses used to satisfy multiple requirements will count once toward the total number of credits required for graduation.

American Studies Minor

24 credits

IIAMST 210 Introduction to American Studies
AMST 350 Perspectives on American Culture

Select one of the following:
- AMST 390 Critical Approaches
- AMST 490 Advanced Special Topics
- AMST 495 Seminar

Area Studies (three courses)
Student selects two courses from one of the following areas and one course from another of the following areas (refer to list of courses in American Studies major):
- American History
- American Literature
- American Arts and Humanities/Social Sciences

Anthropology Minor

20 credits

This minor introduces the student to anthropology, the comparative and holistic study of people. It explores the biological, social, and cultural aspects of our species in the past, present, and future. Anthropology attempts to integrate knowledge of human beings and their activities at the highest and most inclusive level. Anthropologists study the patterning of human behaviors, as well as the conditions under which they arise, persist, or disappear, in the belief that the knowledge gained from this perspective may be applied to the solution of problems of everyday life in different cultures. It provides global information and thinking skills critical to succeeding in the 21st century in business, research, teaching, advocacy, and public service.

ISANTH 110 Cultural Anthropology
ISANTH 111 Archaeology and Physical Anthropology

Select one of the following:
- ANTH 314 World Prehistory
- ANTH 330 Cultural Investigations
- ANTH 413 Anthropological Thought

One 200-level or above ANTH elective

Applied Computer Science Minor

24 credits

This minor allows the non-computer science (non-CS) majors to gain useful CS-related skills that will make them more effective and useful in their chosen disciplines. This is particularly important in a modern world that is dominated by CS-related technologies.

MINOR REQUIREMENTS
MATH 135 Mathematical Foundations for CS
CS 140 Computer Programming I
CS 185 Computer Programming II
CS 150 Web Page Construction or CS 160 Microcomputer Systems
CS 280 Data Structures and Algorithms
One CS course, approved by student’s advisor, in a second, non-Windows computer operating system or architecture. Current courses that satisfy this requirement are CS 210 Midrange Systems, CS 215 Unix System Admin, CS 265 Computer Architecture, and CS 367 Command Language Programming.

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**Art History**
24 credits

ART 101 Foundations of Design or IAART 100
ART 111 Introduction to Art History or IAART 110

Select *three* of the following:
ART 211 Ancient Art
ART 212 Medieval Art
ART 213 Renaissance Art
ART 214 Modern Art
ART 290 Topics in Art History
ART 492 Art History Seminar

Select *one* of the following:
ART 125 Drawing I or IAART 120
ART 208 Ceramics I
ART 224 Photography I
ART 244 Sculpture I

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**Art – Studio**
24 credits

ART 101 Foundations of Design or IAART 100
ART 111 Introduction to Art History or IAART 110
ART 125 Drawing I or IAART 120

Select *two* of the following:
ART 208 Ceramics I
ART 224 Photography I
ART 225 Drawing II
ART 226 Painting I
ART 244 Sculpture I
ART 250 Graphic Design I
ART 333 Printmaking I

Select *one* of the following:
ART 211 Ancient Art
ART 212 Medieval Art
ART 213 Renaissance Art
ART 214 Modern Art
ART 290 Topics in Art History
ART 492 Art History Seminar

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**Biology Minor**
24 credits

Designed to permit students majoring in another field to pursue a program of study in the life sciences, this minor includes a set of core courses that introduce the most important concepts in biology as well as upper-level electives dictated by the personal interests of the student.

**MINOR REQUIREMENTS**

**Core Courses (20 credits)**
BIO 110 Molecules and Cells*
BIO 111 Evolution*
BIO 210 Ecology
BIO 211 Genetics
BIO 212 Cells and Physiology

*Students must earn a grade C or higher in both BIO 110 and BIO 111 in order to take any 200-level or higher BIO course.
Upper-Level Elective Course (4 credits)
Select any 300- or 400-level BIO course to bring total credits in Biology to 24 credits.

Chemistry Minor
24-28 credits
The Chemistry minor makes it possible for students to pursue their personal interests by selecting upper-level electives in Chemistry. It also permits students majoring in another field to pursue a program of study in the physical sciences.

INCHEM 111 General Chemistry I
CHEM 112 General Chemistry II
Select one from the following:
CHEM 220 Fundamental Organic Chemistry
or CHEM 221 Organic Chemistry I and CHEM 222 Organic Chemistry II
CHEM 251 Quantitative Analysis
CHEM Electives (8 credits at 300 level or above)

Communication Minor
20 credits
IHCOMM 171 Public Speaking
COMM 175 Introduction to Communication Studies
COMM 378 Persuasion
Select two of the following:
COMM 275 Interpersonal Communication
COMM 278 Group Interaction
COMM 290 Special Topics
COMM 320 Ethics in Communication
COMM 371 Speech Writing
COMM 372 Intercultural Communication
COMM 376 Theory of Communication and Rhetoric
COMM 380 Analysis of Organizations
COMM 473 Rhetorical Criticism
COMM 490 Advanced Special Topics
COMM 495 Seminar

Criminal Justice Studies Minor
24 credits
This minor develops knowledge of the criminal justice system, theories of criminal behavior, law, administration, and policy. Courses also involve the study of issues and conditions confronting and changing the criminal justice system.

Core Courses (8 credits)
CJS-101 Introduction to Criminal Justice Studies
SOC 340 Criminology or SOC 275 Deviance and Social Control

Elective Courses (minimum 16 credits)
Students must select three additional courses (or courses totaling 12 credits) from the Depth Courses list and one course from the Breadth Courses list. Please note that special topics courses may be available. Please contact the Criminal Justice Studies coordinator for a list of qualified topics courses. Furthermore, the student should be aware that some of the courses listed below have prerequisites that must be met or waived by the instructor of record before they can be registered for the course.

Depth Courses (12 credits)
Select three of the following or courses totaling 12 credits:
CJS 201 Corrections
CJS 290 Topics in Criminal Justice Studies (1-4 credits)
CJS 390 Studies in Criminal Justice (1-4 credits)
HIST 390 Studies in History (Course must be approved by the coordinator to count toward the minor.)
INCHEM 201 Forensic Chemistry
PHIL 360 Philosophy of Law
POSC 316 Constitutional Law
PSYC 495 Seminar in Psychology *(Course must be approved by the coordinator to count toward the minor.)*
SOC 360 Law and Society
SOC 361 Juvenile Delinquency
SOC 461 White-Collar Crime
SAFE 301 Loss Prevention

**Breadth Courses (4 credits)**
Select one of the following:
- HLSC 200 Alcohol and Other Drugs: The Fundamentals
- HLSC 285 Health in Society
- IHPHIL 100 Logical Argumentation
- IHPHIL 220 Ethics
- PHIL 313 Philosophy and the Holocaust
- POSC 312 Public Policy Analysis
- ISPOSC 215 Public Administration
- PSYC 221 Social Psychology
- SAFE 101 Safety Awareness

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**Dance Minor**
20 credits
TAD 235 Dance History
TAD 318 Research in Choreography
*or* TAD 495 Dance Seminar

Select 12 credits from the following:
- TAD 112 Modern Dance/Composition I
- TAD 212 Modern Dance/Composition II
- TAD 311 Modern Dance/Composition III
- TAD 312 Modern Dance/Composition IV
- TAD 411 Modern Dance/Composition V
- TAD 412 Modern Dance/Composition VI

*(TAD 212, TAD 311, TAD 312, TAD 411, and TAD 412 may be repeated once for credit.)*

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**Economics Minor**
20 credits
All minors will complete a three-course sequence that consists of ISECON 104, ECON 103, and ECON 203 or ECON 204. The minor will also complete two additional upper-level economics courses. If a student completes both ECON 203 and ECON 204 then only one additional upper-level economics course is required for the minor.

Mathematics competence at the level of MATH 141 Introductory Statistics is highly recommended.

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**English Minor**
20 credits
This minor consists of five courses in English. Students must complete ENG 200 Literary Analysis, three literature courses at the 300 level, and one literature course at the 400 level.

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**Environmental Studies Minor**
24 credits
A minor in Environmental Studies provides a complement to a wide range of majors such as Biology, Economics, Chemistry, Geography, Geology, Sociology, and Technology Studies.
IIENST 151 The Environment of Central New England
IIENST 152 Principles of Sustainability
ENST 253 Environmental Governance

Select one of the following:
   ENST 251 Matter and Energy in the Environment
   ENST 252 Ecology of a Changing Planet

Select two (2) additional courses at the 300 level or above in ENST. The following courses may be substituted to meet this requirement (note that these courses have prerequisites that are not part of the ENST minor, but may be part of the ISP):
   ECON 340 Environmental Economics
   GEOG 330 Natural Resource Management
   GEOG 332 Global Water Resources
   GEOG 324 Vector GIS
   GEOG 327 Environmental Remote Sensing
   POSC 315 Environmental Policy
   SOC 380 Environmental Sociology

Still other courses, for example, special topics courses, may also be substituted to meet this requirement with the approval of the Environmental Studies department chair.

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**Film Studies Minor**

*24 credits*

FILM 250 Film Production I
FILM 270 Introduction to Film Analysis
FILM 271 Introduction to Film History
FILM 352 Film Genres and Directors
FILM 355 Film Theory
FILM 495 Seminar

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**French Minor**

*20 credits*

This minor allows students to acquire an active command of written and spoken French, with a knowledge of historical and contemporary issues in the French-speaking world. It is designed to complement programs such as Education, English, Film Studies, History, Management, and Music. French minors may elect to study in France or Québec during their junior year through our exchange program with the University of Rennes (France), the Québec-New England Exchange Program, or through other approved programs. Students planning to study abroad must consult with the National and International Exchange Center and French faculty before departure to arrange for program approval and transfer of credit.

New students who have had no prior French should register for FR 101. Students with one or two years of successful high school study or one college semester should register for FR 102. Students with three or more high school years or two college semesters should register for 201. Students must consult French faculty to find the most appropriate level.

**Core Courses**

FR 202 Intermediate French II
FR 315 Conversation in French
FR 316 Composition in French
IIFR 240 Franco-American Women’s Voices
   or FR 330 The French-Speaking World
FR 405 Contemporary Usage

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**Geography Minor**

*20 credits*

A minor in Geography strengthens a liberal arts education. A geographic perspective provides a complement to majors such as Environmental Studies, History, and Sociology. In this 20-credit minor, students will take a course in both of the major subfields of geography: physical and cultural. Students will also select from regional, systematic, and geographic skills courses.
ISGEOG 203 The Human Cultural Mosaic  
ISGEOG 204 Physical Geography

Select one of the following regional courses:
- GEOG 340 Topics in Regional Geography  
- GEOG 341 Geography of the U.S. and Canada  
- GEOG 371/571 Geography Field Studies

Select one of the following systematic fields of geography courses:
- GEOG 303 The Politics of Place  
- GEOG 304 Population Geography  
- GEOG 305 The Global Economy  
- GEOG 307 Urban Geography and Planning  
- GEOG 330 Natural Resource Management  
- GEOG 332 Global Water Resources

Select one of the following geographic skills courses:
- GEOG 321 Geospatial Technology for K-12*  
- GEOG 323 Land Surveying and Cartography  
- GEOG 324 Vector GIS  
- GEOG 325 Cartographic Design and Analysis  
- GEOG 326 Raster GIS  
- GEOG 327 Environmental Remote Sensing  

*Recommended for Teacher Certification candidates only.

Geology Minor  
20 credits

The Geology minor consists of five courses in Geology.

Core Courses
- INGEOL 151 Introductory Physical Geology  
- GEOL 252 Evolution of the Earth

Select three additional courses (12 credits) at the 200 level or above under the advisement of the Geology faculty and major advisor.

German Minor  
20 credits

This minor provides students with an active command of written and spoken German and with a knowledge of historical and contemporary Germany. It is designed to complement programs such as Film Studies, Management, English, History, Holocaust Studies, Music, and Education. German minors may elect to study in Germany or Austria during their junior year through the Marburg University, the University of Maine's Junior Year in Salzburg, the Collegium Palatinum in Heidelberg, or other approved programs. Students planning to study abroad must consult with the National and International Exchange Center and German faculty before departure to arrange for program approval and transfer of credit.

New students who have had no prior German should register for GER 101. Students with one or two years of successful high school study or one college semester should register for GER 102. Students with three or more high school years or two college semesters should register for GER 201. Consult German faculty to find the most appropriate level.

IHGER 201 Intermediate German I  
IHGER 202 Intermediate German II  
GER 315 Conversation and Composition

Select a minimum of 8 credits from the following:
- GER 290 Intermediate Special Topics  
- GER 298 Independent Study  
- GER 350 Study in Germany or Austria  
- GER 498 Independent Study  
- HIST 353 Nazi Germany and the Holocaust
History Minor
20 credits
The History minor consists of 20 credits in History. At least 8 credits must be at the 300 level or above. At least 8 credits must be in non-U.S. and non-European History.

Holocaust and Genocide Studies Minor
20 credits
The minor in Holocaust and Genocide Studies combines historical background with an interdisciplinary exploration of both the Holocaust and genocide through film, literature, philosophy, psychology, sociology, religious studies, and other history offerings. The following curriculum will help students develop a firm knowledge of the Holocaust as an event and an understanding of its precipitating factors and legacy. With a deeper awareness of such issues as prejudice, discrimination, and racism, students should be better able to analyze contemporary political situations and think critically about ethical responsibility.

Holocaust and Genocide Studies (8 credits, required)
IHHGS 252/IHHIST 252 The Holocaust
IHHGS 255 Genocide
Of the remaining three courses (12 credits), one must be a Holocaust elective (4 credits) and one must be a genocide elective (4 credits), as specified by course title. Two courses (8 credits) must be at the 300 level or higher.

Holocaust-Specific Electives
IHHGS 251/IHENG 251 Literature of the Holocaust
IHHGS 254/IWWS 254 Women in the Holocaust
HGS 289 Teaching the Holocaust and Genocide (may count for Holocaust or Genocide, not both)
HGS 290 Special Topics (Holocaust must be specified by course title)
HGS 313/PHIL 313 Philosophy and the Holocaust
HGS 326/SOC 326 Sociology of the Holocaust
HGS 340 Film and the Holocaust
HGS 353/IHIST 353 Nazi Germany and the Holocaust
HGS 356 The Holocaust and the Christian World
HGS 490 Advanced Special Topics (Holocaust must be specified by course title)
HGS 495 Seminar (Holocaust must be specified by course title)
HGS 497 Internship (Holocaust must be specified by course title)
HGS 498 Independent Study (Holocaust must be specified by course title)

Genocide-Specific Electives
HGS 289 Teaching the Holocaust and Genocide (may count for Holocaust or Genocide, not both)
HGS 290 Special Topics (Genocide must be specified by course title)
HGS 327/SOC 327 Sociology of Genocide
HGS 374 Comparative Genocide
HGS 427/SOC 427 Sociological Topics in Genocide
HGS 490 Advanced Special Topics (Genocide must be specified by course title)
HGS 495 Seminar (Genocide must be specified by course title)
HGS 497 Internship (Genocide must be specified by course title)
HGS 498 Independent Study (Genocide must be specified by course title)

Other Electives
IHPHIL 220 Ethics
PHIL 231 Comparative Religion
IHHGS 232 Introduction to Judaism
IHHGS 233 A History of the Jews
IHHIST 253 The Second World War
HHHGS 256 Religion and Violence
HIST 351 19th-Century Germany
HGS 373/IHIST 373 Race, Disability, and Eugenics
International Studies Minor

24 credits

The International Studies minor is an interdisciplinary program that combines core courses in global and comparative politics with courses in geography and history to enhance awareness of historical, spatial, and power relationships throughout the world. All students who minor in International Studies must complete courses in the three content areas enumerated below, and must either complete one intermediate modern language course or pass the CLEP test for proficiency in a foreign language. Additionally, all students should seriously consider participating in the foreign study programs that are sponsored by the National and International Exchange Center.

International Politics (8 credits)
Select two of the following:
- ISPOSC 220 Global Politics
- ISPOSC 223 Comparative Analysis of Government
- POSC 321 U.S. Foreign Policy and Globalization
- POSC 322 Global Political Economy
- POSC 323 Advanced Comparative Analysis of Government
- POSC 324 Conflict Management
- POSC 401 Keystone (global or comparative content area)

These courses will provide a broad conceptual exposure to international systems, issue areas and interests, as well as methods for making sense of global culture and political economy.

Area Studies and Related Social Science (8 credits)
Select two of the following:
- ECON 470 International Trade and Finance
- GEOG 303 Politics of Place Geography
- GEOG 305 The Global Economy
- GEOG 340 Topics in Regional Geography
- GEOG 371 Geography Field Trip [abroad]
- ISANTH 110 Cultural Anthropology
- ANTH 316 Cultures of Southeast Asia
- SOC 350 Sociology of Globalization

These courses will provide spatial and cultural awareness of area studies. It is the intent that academic advisors will strongly recommend that wherever possible, the courses selected by the student be in the same regions as the history courses below.

History (8 credits)
Select two of the following:
- HIST 122 Modern East Asia
- HIST 290 with appropriate regional foci (Mideast or African)
- HIST 322 The Chinese Revolution
- HIST 324 Modern Japan
- HIST 343 Europe Since 1945
- HIST 367 Modern America: 1950-Present

These courses will provide important 20th-century background to understand contemporary global relations. Those courses are selected because of regional importance of the subject matter material and the students are strongly advised to combine regions of the globe with counterpart history selections.

Journalism Minor: Broadcast Media

19-20-plus credits

This minor serves the needs of students seeking an introduction to journalism in the broadcast media.

Core Courses
- JRN 130 Writing for the Media
- JRN 235 Broadcast Journalism
- JRN 323 Journalism Law and Ethics

Select two of the following:
- JRN 335 Television Journalism
- JRN 380 Internship (3-credit minimum)
- JRN 435 Community Television News
Journalism Minor: Print Media

22 credits

This minor serves the needs of students seeking an introduction to journalism in the print media.

Core Courses
JRN 130 Writing for Media
JRN 230 Print Journalism
JRN 280 Equinox Staff (2 credits)
JRN 330 Public Affairs Reporting
JRN 323 Journalism Law and Ethics

Select one of the following:
JRN 430 Feature Writing
JRN 450 News Editing and Management

Management Minor

24 credits

This minor is available to help prepare non-Management majors for careers in business or for graduate study in law or business administration. A grade C or higher is required in MGT 101, MGT 202, and MGT 213 or MGT 215.

A grade C or higher is required in MGT 101, MGT 202, and MGT 213.

Core Courses
ISECON 104 Introduction to Macroeconomics
MGT 101 Introduction to Management
MGT 202 Quantitative Decision Making
MGT 215 Accounting for Sustainable Management or MGT 213 Financial Accounting

Select two of the following:
MGT 301 Organizational Theory and Behavior
MGT 308 Small Business Entrepreneurship
MGT 319 Financial Management
MGT 324 Human Resource Management
MGT 331 Principles of Marketing
MGT 345 Operations Management
MGT 381 Management Information Systems
MGT 466 Competitive Manufacturing Management

Mathematics Minor

20 credits

Core Courses
MATH 141 Introductory Statistics*
or MATH 241 Probability and Statistics I
MATH 151 Calculus I
MATH 152 Calculus II
MATH 225 Introduction to Abstract and Discrete Mathematics

MATH elective at the 200 level or above excluding MATH 275, MATH 371, MATH 375, MATH 471, and MATH 475.

*This requirement can be fulfilled by completing PSYC 251.

Medieval and Early Modern Studies Minor

20 credits

The program in Medieval and Early Modern Studies focuses on the cultural and social interactions of various peoples of those eras. The program is international in scope and range, giving students a better understanding of the kinds of exchanges that take place when different cultures come into contact, and providing them with the tools and knowledge to understand the history and dynamics of a globalized world.

4 credits
HIST 225 Medieval World: European Culture and Society From 500-1400 [note: the course should appear in the catalog with this number and designation in the fall of 2011, pending Senate approval]
Electives  
16 credits

Of the remaining four courses (16 credits), one must be a Medieval elective (4 credits) and one must be an Early Modern elective (4 credits). Two electives (8 credits) must be at the 300 level or higher.

Medieval Electives  
(minimum) 4 credits

Select one from the following:
- ART 212 Medieval Art
- ART 492 Art History Seminar (Medieval topic)
- IHENG 220 Readings in British Literature (Medieval topic)
- ENG 323 Medieval Literature
- ENG 324 Chaucer
- ENG 490 Advanced Studies (Medieval topic)

Early Modern Electives  
(minimum) 4 credits

Select one from the following:
- ART 213 Renaissance Art
- ART 492 Art History Seminar (Renaissance topic)
- IHENG 220 Readings in British Literature (Early Modern topic)
- ENG 326 English Renaissance Literature
- ENG 327 Shakespeare: Poetry and Plays
- ENG 490 Advanced Studies (Early Modern topic)
- HIST 337 Europe 1400-1600
- HIST 338 European Encounters in the New World

Music Minor  
24 credits

The Music minor presupposes a high level of interest and aptitude in music. All students are auditioned before admission to the program. Students in this minor are advised to take one music-related Integrative Studies course with integrative outcomes addressing diversity or global issues.

MUA 101, 102, 201, 202, 301, and 302 Applied Music (1-2 credits, total 6 credits)*
- MU 118 Functional Piano I (2 credits)
- MU 151 Music Theory I (2 credits)**
- MU 152 Music Theory II (2 credits)
- MU 161 Aural Skills I (1 credit)
- MU 162 Aural Skills II (1 credit)
- MU 172-MU 178 Ensembles (1 credit each, total 4 credits)

Select at least 6 credits from the following:
- IAMU 112 Latin American Music
- IAMU 216 History of Rock & Roll
- IAMU 218 History of Jazz
- MU 290 Special Topics in Music (1-4 credits)
- MU 298 Independent Study (1-6 credits)
- MU 310 Western Music Before 1700 (2 credits)
- MU 312 Western Music After 1700
- MU 486 20th-Century Music
- MU 498 Independent Study (1-6 credits)

*Applied Music courses may be taken for 1 or 2 credits each, with additional semesters of study as necessary for a minimum of 6 credits total.

**Students who do not pass the theory placement test given at the time of their audition are advised to seek a private tutor to eliminate this deficiency before starting the sequence of theory classes.
Philosophy Minor
20 credits

This minor normally comprises five courses. Distribution requirements may be partially waived by written permission of the Philosophy faculty.

Core Courses
IHPHIL 100 Logical Argumentation

Select two of the following:
IHPHIL 220 Ethics
PHIL 240 Skin, Sex, and Genes
PHIL 260 Theories of the Body
PHIL 280 Knowledge and Reality
PHIL 290 Special Topics

Electives
Select two of the following:
II 310 Existentialism and Love
PHIL 313 Philosophy and the Holocaust
PHIL 350 Aesthetics
PHIL 360 Philosophy of Law
PHIL 370 Philosophy of Language
PHIL 406 Existentialism and Film
PHIL 490 Advanced Special Topics
PHIL 498 Independent Study

Physics Minor
20 credits

Core Courses
INPHYS 241, PHYS 242 University Physics I, II
PHYS 342 Modern Physics

Select two of the following:
PHYS 260 Electronics
PHYS 330 Thermodynamics
PHYS 339 Classical Mechanics
PHYS 440 Electricity and Magnetism
MATH 361 Differential Equations
CHEM 341 Physical Chemistry I
or CHEM 461 X-Ray Crystallography

Political Science Minor
20 credits

The Political Science minor provides students with an understanding of politics and government as practiced in the United States and throughout the world; a knowledge of global political relationships; opportunities to develop skills that are useful both in the course of participating first-hand in politics and in the rigorous analysis and communication of complex information; familiarity with methods used in the study of political science; and preparation for professional careers in law, government, international affairs, and the teaching of politics and the social sciences.

Students pursuing a minor in Political Science should receive a grade C or higher in each course that counts toward the minor.

The distribution requirements are:
• three courses in political science at the 200 level or higher (12 credits), in two of the three content areas defined below

Content Area 1: U.S. Politics and Public Policy
ISPOSC 210 U.S. Politics
ISPOSC 211 State and Local Politics
POSC 215 Public Administration
POSC 310 Participation and Democracy in America
POSC 312 Public Policy Analysis
POSC 315 Environmental Politics
POSC 316 Constitutional Law

**Content Area 2: Global and Comparative Politics**
ISPOSC 220 Global Politics
ISPOSC 223 Comparative Government: Canada and United States
ISPOSC 228 Understanding Global Politics through Literature and Film
POSC321 U.S. Foreign Policy and Globalization
POSC 322 Global Political Economy
POSC 323 Advanced Comparative Analysis of Government
POSC 324 Conflict Management

**Content Area 3: Political Thought and Analysis**
ISPOSC 230 Foundations of Political Thought
POSC 301 Writing and Research
POSC 334 Modern Political Thought
at least one additional course in political science at the 300 or 400 level (4 credits)
POSC 401 Keystone in Political Science

No more than 4 credits should be earned toward the minor from 496 (the practicum/internship) or 498 (the advanced independent study course).

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**Psychology Minor**
20 credits
PSYC 101 General Psychology
Select one of the following course sequences (8 credits)
- PSYC 253 Brain and Behavior and
  PSYC 355 Psychology of Learning
  or
- PSYC 242 Personality and
  PSYC 345 Abnormal Psychology
  or
- PSYC 251 Psychological Statistics* and
  PSYC 340 Psychological Testing
  or
- PSYC 311 Child and Adolescent Psychology and
  PSYC 314 Adulthood and Aging
Select two electives at the 300 or 400 level.

*Students who have already completed MATH 141 may not take PSYC 251 for college credit; therefore, this requirement may be fulfilled by completing MATH 141. Students must take an additional 4-credit PSYC elective in place of PSYC 251 to fulfill the Psychology minor requirements.

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**Safety and Occupational Health Applied Sciences Minor**
20 credits
Credits earned in courses used to satisfy multiple requirements will count once toward the total number of credits required for graduation.
SAFE 101 Safety Awareness
SAFE 202 Occupational Safety
Select a minimum of three courses (12 credits) from the following:
- INCHEM 103 Fundamentals of Chemistry and Lab
- SAFE 203 Fire and HAZMAT Response
- SAFE 204 Human Factors in Safety
- SAFE 205 Behavioral Based Safety
- SAFE 301 Loss Prevention
- SAFE 302 Law and Ethics in Safety
- SAFE 303 Safety and Health Standards
SAFE 304 Environmental Regulation  
SAFE 401 Industrial Hygiene  
SAFE 402 Critical Incident Response

**Sociology Minor**  
*20 credits*

The Sociology minor is designed to give students a basic understanding of society and how individual behavior is influenced by the larger social world. It also provides insight into social relations and organizations, which is valuable in all fields. A minor in Sociology can be beneficial in a variety of careers such as social services, education, human rights, health and wellness, justice, advocacy, and research.

**Core Courses**
SOC 201 Introduction to the Sociology Major  
SOC 301 Sociological Research Methods  
SOC 305 Sociological Theory

Select *two* additional Sociology electives (minimum total of 8 credits).

**Spanish Minor**  
*20 credits*

This minor allows students to acquire an active command of written and spoken Spanish, with a knowledge of historical and contemporary issues in the Spanish-speaking world. It is designed to complement programs such as Education, English, Film Studies, History, Management, and Music. Spanish minors may elect to study in Spain or Latin America during their junior year through our exchange programs or through other approved programs. Students planning to study abroad must consult with the National and International Exchange Center and Spanish faculty before departure to arrange for program approval and transfer of credit.

New students who have had no prior Spanish should register for IHSP 101. Students with one or two years of successful high school study or one college semester should register for IHSP 102. Students with three or more high school years or two college semesters should register for IHSP 201. Students must consult Spanish faculty to find the most appropriate level.

**Core Courses**
SP 202 Intermediate Spanish II  
SP 315 Conversation in Spanish  
SP 316 Composition in Spanish  
SP 330 Latinos in the United States  
SP 405 Contemporary Spanish Usage

**Statistics Minor**  
*20 credits*

MATH 141 Introductory Statistics* or PSYC 251  
MATH 151 Calculus I  
MATH 242 Applied Statistics

Select *one* of the following:  
MATH 241 Probability and Statistics I  
MATH 360 Numerical Methods  
MATH 365 Mathematical Modeling

One course from outside the Mathematics Department incorporating substantial use of statistics, or an experiential or service-learning experience that has a substantial statistical component. Must be approved by the Mathematics Department.

*This requirement can be fulfilled by completing PSYC 251.*
Substance Abuse/Addictions Minor

The Substance Abuse/Addictions Minor offers substance abuse/addiction courses in preparation for further studies in the field as well as preparation for licensure or certification in some states. The program provides students with a theoretical understanding of substance abuse, compulsive behaviors, and addictions and an introduction to counseling, treatment, or prevention. The curriculum emphasizes research, theory, and practice regarding the continuum of care in addictions. Students can specialize in the area of prevention or treatment.

MINOR REQUIREMENTS

(minimum) 20 credits

HLSC 200 Alcohol and Other Drugs: The Fundamentals
HLSC 380 Addiction Theory Research and Practice
HLSC 382 Addiction Counseling and Case Management
HLSC 386 Chemical Dependency Diagnosis and Treatment

Select one of the following:
HLSC 489 Drug Abuse Prevention
HLSC 491 Advanced Drug Treatment Methods

Recommended but not required: HLSC 492 Internship in Substance Abuse and Addictions

Sustainable Product Design and Innovation Minor

24 credits

A minor in Sustainable Product Design and Innovation will provide a technical and design thinking background for students majoring in other disciplines. The following course outline will provide complimentary studies to majors in Safety and Occupational Health Applied Sciences, Architecture, Management, Applied Computer Science, Environmental Studies, Math/Physics, and Art.

SPDI Core Courses (12 credits)

SPDI 110 Electricity and Electronics Fundamentals
SPDI 152 Product Design I
SPDI 253 Materials: A Life-Cycle View

SPDI Electives (12 credits)

Select at least one of the following (4 credits):
SPDI 170 Introduction to Woodworking Technology
SPDI 180 Metal Processes and Prototyping

Select at least one of the following (4 credits):
SPDI 121 Drafting, Sketching, and CADD
SPDI 221 Three-Dimensional CADD

Select at least one of the following SPDI or Management courses at 300 or 400 level (4 credits):
SPDI 400 Manufacturing Enterprise
MGT 446 Competitive Manufacturing Management
MGT 331 Principles of Marketing

Theatre Minor

20 credits

Courses taken must include one course from the 100 level or 4 credits as follows:

TAD 121 Technical Theatre (2 credits)
TAD 123 Laboratory I (1 credit required concurrent with TAD 121)
TAD 297 Production Process (1 credit)

Two courses from the 200 level (8 credits)
Two courses from the 300 level or above (8 credits)
Women's and Gender Studies Minor

Women's and Gender Studies is an interdisciplinary field that examines feminist theoretical perspectives on the intersections of race/ethnicity, class, gender, sexuality, nationality, religion, and other identities. This minor teaches students to think critically about the social construction of identity and the politics of knowledge production. Students will use these critical-thinking skills to understand people's lives within a global context and analyze the systems of oppression that contribute to continuing economic, political, and cultural inequalities. Women's and Gender Studies minors will be encouraged to promote social justice throughout their course work.

IIWGS 101 Introduction to Women's and Gender Studies
WGS 301 Feminist Theories or WGS 302 Queer Theory
WGS 495 Capstone in Women's and Gender Studies

Select two courses from the following list of approved electives. Special topics may also be available each semester. A Women's and Gender Studies faculty member can advise you about current offerings from various disciplines that will fulfill this requirement.

Arts and Humanities
ENG 203 Women's Writing
ENG 381 Women Writers
FILM 495 Feminist Film Theories (specified in title)
IAMU 115 Women in Music
IHFILM 310 Women and Cinema
IIIFILM 310 Franco-American Women’s Voices
IIHGS/IIWGS 254 Women in the Holocaust
PHIL 240 Skin, Sex, and Genes
PHIL 260 Theories of the Body

Professional Studies Electives
IIIEDUC 306 Women and Education
IIHLSC 350 Women and Health: Witches, Harlots, and Healers

Sciences/Social Sciences Electives
ANTH 315 Gender and Culture
PSYC 425 Psychology of Women
SOC 320 Women, Gender, and Society
SOC 345 Sociology of Families
SOC 455 The Body/Sexuality in Society

Women's and Gender Studies Electives
Any IIWGS or WGS course at or above the 200 level.

Writing Minor

The writing minor helps develop an essential skill in ways applicable to any major, and offers students a means of pursuing their own interests in the field. Students may choose to focus primarily on fiction and poetry, may concentrate on nonfiction writing, or may combine these genres. All students are required in the last year of their program to complete and submit a portfolio of revised and selected work.

Select one of the following:
ENG 202 Creative Nonfiction Writing
IAENG 204 Creative Writing
ENG 208 Topics in Writing

Select three of the following (including at least two courses at the 300 level or above):
ENG 202 Creative Nonfiction Writing (if not taken above)
ENG 203 Women's Writing
IAENG 204 Creative Writing (if not taken above)
ENG 208 Topics in Writing
ENG 301 Fiction Workshop
ENG 302 Poetry Workshop
ENG 303 Nonfiction Workshop
ENG 306 Autobiography Workshop
IIENG 307 Writing in the World
ENG 308 Advanced Topics in Writing
ENG 402 Theory and Practice
Required of all students:
ENG 405 Writing Minor Portfolio
Teacher Education/Certification Programs

Keene State College has a long history of preparing teachers at the undergraduate, post-baccalaureate, and graduate level. Students seeking teacher certification may select from several options, which are described below and in other sections of this catalog. In addition to being accredited by the New England Association of Schools and Colleges, the Keene State College Teacher Education programs have received accreditation from the National Council for Accreditation of Teacher Education (NCATE) and the New Hampshire State Board of Education.

A. UNDERGRADUATE TEACHER PREPARATION
Undergraduate Teacher Preparation is designed for students seeking to become certified teachers. The undergraduate program requires three areas of study. Integrative Studies provides students with a background in liberal arts. Students need to adhere to the Integrative Studies requirements stipulated by the Education major and any other major/concentration they are pursuing. Teacher Education coursework focuses on the development of an understanding of the teaching profession, diversity of learners, and effective teaching practices, along with a series of supervised preprofessional experiences. The third area of study is a major in a discipline outside of education. Though the programs appear intensive, it is possible to complete most of them within four years, provided students seek the support of advisors, maintain required grades, and fulfill requirements for acceptance into Teacher Education during the second year.

Undergraduate students preparing for the teaching profession may choose from one of the following options:

Option I: Education. Requires second major. See B.S. Education for more information.
- Early Childhood (birth through age 8)
- Elementary Education (kindergarten through grade 6-8)
- Secondary Teacher Certification – includes Middle School certification with options in:
  - Biology (grades 7-12)
  - Chemistry (grades 7-12)
  - Chemistry-Physics (grades 7-12)
  - Earth Sciences: Geology (grades 7-12)
  - General Science (Middle School certification, grades 5-9)
- Social Studies (grades 5-12) – in addition to core Social Science and History courses, a teacher candidate must choose one of the following majors:
  - Geography
  - History
  - Social Science
- English (grades 5-12)
- Mathematics (Middle School, grades 5-8, and Secondary, grades 7-12)
- French
- Spanish
- Special Education (General special education certification K-12 with additional certification in Elementary or Secondary options are available.)

Option II: K-12 Certification.
- Music (see B.M. in Music Education for more information)
- Physical Education (see B.S. in Physical Education for more information)

Admission to the College does not guarantee admission to a Teacher Education Program. Students seeking admission to Teacher Education must meet higher standards for academic performance, dispositions, and testing.

Teacher Education and programmatic standards are updated annually based on professional state and national requirements and are published in The ROUTE Handbook, which is available at the Keene State College Bookstore and online at the Teacher Education website.

Students interested in entering the teaching profession should take EDUC 100 during their first year and consult with a faculty member in their content area. Advising information will be made available each semester.
B. Post-Baccalaureate Teacher Certification Program
Students who have earned a bachelor's degree from an appropriately accredited institution and are interested in obtaining teacher certification may apply for admission to the Post-Baccalaureate Teacher Certification Program. Additional information on the post-baccalaureate program, policies, and procedures may be found in the Advanced Study in Education – Post-Baccalaureate Certification Programs section of this catalog.

C. Master’s Degree with Teacher Certification
This program is currently under review. Consequently, there is an administrative hold on all admissions. Contact the dean of Graduate and Professional Studies for further information.
Graduate Studies

PROGRAM ADMINISTRATION
Admission
Candidates for admission to a program of Graduate Study in Education must submit the appropriate application, including required materials, to the KSC Admissions Office. Furthermore, the following requirements must be met: submission of transcripts for all undergraduate and graduate course work, three letters of recommendation, an admissions essay, and an application fee. Applicants with a current official teacher certification from any state Department of Education must include a copy with their application. A personal interview is also required to complete the application process. Each program or option may specify additional admissions criteria. Refer to the specific admissions criteria for each program or option listed on the Application for Graduate Study in Education.

Applicants must have earned a baccalaureate degree with a minimum 2.5 grade point average for all undergraduate course work or must submit an official score report indicating a performance score at or above the 50th percentile on each of the three subtests of the (General) Graduate Record Exam (GRE).

Normally, application folders completed by April 1 (fall) and December 1 (spring) will be evaluated for matriculation for the following semester. Specific expectations are described on the Graduate Study application form and on the Graduate Studies website (http://keenestateinfo.com/gradstudies/). Individual programs have target enrollments. Keene State College reserves the right to close admissions, irrespective of the stated deadlines. Once accepted, students are required to submit a $100 non-refundable enrollment services fee before matriculation.

Program Support
The Graduate Program is administered through the Teacher Education and Graduate Studies (TEGS) Office in collaboration with the Education faculty. The College's Admissions Office coordinates the admissions process in conjunction with the TEGS Office. The Registrar's Office maintains academic records. Upon admission to the Graduate Program, the TEGS Office, after consultation with the student and Education faculty, identifies an advisor. The TEGS Office monitors matriculated student progress through the program.

The Education faculty offers courses in a cycle that meets the needs of the students in each program. The cycle includes fall, spring, and summer semesters. Courses are offered from 4 to 6:30 p.m. and 7 to 9:30 p.m. Monday through Thursday during the academic year. Courses are also offered on a Friday evening to Saturday schedule. Summer session classes include day and evening meetings as well as weeklong institutes.

Expectations for Degree Completion
• The minimum course requirements must be completed as specified in the program, with an average grade of B or higher (3.0 on a scale of 4.0). No grade less than a C is acceptable, and no more than two grades less than a B may be applied to the degree. The Course Retake Policy does not apply to courses taken for graduate credit.
• The residence requirement for graduate students must be fulfilled (normally completed by taking at least 80 percent of credits through Keene State College courses).
• An Intent to Graduate form must be submitted to the TEGS Office during the first two weeks of the semester before the semester of graduation.
• Payment of the graduation fee is required.

Time Limitations
The statute of limitations (total time period in which to complete a graduate program) is six calendar years from the date of official admission for programs that require 30 credits or more to complete, or four calendar years for those programs that require 29 or fewer credits.

Course Load
A matriculated graduate student is considered to be full-time when he or she registers for 9 or more credits in a given term. Registration for 4.5 credits but less than 9 credits results in half-time status. Course load is a significant determining factor regarding eligibility for financial aid. Contact the Student Financial Services Office for additional information.

Leave of Absence
Each semester students must either register for a course or request a leave of absence. Failure to do either may lead to administrative withdrawal from the college. To request a leave of absence, contact the Associate VP for Student Affairs office. Students must specify an intended date of return. No readmission procedure will be required when the College has granted an official leave.

Academic Dismissal
Graduate students who fail to maintain a 3.0 cumulative grade point average (on a 4.0 scale) are subject to academic dismissal. Students may also be dismissed for lack of professionalism, attitude toward and aptitude for professed occupational goals, and other criteria established by the degree program.
Transfer of Credit
Matriculated students may submit a Transfer of Credit Request form to the TEGS Office. Keene State College will only accept transfer credits that apply to a candidate's graduate program and are approved by the student's advisor and/or the Education faculty chair. Only credits are transferred, not grades. Transfer course grades are not included in the 3.0 grade point average required for program completion. Transcripts must indicate that the student was enrolled in a graduate-level course in an appropriately accredited institution. Grades below a B (3.0 on a scale of 4.0) are not acceptable for transfer into graduate programs. Normally, courses taken more than seven years before the date of matriculation may not be transferred into a graduate program.

ASSISTANTSHIPS/FINANCIAL AID
A limited amount of grant and loan money is available for financial aid for graduate students. Submit a Free Application for Federal Student Aid (FAFSA) by March 1 and contact the Keene State Office of Student Financial Services for more information. A limited number of graduate assistantships are available to matriculated graduate students. Benefits include a $3,000 annual stipend, plus waiver of tuition and fees (at the in-state rate) for up to eight approved courses (normally 24 credit hours) for the academic year. Twenty hours of work per week are expected of recipients during each semester. Applications are available from the TEGS Office.

EARNING A SECOND GRADUATE DEGREE
Those presently holding a master's degree may earn an additional master's degree in a different area by completing all requirements for the second degree. Candidates for a second graduate degree should apply through the regular admissions process. Existing policies regarding transfer of credit apply.
Graduate Study in Education

Enter to learn; go forth to serve …

Tomorrow’s educational leaders emerge from Keene State as new teachers, advanced special educators, master
teachers, school counselors, and principals. At Keene State, we successfully guide intelligent and enthusiastic
individuals as they become confident, competent educators actively improving public and private school envi-
ronments. Our graduates are noted for an active leadership style that stimulates positive systemic change within
demanding school environments.

Keene State College has a long history of preparing teachers at the undergraduate, post-baccalaureate, and graduate
level. The KSC programs of Graduate Study in Education are designed for the adult learner who aspires to enter
the field of education, as well as for the experienced educator who seeks new knowledge, skills, and/or additional
certification as his or her career develops.

Keene State College graduate programs are grounded in standards from national organizations and are accredited
by one or more of the following agencies: the New England Association of Schools and Colleges, the National
Council for Accreditation of Teacher Education (NCATE), or the New Hampshire State Board of Education. In
addition, each program is framed by standards from specialty professional organizations, whose standards delineate
the knowledge, skills, and dispositions professional educators should have, and in that way suggest desired outcomes
of the various programs and options. Each specialty area uses the standards in planning courses and experiences
and strives to meet as many standards as possible.

In keeping with our mission and vision, the Keene State College Education faculty has generated four themes that
speak to what we see as fundamental to the process of teaching and learning. These themes weave through our
curriculum for beginning teachers and advanced-level professionals at both the undergraduate and the graduate
levels.

KSC education programs strive to prepare education professionals who:

- Explore the dynamic nature of the teaching and learning process,
- Demonstrate professional and ethical behaviors that meet high expectations and standards,
- Understand the world from multiple perspectives,
- Contribute to a just and equitable world.

We are seeking students who are committed to excellence. The ideal candidate for admission into the Graduate
Studies Program at Keene State College will demonstrate professional and personal dispositions, including:

- clear communication skills
- the ability to work collaboratively
- professional appearance and demeanor
- the commitment to lifelong learning and service to the community
- clear understanding of the ethical obligations of the profession
- a demonstrated commitment to honoring diverse perspectives
- respect, empathy, and caring for others
- the ability to accept responsibility for own actions
- the consistent ability to be present, punctual, and prepared
- a demonstration of integrity and honesty
- the willingness to work diligently to achieve success.
Master’s Degree Programs

Master of Education

1. CURRICULUM AND INSTRUCTION OPTION

The Curriculum and Instruction (C&I) Option in the master’s program in education promotes the development and enhancement of teacher leadership for classroom teachers. The program strives to instill an understanding of self and others in conjunction with the development of skills, knowledge, critical thinking, and compassion required for creating an equitable and engaging learning environment for diverse learners. Students who enroll at Keene State College under the partnership program with Granite State College may enroll in the Professional Development program and complete the Demonstration of Professional Leadership component.

Curriculum and instruction: Professional development (36 credits)

The C&I Professional Development track is a two-year M.Ed. The C&I Professional Development program is designed for classroom teachers currently employed in an appropriate school setting. The goal is to provide a customized experience leading to the development of teacher leaders committed to school improvement. The program combines core coursework with an individually designed specialization and culminates with the design and implementation of a school-based research project that showcases the individual student’s area of expertise and leadership capacity. Students begin the program in the summer by taking the Foundations courses and are expected to complete their program of study in two years, including summer work. Six credits are taken during each term (summer, fall, or spring).

The Professional Development sequence is designed so that a small cohort of graduate students can proceed through the program together. Each student works closely with a faculty advisor to design an area of specialization that aligns with the National Board of Professional Teachers Standards and the student’s personal goals. Through course work, seminar discussions, field work, reading, professional conferences, etc., students explore teacher leadership in their area of focus. Throughout the program, students develop a portfolio to document professional learning and progress on the goals articulated in their approved program of study.

Action research is central to each student’s plan of study. It is used as a tool for deep inquiry into the dynamics of teaching and learning in the school setting. Students are required to use the findings from their research to support a leadership initiative, which may include grant writing, leading workshops, writing articles and presenting at professional conferences. At the end of the program, students are expected to design their own exit exhibition, which provides them an opportunity to share their portfolio and demonstrate competency in the areas identified in their program of study.

The C&I Professional Development program offers flexibility and individualization for highly motivated professional teachers who are looking for a leadership role in a specified area of focus of their choice. Students can expect their graduate work at KSC to be a time of reflection and renewal as they explore themselves and their relationship with colleagues, students, family, and the community. Throughout the program students are challenged to deepen their understanding of the world from multiple perspectives, explore the dynamic nature of the teaching and learning process, demonstrate professional and ethical behaviors by meeting high expectations and standards, and contribute to a just and equitable world.

Admission Criteria – Curriculum and Instruction: Professional Development

Candidates for admission to the Curriculum and Instruction: Professional Development program must submit an Application for Graduate Study in Education, including required materials, to the KSC Admissions Office. For additional information refer to the Graduate Application.

C&I Option – Professional Development Requirements (36 credits)

FOUNDATIONS – Phase One (6 credits) #

EDUCCI 610 Current Issues in P-12 Education (3 credits), summer (first year)
EDUCCI 625 Technology-integrated Teaching (3 credits), summer (first year)

SPECIALIZATION – Phase Two (18 credits) #

EDUCCI 635 Curriculum Theory and Development (3 credits), fall (first year)
EDUCCI 620 Specialization I (3 credits), fall (first year)
EDUCCI 645 Assessment and Evaluation in Schools (3 credits), spring (first year)
EDUCCI 630 Specialization II (3 credits), spring (first year)
EDUC 641 School Law (3 credits), summer (second year)
EDUCCI 695 Seminar: Teacher as Leader (3 credits), fall (second year)
DEMONSTRATION OF PROFESSIONAL LEADERSHIP – Phase Three (12 credits)
EDUC 670 Educational Research Foundations (3 credits), summer (second year)
EDUC 675 Educational Research Design (3 credits), fall (second year)
EDUC 680 Educational Research Capstone (6 credits), spring (second year)

*Students identify and design their Specialization during the Portfolio seminar (EDUCCI 610). In some cases, graduate credits completed prior to admission to the program may be approved for credit toward the degree if the student demonstrates how these credits support the specialization. This approval takes place during the Portfolio seminar (EDUCCI 610), and may result in the waiver of one or both of the Special Topics courses.

# Note: Students participating in the Granite State partnership receive credit for their GSC coursework through EDUC 612 Demonstrated Certification Competence (18-24 credits) and enroll in the appropriate complementary courses. All courses in the Demonstration of Professional Leadership component of the degree are required.

Curriculum and Instruction: Initial Certification/World Educational Links Track (39 credits)
This program is currently under review. Consequently, there is an administrative hold on all admissions.
Contact the dean of Graduate and Professional Studies for further information.

2. EDUCATIONAL LEADERSHIP OPTION
36 credits
(Meets New Hampshire Certification Competencies for Principal: Grades K-12)

The Educational Leadership Option will provide the candidate with the framework and expertise in the knowledge, skills, and dispositions for transformational school leadership for the 21st century. Through the perspectives of the conceptual framework of the Keene State College education program, candidates for the Educational Leadership Program will:

**E**xplore the dynamic nature of the teaching and learning process
**D**emonstrate professional and ethical behaviors that meet high expectations and standards
**U**nderstand the world from multiple perspectives
**C**ontribute to a just and equitable world

School principals are leaders who function in many roles to meet the diverse needs of individuals and groups in an increasingly complex society and a rapidly evolving world. To lead effectively, school principals must be prepared with the knowledge, skills, and ethical understandings necessary to create an environment that promotes human potential in terms of learning and citizenship.

Admission Criteria – Educational Leadership Option
Candidates for admission to the Educational Leadership Option must submit an Application for Graduate Study in Education, including required materials, to the KSC Admissions Office. For additional information, refer to the Graduate Application.

Educational Leadership Option Requirements
(36 credits)

*Foundations (9 credits)*
EDUCEL 621 Organizational Leadership
EDUCEL 622 School Effectiveness, Reform, and Technology
EDUCCI 635 Curriculum Theory and Practice

*Specialization (12 credits)*
EDUC 641 School Law
EDUCEL 631 Staff Selection, Supervision and Evaluation
EDUCEL 652 Budget, Facilities, and Safe Schools
EDUCEL 655 Curriculum Management: Using Data to Transform Schools

*Demonstration of Professional Leadership (15 credits)*
EDUC 670 Educational Research Foundations
EDUC 675 Educational Research Design
EDUC 699 Capstone
EDUCEL 696 Internship I: School and Community Relations
EDUCEL 697 Internship II: Connections

*Graduate-Level Electives (6 credits)*

*Capstone Experience (3 credits)*
EDUC 699 Capstone
3. SCHOOL COUNSELOR OPTION

48 credits

(Meets New Hampshire Certification Competencies for Guidance Counselor: Grades K-12)

The Keene State College School Counselor Program is designed to encourage the development of school counselors who are, as described in the American School Counselor Association National Standards, actively involved in school transformation: "catalysts for educational change ... [playing] a leadership role in educational reform" (Campbell and Dahir, 1997, p. 3). The program prepares future school counselors to work as advocates for their students and to create developmental school counseling programs that are comprehensive in nature and focused on equity and success for all students. The program promotes an understanding of the roles and responsibilities of the school counselor in the 21st century and the enhancement and development of relevant school counseling skills and strategies.

Developmental, ecological/systemic, and multicultural perspectives provide the theoretical frameworks. The program is based on the American School Counselor Association (ASCA) National Standards (Campbell and Dahir, 1997), the ASCA National Model: A Framework for School Counseling Programs (American School Counselor Association, 2003), the Council for the Accreditation of Counseling and Related Educational Programs (CACREP) standards (CACREP, 2001), and the New Hampshire state standards for school counselors, which, together, provide the framework for the program.

The program's developmental perspective focuses on the needs, tasks, and challenges of children and adolescents as they grow and of the school counselor throughout her or his career. Therefore, we also emphasize the evolution of self-awareness and the skills required to be a lifelong reflective practitioner. The program is designed to create the conditions for self-reflection and awareness within the context of the role of school counselor in order to foster this awareness and these skills.

An ecological/systemic perspective prepares counselors to work effectively with the systems that form the context of students' lives. These systems include the peer group, school, family, and community. An ecological perspective considers the impact of community, national, and global events on students and the spectrum of effective school counselors' responses to these events.

A multicultural perspective is woven throughout the program; we are committed to preparing counselors who can work sensitively and effectively with diverse populations, including the range of cultural, ethnic, gender related, class, and racial diversity that exists in schools and in society. This emphasis includes attention to the range of learning differences and styles of the student population.

The ASCA national standards are "the essential elements of a quality and effective school counseling program. The standards address program content and the knowledge, attitudes, and skill competencies that all students ... develop as a result of participating in a school counseling program. ... The content of school counseling programs focuses on three widely accepted and interrelated areas: academic development, career development, and personal/social development" (Campbell and Dahir, 1997, pp. 3-5).

The ASCA National Model: A Framework for School Counseling Programs (American School Counselor Association, 2003) focuses on "a comprehensive approach to four elements: program foundation; delivery; management; and accountability" (ASCA p. 10). According to the ASCA national model, the foundation is based on the beliefs and philosophy of the individual school, its mission statement, and the ASCA national standards. The delivery system includes the school guidance curriculum, planning for individual students, responsive services, and system support. The management system includes organizing advisory councils, gathering and using data to make decisions and plan programs and interventions, and the use of action plans and other organizational tools to document and assess the program and how it is making a difference for all students. "School counselors must be proficient in retrieving school data, analyzing it to improve student success and using it to ensure educational equity for all students" (ASCA p. 10). A commitment to advocacy, leadership, collaboration, and systemic change provides the overall framing of this approach.

The Council for the Accreditation of Counseling and Related Educational Programs (CACREP 2001) focuses on the development and enhancement of high-quality standards for graduate programs in counseling. The CACREP standards are the national standard for designing and assessing graduate programs in counseling, therefore, these are the standards we use in conjunction with the New Hampshire state standards to design and assess the Keene State program.

In order to work effectively with students, faculty, staff, families, and community stakeholders, school counselors need to have effective skills in communication, individual counseling, small-group guidance and counseling, and classroom guidance. Leadership in facilitating communication and team-building among faculty and staff members and with families and students are critical components of the school counselor's role. Effective leadership requires interpersonal and consultation skills and the ability to mediate and resolve conflicts. Skills in behavior management, crisis intervention, and referral and provision of services are crucial, as is an understanding of how to work with learning differences and emotional and health-related problems.

School counselors need to be well grounded in current ethical and legal standards. Ethical practice must be infused in and guide all of their work. Awareness of the guidelines of professional organizations is of the utmost importance. Legal and ethical considerations include understanding the parameters surrounding confidentiality and knowing one's own biases and limits, when it is necessary to consult with colleagues, and when to refer students to another individual or agency. An ethical school
counselor actively seeks to continuously learn more about this ever-growing field and is careful to seek appropriate peer review and clinical supervision throughout his or her career.

The School Counselor Option is field-based; each course requires students to apply course content to a school or counseling context. The program is also sequential in design, with each course cluster providing a base for subsequent courses. Two semester-long School Counseling Internships (elementary and secondary) include a weekly seminar and require students to demonstrate mastery level counseling in a school setting. Program flexibility and individualization occur within the courses as students design and try out interventions based on interpretations of theory and research into identified best practices.

**Admission Criteria – School Counselor Option**
Candidates for admission to the Educational Leadership Option must submit an Application for Graduate Study in Education, including required materials, to the KSC Admissions Office. For additional information, refer to the Graduate Application.

**School Counselor Option (36 credits)**
- EDUCSC 622 School Counseling: Roles, Responsibilities, and Interventions (3 credits)
- EDUCSC 623 The Inclusive School Counselor: Diversity and Multiculturalism in Schools (3 credits)
- EDUCSC 626 Professional Seminar in School Counseling (3 credits)
- EDUC 630 Life Span Development (3 credits)
- EDUCSC 631 Assessment and Evaluation for School Counselors (3 credits)
- EDUC 641 School Law (3 credits)
- EDUCSC 641 Career Development (3 credits)
- EDUCSC 651 Methods and Skills of Counseling (3 credits)
- EDUCSC 652 Group Counseling in Schools (3 credits)
- EDUCSC 662 School Counseling: Theoretical Foundations (3 credits)
- EDUCSC 696 Internship: Elementary (3 credits)
- EDUCSC 697 Internship: Secondary (3 credits)

**Graduate-Level Electives (3 credits)**
Course(s) to be determined in consultation with faculty advisor.

**Demonstration of Professional Leadership (9 credits)**
- EDUC 670 Educational Research Foundations (3 credits)
- EDUC 675 Educational Research Design (3 credits)
- EDUC 699 Capstone Experience (3 credits)

**4. SPECIAL EDUCATION OPTION**
39 credits

This option is designed for individuals who seek certification by the New Hampshire Department of Education in General Special Education (K-12) and a Master of Education degree. The M.Ed. Special Education Option is designed to support individuals to achieve special education certification at the initial level as well as enhance competence and extend learning beyond certification competencies in the area of special education. The option combines certification coursework with a professional leadership experience and culminates with the design and implementation of a school-based research project that showcases an individual student’s area of expertise and leadership capacity in special education. The program begins in the summer and can be completed in one year (full-time) or two years (part-time). The certification aspects of this portfolio-based program blend special education content knowledge courses with a yearlong internship experience. The internship may be conducted on the job (for students employed as a teacher in an appropriate special education setting) or in a field experience approved by the faculty coordinator(s) of this program. The certification component follows standards set forth by the National Council for Accreditation of Teacher Education (NCATE), the Council for Exceptional Children (CEC), and the New Hampshire Department of Education. The KSC Conceptual Framework for Teacher Education Programs provides students with a frame of reference as they work through the program.

Faculty in the M.Ed. Special Education Option are dedicated to preparing special educators by partnering with local special education professionals in the larger KSC community. Guiding principles include assisting candidates to: (1) apply special education knowledge and skills so that the individuals with disabilities who they teach can develop academic, social, and transition skills to become meaningful and productive members of a community; (2) design instruction, assessment, and individualized programs with the student and family at the center of the process; (3) utilize expertise of special education stakeholders within and outside a school system in a collaborative framework; (4) celebrate diversity in the context of supporting individuals with disabilities; (5) act as advocates for individuals with disabilities; (6) develop belief and value systems that provide a focus for acting as a special educator; and (7) reflect on practice to increase special education knowledge, skills, and beliefs.

Applicants to the M.Ed. Special Education Option must demonstrate an appropriate foundation in “regular” education. Individuals who possess a recognized form of teacher certification have demonstrated this required competency. Candidates who do not have the required educational foundation must complete a Post-Baccalaureate Teacher Certification program in order to demonstrate competency in “regular” education.
Graduates from the Keene State College elementary or secondary education programs who seek certification in General Special Education (K-12) are encouraged to apply to the M.Ed. Special Education Option during their senior year. Graduates of the KSC elementary or secondary education programs who have completed coursework in special education foundations have already addressed fundamental certification competencies. If accepted into the M.Ed. Special Education Option, these individuals will be required to complete fewer credits (see below).

Granite State College students who receive initial or advanced special education certification may transfer these credits into the M.Ed. option (see Granite State College Partnership below).

**Admission Criteria – Special Education Option**

Candidates for admission to the Special Education Option must submit an Application for Graduate Study in Education, including required materials, to the KSC Admissions Office. For additional information regarding specific admissions criteria refer to the Graduate Application.

**Special Education Option**

32-38 credits

**Special Education Certification (20-26 credits)**

*EDUCSP 601 Foundations in Special Education (3 credits)
*EDUCSP 602 Curriculum and Instructional Design (3 credits)
EDUCSP 603 Positive Behavior Supports (2 credits)
EDUCSP 604 Assessment and Evaluation in Special Education (3 credits)
EDUCSP 605 Transition Planning and Programming (3 credits)
EDUCSP 660 Internship in Special Education I (6 credits)
EDUCSP 665 Internship in Special Education II (6 credits)

**Demonstration of Professional Leadership (12 credits)**

EDUC 670 Educational Research Foundations (3 credits)
EDUC 675 Educational Research Design (3 credits)
EDUC 680 Educational Research Capstone (6 credits)

* Candidates who completed both EDSP 250 and 350 (8 credits of foundational special education coursework) at KSC will not be required to complete EDUCSP 601/602. The certification component of their M.Ed. will total 20 credits. Candidates who completed only EDSP 250 (4 credits) at KSC will be required to complete EDUCSP 602. The certification component of their M.Ed. will total 23 credits. Candidates must pass these courses with a minimum grade of B. These candidates will be required to document the special education competencies achieved during these courses in their Special Education M.Ed. portfolio.

**Granite State College Partnership**

Individuals who become certified by the New Hampshire Department of Education (NH DOE) after completion of an approved Post-Baccalaureate program at Granite State College (GSC) may qualify to transfer a block of credits via EDUC 612: Demonstrated Certification Competence into the Master of Education degree at KSC. The following GSC certification areas have been approved for transfer into the Certification component of the M.Ed. Special Education Option at KSC:

- Early Childhood Special Education
- General Special Education
- Emotionally and Behavioral Disabilities
- Specific Learning Disabilities
- Intellectual and Developmental Disabilities

The successful applicant from GSC will have earned at least 18 post-baccalaureate credits with a GPA of 3.0 or higher for each course. Individuals who earned fewer than 26 qualified credits from GSC will be required to complete additional graduate coursework at KSC. The 12 credit Demonstration of Professional Leadership component of the M.Ed. must be completed with a cumulative GPA of 3.0 or higher before transfer credit for Demonstrated Certification Competence will be awarded. Additional program requirements are outlined in the most recent Memorandum of Understanding between KSC and GSC.

Students who transfer from GSC are encouraged to participate in Institutes and offerings in other KSC graduate programs that serve to enhance their understanding of serving students with disabilities.
Master of Science

SAFETY AND OCCUPATIONAL HEALTH APPLIED SCIENCE

Keene State College has a long history of preparing exceptional occupational safety and health professionals. The job of the occupational safety and health professional is to anticipate, evaluate, and control hazards within the workplace to protect the health and safety of workers.

The graduate program in Safety and Occupational Health Applied Sciences provides a dynamic learning experience for occupational safety and health professionals seeking advanced study in the profession. The program includes research opportunities that apply course content exploring the emerging philosophical, technological, and managerial challenges facing today's safety and health professional. Graduates will possess essential competencies in writing, quantitative literacy, and critical and creative thinking, and develop the advanced management skills and technological expertise required to be successful leaders as occupational safety and health professionals in the private and public sector.

The Graduate Studies program will offer a stimulating environment that provides continued cultural and intellectual growth to safety professionals. The Safety faculty, in conjunction with well-qualified adjunct faculty, (faculty with an advanced degree and exceptional professional experience) will offer courses in a planned three-year cycle that allows realistic student planning for completion of degree requirements in two to three years. The three-year cycle includes fall, spring, and summer semesters. Courses will be scheduled in a format that will be compatible with the needs of working professionals, including weekend courses. Courses in the M.S. Safety and Occupational Health Applied Sciences will include a blended learning format incorporating both classroom meetings and online content.

ADMISSION CRITERIA
Candidates for admission to the M.S. Safety and Occupational Health Applied Sciences must meet the requirements for graduate study at Keene State College and submit an Application for Graduate Study, including required materials to the KSC Admissions Office. For additional information, refer to the Graduate Application.

MASTER OF SCIENCE, SAFETY AND OCCUPATIONAL HEALTH APPLIED SCIENCE

REQUIRED COURSES
32 credits

SAFE 601 Current Issues in Safety
SAFE 602 Best Practices in Safety
SAFE 603 Applied Occupational Health
SAFE 604 Leading Safety Change
SAFE 605 Safety Management Systems
SAFE 610 Risk and Safety
SAFE 620 Safety Program Assessment
SAFE 650 Self-Directed Study

CAPSTONE EXPERIENCE
4 credits

Select one of the following:
SAFE 695 Graduate Practicum
SAFE 699 Thesis

DEGREE REQUIREMENTS
36 credits

Post-Master’s Certification Programs

For individuals currently holding an appropriate master’s degree who wish to become certifiable as a school principal or school counselor, post-master’s certification programs are available as follows:

EDUCATIONAL LEADERSHIP POST-MASTER’S CERTIFICATION OPTION
27 credits

(Meets New Hampshire Certification Competencies for Principal: Grades K-12)

School principals are leaders who function in many roles to meet the diverse needs of individuals and groups in an increasingly complex society and a rapidly evolving world. To lead effectively, school principals must be prepared with the knowledge, skills, and ethical understandings necessary to create an environment that promotes human potential in terms of learning and citizenship.
The literature defines leadership as a direction-setting task. People who lead engage in visioning, purposing, and agenda setting. At the core is the principal’s role in the development of shared strategic visions for schools. Shared visions are the basis of a school’s culture and values, which suggest that leaders are people who facilitate the development of shared visions and thus create desired changes in culture and values.

A developmental and ecological perspective provides the theoretical framework for the program. The overriding theme of leadership drives the vision of school principal preparation. The developmental framework focuses on the needs, tasks, and challenges of children, adolescents, and adults in the school setting. The ecological perspective prepares future principals to work effectively with those systems that comprise and have an interrelationship with schools. These systems include school, family, community, and state, national, and global organizations.

A multicultural perspective is expressed by the commitment to prepare principals who can work effectively with diverse populations of children, adolescents, and adults. This emphasis encompasses sensitivity to individuals in an organizational setting. School principals work with students, teachers, paraprofessionals, staff members, other professionals, parents, board members, community members, and central office personnel in a variety of curricular and co-curricular planning and activities. Leadership, team building, and communication skills are crucial to working with all constituencies, including large groups, small groups, and individuals in conferencing.

An integral component of the program is the thorough development of each student’s understanding of what makes organizations effective; motivation, human development, learning, and learning styles; and mediation and conflict resolution, oral and written communication, and delegation.

School principals must be models of and knowledgeable about ethical and legal standards and must be capable of applying those concepts in the complexities of a school setting. They must have knowledge of the legal and ethical parameters regarding confidentiality, personal and group safety, personal biases and limits, consultation with colleagues, and the need to refer an issue to another individual, central office, or outside agency.

**ADMISSION CRITERIA – EDUCATIONAL LEADERSHIP OPTION**

Candidates for admission to the Educational Leadership Certificate Option must submit an Application for Graduate Study in Education, including required materials, to the KSC Admissions Office. For additional information, refer to the Graduate Application.

**EDUCATIONAL LEADERSHIP CERTIFICATION OPTION REQUIREMENTS**

27 credits

**Foundations (9 credits)**
- EDUCEL 621 Organizational Leadership
- EDUCEL 622 School Effectiveness, Reform, and Technology
- EDUCCI 635 Curriculum Theory and Practice

**Specialization (12 credits)**
- EDUC 641 School Law
- EDUCEL 631 Staff Selection, Supervision, and Evaluation
- EDUCEL 652 Budget, Facilities, and Safe Schools
- EDUCEL 655 Curriculum Management: Using Data to Transform Schools

**Demonstration of Professional Leadership (6 credits)**
- EDUCEL 696 Internship I: School and Community Relations
- EDUCEL 697 Internship II: Connections

**SCHOOL COUNSELOR CERTIFICATION**

(31 credits)

(Meets New Hampshire Certification Competencies for Guidance Counselor: Grades K-12)

Refer to the Master of Education: School Counselor Option section of this catalog for a description of this program.

**Admission Criteria**

Candidates for admission to the School Counselor Certificate Option must submit an Application for Graduate Study in Education, including required materials, to the KSC Admissions Office. For additional information, refer to the Graduate Application.

**School Counselor Certificate Requirements (30 credits)**
- EDUCCS 622 School Counseling: Roles, Responsibilities, and Interventions
- EDUCCS 623 The Inclusive School Counselor: Multiculturalism and Diversity in Schools
- EDUC 630 Lifespan Development
- EDUCCS 631 Assessment and Evaluation for School Counselors
EDUCSC 641 Career Development
EDUC 641 School Law
EDUCSC 652 Group Counseling in Schools
EDUCSC 662 School Counseling: Theoretical Foundations
EDUCSC 696 Internship: Elementary
EDUCSC 697 Internship: Secondary

Post-Baccalaureate Teacher Certification Programs

Post-Baccalaureate Teacher Certification Program (PBTCP) is specifically designed to address the needs of two distinct populations:

- Experienced educators who want to become certified in another discipline; these individuals will have completed a baccalaureate degree and typically possess current teacher certification.
- Individuals who hold a baccalaureate degree and whose life experiences have led them to seek initial teacher certification; this group may range from the novice student who has no background or experience in education to individuals who have a wealth of experience and/or are employed as teacher aids, tutors, paraprofessionals, or special education classroom teachers.

This program closely follows the undergraduate Teacher Education model. It is composed almost exclusively of undergraduate courses. Through this program, students are able to meet New Hampshire competencies for certification in one or more of the following areas:

- Biology (grades 7-12)
- Chemistry (grades 7-12)
- Early Childhood Development (nursery-3)
- Earth Science (grades 7-12)
- Elementary Education (grades K-8)
- English (grades 5-12)
- French (grades K-12)
- General Science (grades 5-9)
- General Special Education (grades K-12)
- Middle/Junior High Mathematics (grades 5-8)
- Music Education (grades K-12)
- Physical Education (grades K-12)
- Physical Science (grades 7-12)
- Secondary Mathematics (grades 7-12)
- Spanish (grades K-12)
- Social Studies (grades 5-12)

Selection of a Content Area is required for admission. Prior to admission, it is strongly recommended that applicants have at least 100 hours of contact with children in a public school setting. This track requires an initial review of all post-secondary course work. The Office of Teacher Education and Graduate Studies coordinates the examination of official transcripts, relevant standardized test results and other application materials to develop an individualized educational plan that will address the KSC Teacher Education Themes while meeting New Hampshire state standards for Teacher Certification. The educational plan will typically address certification competencies not met by the student’s baccalaureate degree. Required courses will guide students toward the acquisition of the knowledge, skills and dispositions necessary to demonstrate competence in their selected area of certification and as a professional educator.

Extra academic preparation may be required for applicants whose baccalaureate degree is not closely related to the area of certification they are seeking. Prior to engagement in the Student Teaching experience, it is strongly recommended that a student have at least 500 hours of contact with children of various ages in different public school environments.

ADMISSION CRITERIA

Candidates for admission to the Post-Baccalaureate Teacher Certification Program must submit an Application for Graduate Study in Education, including required materials, to the KSC Admissions Office. For additional information, refer to the Graduate Application.

Preference will be given to candidates who submit passing scores for the Praxis II content tests (typically: content knowledge and essay) as specified by the New Hampshire Department of Education. Praxis II tests are currently required for the following secondary certification areas:

- Biology (7 to 12)
- Chemistry (7 to 12)
Earth/Space Science (7 to 12)
English (5 to 12)
French (K to 12)
General Science (5 to 9)
Middle/Junior High Math (5 to 8)
Physics (7 to 12)
Secondary Math (7 to 12)
Spanish (K to 12)
Social Studies (5 to 12)
Courses of Instruction

Because curriculum development is a continuous process, there may have been course changes subsequent to the publishing of this catalog. Therefore, the College reserves the right to add, change, or delete curricular offerings and/or make curricular refinements. Some changes are necessitated by agencies that accredit the College or award certificates to students. Check with the appropriate academic discipline to learn of any recent changes.

Course Availability
As a service to students and those who advise students, the College provides information regarding the semester a course is expected to be offered. The information is included in the course description. Please note that course schedule information is subject to change without notification. Furthermore, the inclusion of information as to when courses are typically offered does not constitute a contract between the students and the College.

Course Numbering System
All courses carry four credits unless otherwise indicated. Prerequisites, if there are any, are listed at the end of each course description.

For courses numbered below 100, credits do not apply toward graduation.

100/200-level courses are introductory and intermediate courses usually taken during the freshman and sophomore years.

300/400-level courses are upper division courses, usually taken by juniors and seniors.

500-level courses are graduate courses but are open to senior undergraduates with permission of the appropriate divisional dean.

600-level courses are graduate courses only; they are not open to undergraduates.

Experimental courses are identified as 199 (basic), 399 (advanced), and 599 (graduate). They may be offered with permission of the discipline faculty, the appropriate divisional dean, and the vice president for Academic Affairs. Normally these courses are not repeated.

American Studies

IHAMST 140 WHAT IS AMERICAN STUDIES?
Explores historical and contemporary issues from American culture(s). Topics may include nationhood, identity, and cultural production. Annually.

IHAMST 248 CULTURES OF NORTHERN PLAINS INDIANS
An introduction to American Indian studies through the perspectives of Northern Plains Indians, focusing on Plains Indians’ literature, music, art, Indian law, history, and philosophy. Prerequisite: ITW 101. Annually.

IHAMST 291 SPECIAL TOPICS
Course examines topics through perspectives and approaches drawn from the field of American Studies. May be repeated as topics change. Fall, Spring.

IHAMST 372 READINGS IN AMERICAN STUDIES
Examines primary, theoretical, and critical materials related to American Studies. May engage historical, philosophical, artistic, and literary issues in American culture(s). Prerequisites: 24 credits in ISP, including ITW 101 and IQL 101. Annually.

IIAMST 210 INTRODUCTION TO AMERICAN STUDIES
An introduction to the cultural complexities of the American experience with an emphasis on formulating interdisciplinary questions. Usually focuses on a particular decade, region, or theme. Prerequisite: ITW 101 or its equivalent. Fall, Spring.

IIAMST 250 INTERPRETING AMERICAN CULTURES
An examination of a particular aspect of American cultures with an emphasis on developing a critical method appropriate to the interdisciplinary use of texts and other cultural artifacts. Prerequisite: ITW 101 or its equivalent. Annually.
IIAMST 370 AMERICAN BIOGRAPHY
Interdisciplinary course examines selected biographies of Americans and American-identified figures from historical and literary perspectives. Readings contextualize developments in American culture and society (writ large) from 1492 to the present. Intended for nonmajors. Includes autobiographies. Prerequisite: 24 ISP credits, including ITW and IQL. Annually.

IIAMST 375 AMERICAN CULTURAL STUDIES
Interdisciplinary exploration of a specific aspect or area of American culture employing methods drawn from the field of American Studies. Course moves toward the question: “What is American?” Readings consider phenomena defining American culture(s) and social structure(s), engaging theoretical, historical, and aesthetic materials. Intended for nonmajors. Prerequisite: 24 ISP credits, including ITW and IQL. Annually.

IIAMST 380 THE NEW ENGLAND EXPERIENCE
Interdisciplinary course examines selected readings and discussions of New England culture and society from 17th century to the present. Examination draws upon literary, historical, and theoretical materials. Questions of region, image, imagination, and identity are addressed. Prerequisite: 24 ISP credits, including ITW and IQL. Annually.

AMST 290 SPECIAL TOPICS
Exploration of topics in American Studies. May be repeated as topics change. Spring.

AMST 298 INDEPENDENT STUDY
1-8 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Repeatable to a total of 8 credits. Prerequisite: Consent required of the instructor who will supervise the independent study.

AMST 350 PERSPECTIVES ON AMERICAN CULTURE
An exploration of the theory and history of American studies. The course stresses the importance of understanding the complex role of ideology in forming national identity. Prerequisites: IIAMST 210 and IIAMST 250.

AMST 363 WRITING IN AN ENDANGERED WORLD
This course traces environmentalism as a social movement in relation to the development of environmental writing. Students will consider the relationship between literature and social change, the development of literary strategies in environmental writing, and commentaries on the environmental movement by cultural critics and environmental historians in developing countries. Prerequisites: IIENST 152 and ENST 253. Cross-listed with ENST 363. Fall, alternate years.

AMST 390 CRITICAL APPROACHES
Exploration of selected aspects of the American experience viewed from one or more critical perspectives. When appropriate, also listed as ENG 390 or a 400-level English course. May be repeated as topics change. Every two years.

AMST 490 ADVANCED SPECIAL TOPICS
Exploration of advanced topics in American Studies. May be repeated as topics change. Occasionally.

AMST 495 SEMINAR
An interdisciplinary examination of a selected period, theme, or issue related to the American experience. AMST students will propose seminar paper topics that integrate learning from previous courses in American Studies and related disciplines. May be repeated for credit as topics change. Prerequisites: ITW 101, IIAMST 210, AMST 350, junior standing, and permission of instructor. Spring.

AMST 497 INTERNSHIP
1-4 credits
Experience in the field providing an opportunity to explore and reflect on work/professional options related to American Studies. Settings may be museums, historical/preservation/restoration organizations, libraries/archives, media, schools, environmental groups, social services, or other related fields. May be repeated to a total of 8 credits. Prerequisites: Permission of American Studies coordinator, and approval and appropriate supervision by core faculty.

AMST 498 INDEPENDENT STUDY
1-8 credits
Intensive study of an issue, problem, or topic related to American Studies. Consent required of the instructor who will supervise the independent study. May be repeated to a total of 8 credits.
Anthropology

ISANTH 110 CULTURAL ANTHROPOLOGY
Introduction to anthropological knowledge and understanding of human cultures and societies. Cross-cultural comparison and review of tribal and industrialized societies. Application of anthropological concepts to provide understanding of other cultures and one's own culture. Fall, Spring.

ISANTH 111 ARCHEOLOGY AND PHYSICAL ANTHROPOLOGY
An introduction to the biological and cultural evolution of human beings. In addition to the prehistoric record, the course will cover primatology, human variation, and problems of theory and practice in archeology. Fall, Spring.

ANTH 290 TOPICS IN ANTHROPOLOGY
Selected topics in anthropology. May be repeated as topics change to a total of 8 credits. Prerequisite: ISANTH 110. Occasionally.

ANTH 314 WORLD PREHISTORY
An in-depth, comparative examination of cultural change and culture process in prehistoric societies from various places around the world. The course begins with the appearance of anatomically modern humans and ends with the demise of the first civilizations and includes multiple theoretical perspectives on prehistoric behavior. Prerequisite: ISANTH 111. Fall, odd years.

ANTH 315 GENDER AND CULTURE
An examination of the ideology and social reality of gender cross-culturally. The course covers various theoretical approaches and explores the ethnographic literature. Prerequisite: ISANTH 110 or permission of instructor. Fall.

ANTH 316 CULTURES OF SOUTHEAST ASIA
A cultural anthropological investigation of the diversity of cultures in Southeast Asia. Focuses on the large variety of economic and religious traditions in the area and how these interrelate. Prerequisite: ISANTH 110 or permission of instructor. Occasionally.

ANTH 318 THE ANCIENT MAYA
A comprehensive investigation of the archeology of ancient Maya culture. The course begins with an examination of some of the earliest occupations in Mesoamerica and then documents the complex social, political, economic, and ideological developments of the Maya until the arrival of Spanish Europeans. Prerequisite: ISANTH 111. Spring, even years.

ANTH 320 MAGIC, WITCHCRAFT, AND RELIGION
This course will provide a holistic and comparative approach to the study of religious beliefs and practices. Students will explore magical and religious behavior, ritual, myth, shamanism, curing, spirit possession, ancestor worship, witchcraft, and millennial and countercultural movements in a variety of tribal and state societies. Prerequisite: ISANTH 110 or permission of instructor. Spring, odd years.

ANTH 321 LITHIC TECHNOLOGY
This course focuses on stone tool technology from both a cultural evolutionary perspective and as a technological process. Students will examine stone tool classification and analysis with emphasis on raw material types, artifact typologies, reduction sequences, refitting studies, use-wear analysis, and sourcing and dating methods. Prerequisite: ISANTH 111. Fall, even years.

ANTH 323 ANTHROPOLOGY OF CONFLICT AND VIOLENCE
This course focuses on the nature of conflict in human societies around the world and examines the roles of violence from a cross-cultural perspective. Conflict and violence are studied in societies ranging from food-foragers and complex states to explore the consequences of what is labeled "violence." Prerequisite: ISANTH 110. Spring, even years.

ANTH 330 CULTURAL INVESTIGATIONS
Introduction to methodology for contemporary ethnographic field research in anthropology, including research design, participant-observation, interviewing, field notes, indexing, report writing, and visual documentation. Students complete assigned and independent research projects relying on a variety of ethnographic methods. Prerequisite: ISANTH 110 or permission of instructor. Fall, even years.

ANTH 335 PRACTICUM IN ANTHROPOLOGY
2-8 credits
This course provides an opportunity for students to use anthropological learning in a cultural setting for 8 to 10 hours each week. Students may select from among applied research, human services, or other social/cultural change settings. Prerequisite: Permission of instructor. Fall, Spring.

ANTH 390 STUDIES IN ANTHROPOLOGY
Intensive study of selected topics in anthropology. May be repeated as topics change to a total of 8 credits. Prerequisite: ISANTH 110. Occasionally.
ANTH 413 ANTHROPOLOGICAL THOUGHT
Anthropology, throughout its history, has attempted to understand the similarities and differences among human populations and their cultures. This course will examine different anthropological schools of thought in regard to how cultures should be studied and understood. Prerequisite: ANTH 212, ANTH 315, or ANTH 316, or permission of instructor. Spring, odd years.

ANTH 494 COOPERATIVE EDUCATION
2-8 credits
Work-learning experience for Anthropology minors. Placement arranged by the student and approved, supervised, and evaluated by a faculty member. Student spends 3 to 4 hours each week in a work setting for each credit earned. Compensation possible. May be repeated to a total of 8 credits (4 credit maximum toward Anthropology minor). Prerequisite: Permission of instructor. Graded Pass/Fail. Occasionally.

ANTH 498 INDEPENDENT STUDY
1-4 credits
Advanced independent study of an Anthropology area not normally available in the curriculum. Requires a written report. May be repeated to a total of 4 credits. Prerequisite: Permission of instructor. Occasionally.

Architecture

ARCH 120 ARCHITECTURAL CAD I
This course introduces architectural computer-aided drafting (CAD) with state-of-the-art applications. Students, through a combination of lectures, hands-on exercises, and drawing problems, build a solid foundation of two-dimensional CAD skills and apply these skills creating architectural plans, sections, and elevations according to professional drafting standards, techniques, and practices. Fall, Spring.

ARCH 180 INTRODUCTION TO ARCHITECTURAL DESIGN
This course provides an introduction to the design, history, and construction of residential buildings. Students study basic principles of residential building design and design processes, including programming, site planning, design elements, and construction methods. Students use seminars and projects studying drafting techniques to plan, design, and develop presentation and working drawings. Fall, Spring.

ARCH 220 ARCHITECTURAL CAD II
An intermediate course in computer-aided drafting using state-of-the-art architectural drafting software. Students, through a combination of lectures, hands-on exercises, and drawing problems, learn three-dimensional CAD skills to generate architectural design and detail drawings according to professional drafting standards, techniques, and practices. Prerequisite: ARCH 120 or permission of instructor. Fall, Spring.

ARCH 230 ARCHITECTURAL DESIGN I
Studio investigations of fundamental design concepts, principles, and elements. Projects and exercises focus on the creation of abstract architectural forms and spaces through an exploration of shape, hierarchy, organization, scale, proportion, materials, and light. Studio Design courses should be taken in sequence. Prerequisite: IAART 103 or permission of instructor. Fall.

ARCH 235 ARCHITECTURAL DESIGN II
Studio investigations of fundamental design concepts, principles, and processes. Projects focus on the creation of both abstract and programmed architectural forms and spaces with an emphasis on formal and aesthetic values and the development of a visual vocabulary. The exercises are oriented toward the achievement of creative individual expression. Prerequisite: ARCH 230 or permission of instructor. Spring.

ARCH 260 SUSTAINABLE DESIGN AND BUILDING SCIENCE
Study of energy issues, sustainable building design, and introduction to building science. Focus is on energy-efficient buildings, solar energy systems, related environmental issues, and basics of building science. Projects involve energy analysis of buildings, evaluation of renewable energy options, world energy issues, critical design decisions for building, and building forensics. Prerequisite: MATH 120 or permission of the instructor. Spring.

ARCH 270 COMMERCIAL CONSTRUCTION
Introduction of the processes of commercial building, including environmental and regulatory factors and analysis of foundation components and structural and enclosure building systems. Lectures, site visits, and projects present students with an array of technical challenges in building design. Focus is on analyzing and designing architectural details for a variety of building materials. Prerequisite: ARCH 180. Fall.

ARCH 275 RESIDENTIAL CONSTRUCTION
A study of residential construction technology systems, including the planning, materials and processes used by building contractors to build residential structures. The interrelationship of societal needs, the environment, and quality of life as they affect building design and construction practices are examined. Two-hour lecture, three-hour lab. Fall, Spring.
ARCH 280 COLLABORATIVE ARCHITECTURAL PROJECT
Project-centered course emphasizing team approach to solving complex architectural problems. Students conduct architectural projects in the local community for a specific client and site. Involves site planning, programming, schematic design, and construction management. Prerequisite: ARCH 270 or permission of instructor. Spring.

ARCH 290 SPECIAL TOPICS
2-8 credits
Study of a selected topic in Architecture. May be repeated as topics change. Prerequisites vary with topics. Fall, Spring.

ARCH 294 COOPERATIVE EDUCATION
2-8 credits
Work-learning experience for which compensation may be received. Placements arranged and approved, supervised and evaluated by full-time Architecture faculty. Elective credit only (cannot be applied to credits in the major) to a total of 12 credits per program. Prerequisites: Declaration of Architecture major and permission of normally 40 hours per credit. Graded Pass/Fail. Fall, Spring.

ARCH 320 ARCHITECTURAL CAD III
An advanced course in state-of-the-art architectural rendering, graphic, and CAD applications. Students through a combination of lectures, hands-on exercises, and drawing problems, learn advanced visual representation skills to generate architectural renderings, presentation, and portfolio quality images. Prerequisite: ARCH 220 or permission of instructor. Fall.

ARCH 330 ARCHITECTURAL DESIGN III
Intermediate-level design investigations based upon the generation of architectural solutions with particular emphasis on formal, functional, and materialization concerns. Projects and exercises focus on the analysis and synthesis of built form with investigations into historical precedents; human factors; site, environmental, and contextual influences; and identification of materials. Prerequisite: ARCH 235 or permission of instructor. Fall.

ARCH 350 ARCHITECTURAL HISTORY I
An introduction to the history of architecture and the design concepts that are the building blocks of architectural history from prehistory to the Baroque period. The course surveys the traditional or “canonical” architectural works of Western Europe, the United States, Asia, and the Middle East. Fall.

ARCH 355 ARCHITECTURAL HISTORY II
Survey of architectural history, including built form, design theories, construction technologies, and social, political, religious influences from the Gothic period through 1960s. Examines the architecture of Western and non-Western civilizations. Lectures, quizzes, exams, and oral presentations serve as methods for gaining knowledge of transitions in architectural history. Spring.

ARCH 360 SOLAR DESIGN AND BUILDING SCIENCE II
Designing Passive and Active Solar Systems for buildings, performance modeling, and advanced building science. Includes basic principles, performance calculations, design optimization, architectural integration of solar energy systems, air quality, and moisture control. Students design combined solar systems applying principles of advanced building science. Prerequisite: ARCH 260. Spring.

ARCH 370 ARCHITECTURAL SYSTEMS
Designing mechanical and electrical systems in the context of high-performance buildings. Course applies scientific principles in designing water-supply systems, heating, cooling, electrical services, lighting, and sound control, extending the understanding of healthy buildings design. Emphasizes the principles and concepts to help students design a variety of systems while creating healthy buildings. Prerequisite: ARCH 260 or permission of instructor. Fall.

ARCH 375 STATICS AND STRUCTURAL ANALYSIS
Analysis of structural systems in static equilibrium. Begins with fundamental physical laws and progresses to equations of forces and moments on rigid bodies, the analysis of frames, trusses, and internal forces and moments in beams, and loading diagrams and geometrical analysis of building loads. Fall.

ARCH 430 ARCHITECTURAL DESIGN IV
Advanced architectural design of complex building programs. Emphasis on analysis and synthesis of design solutions, including aesthetic principles, satisfaction of programmatic and human concerns, integrating forms in urban or natural context, and identification of appropriate building tectonics. Research is performed on building type and relevant architectural references. Prerequisite: ARCH 330 or permission of instructor. Spring.

ARCH 435 PORTFOLIO DESIGN
Preparation of an architectural portfolio for employment, fellowships, grants, and postgraduate academic opportunities. Course focuses on visual and written representation of individual studio work. Students engage in the representational process to provide a critical forum for written and visual communication in the field of architecture and their own work. Prerequisite: ARCH 430 or permission of instructor. Fall.

ARCH 480 SENIOR DESIGN PROJECT
Culminating course in the architecture program where each senior defines and develops a complete design and set of drawings for a real client and site. The course emphasizes group interaction, peer review, and evaluation by independent architects. Prerequisite: ARCH 280 or permission of instructor. Spring.
ARCH 490 ADVANCED SPECIAL TOPICS
2-8 credits
Study of a selected topic in Architecture at an advanced level. May be repeated as topics change. Prerequisites vary with topics. Fall, Spring.

ARCH 494 ADVANCED COOPERATIVE EDUCATION
2-8 credits
Sequential work-learning experience for which compensation may be received. Placements arranged and approved, supervised and evaluated by full-time Architecture faculty. Elective credit only (normally 40 hours per credit) to a total of 12 credits per program. Prerequisites: Declaration of Architecture major and permission of instructor. May be repeated for credit. Graded Pass/Fail. Fall, Spring.

ARCH 498 INDEPENDENT STUDY
2-8 credits
Advanced independent study of various fields of Architecture through independent reading, writing, laboratory work, or field investigation. Requires a written report. May be repeated to a total of 8 credits. Prerequisite: Permission of instructor. Fall, Spring.

Art

IAART 100 FOUNDATIONS OF DESIGN
Study of primary visual design concepts through series of lectures and projects that explore two- and three-dimensional design, and the language of color. Emphasis is on the interaction of these elements in relation to composition and the development of visual literacy. Not open to students who have completed ART 101. Fall and Spring.

IAART 103 THREE-DIMENSIONAL DESIGN
A comprehensive exploration of the properties of natural and human-made volumes and spaces. Projects involve sculptural objects, and architectural and environmental design. Studio projects are completed outside of class. Fall and Spring.

IAART 110 INTRODUCTION TO ART HISTORY
General survey of the history of art and architecture from the ancient to modern periods. The course will explore the roles of the artist, art patron, and viewer in society, and feature in-depth analysis and contextual interpretation of works from a select number of world cultures, regions, and stylistic traditions. Fall, Spring.

IAART 120 DRAWING I
The practice of representational drawing emphasizing linear and form description with drawing media. Develops skills for all students, including Art majors. Not open to students who have completed ART 125. May be repeated for credit with permission of instructor. Fall, Spring.

IAART 207 CERAMICS AND CULTURE
Through projects, demonstrations, and visual media (slides, videos, etc.), students will investigate differing methods of working with clay such as hand-building, wheel-throwing, and surface techniques. Students will research ceramic art in its global socio-historical contexts. For non-Art majors only. Annually.

IAART 300 COLOR DESIGN AND SITE-SPECIFIC PAINTING
Explores the language of color and two-dimensional design, and surveys the history of painted murals and other wall ornamentation. Students complete a site-specific mural on campus. For non-Art majors only. Prerequisites: 24 credits in ISP, including ITW 101 and IQL 101. Annually.

ART 101 FOUNDATIONS OF DESIGN
Study of primary visual design concepts through series of lectures and projects that explore two- and three-dimensional design, and the language of color. Emphasis is on the interaction of these elements in relation to composition and the development of visual literacy. Not open to students who have completed IAART 100. Fall, Spring.

ART 111 INTRODUCTION TO ART HISTORY
General survey of the history of art and architecture from the ancient to modern periods. The course will explore the roles of the artist, art patron, and viewer in society, and feature in-depth analysis and contextual interpretation of works from a select number of world cultures, regions, and stylistic traditions. For Art majors only. Not open to students who have completed IAART 110. Fall, Spring.

ART 125 DRAWING I
The practice of representational drawing emphasizing linear and form description with drawing media. Develops skills for all students, including Art majors. May be repeated for credit with permission of instructor. For Art majors only. Fall, Spring.
ART 151 TECHNOLOGY WORKSHOP
2 credits
This course introduces the Macintosh computer and its role in the design and production of digital art and graphic design. Emphasis is on efficient digital workflow procedures, networking principles, file management, and font organization. Students will become acquainted with software packages, including Adobe Photoshop, Illustrator, and InDesign. Prerequisites: IAART 100, ART 101, IAART 120, or ART 125. Fall, Spring.

ART 208 CERAMICS I
Design and construction of wheel and hand-built pottery, including the preparation of glazes and the process of firing. May be repeated for credit with permission of instructor. Fall, Spring.

ART 211 ANCIENT ART
The history of Western art from Paleolithic cave paintings through Roman Imperial architecture. Prerequisite: ART 111 or IAART 110. Spring.

ART 212 MEDIEVAL ART
The history of Western art from early Christian catacomb paintings through Gothic cathedral architecture. Prerequisite: ART 111 or IAART 110. Fall.

ART 213 RENAISSANCE ART
The history of art and architecture in Europe with emphasis on Italy, Germany, and the Lowlands from the late Middle Ages through the mid-16th century (1300-1550 CE). Prerequisite: ART 111 or IAART 110. Spring.

ART 214 MODERN ART
The history of art in Europe and North America from the mid-19th through the mid-20th century with an emphasis on stylistic innovation and the socio-cultural context of the visual arts. Prerequisite: ART 111 or IAART 110. Spring.

ART 224 PHOTOGRAPHY I
A studio investigation of photography and the application of the medium to individual expression. Includes a working knowledge of camera controls, digital manipulation, and inkjet and analog printing. A digital camera with manual controls is required. May be repeated for credit with approval of instructor. Prerequisite: ART 125 or approval of instructor. Fall, Spring.

ART 225 DRAWING II
Advanced studio work in pencil, ink, charcoal, and chalk from still life and figure models. May be repeated for credit with permission of instructor. Prerequisite: ART 125 or IAART 120. Fall, Spring.

ART 226 PAINTING I
An introductory course in oil painting, with emphasis on color, shape, light, and texture as they affect the art of painting. Basic compositions of a representational nature and creative experimentation are encouraged. A technical understanding of the oil painting medium is also presented. Prerequisites: ART 101 or IAART 100 and ART 125 or IAART 120 or permission of instructor. Fall, Spring.

ART 244 SCULPTURE I
A comprehensive exploration in the fundamentals of sculpture using processes such as carving, casting, modeling, assemblage, and welding. Emphasis is on developing standards in sculptural technique and personal expression. Fall, Spring.

ART 250 GRAPHIC DESIGN I
Introduction to graphic design as a problem solving activity that communicates visually. Creative brainstorming techniques, design principles, time-based media, and semiotic theory are introduced. Group and individual critiques help students identify focus and aptitude for graphic design. Prerequisites: ART 151 and two of following: ART 101 or IAART 100, ART 111 or IAART 110, or ART 125 or IAART 120. Fall, Spring.

ART 253 DIGITAL IMAGING
The study of digital photography, including digital camera, software, computer-based printing, or other output media. Artistic, theoretical, and technical aspects will be considered. Topics include mechanics, image manipulation, and preparing digital images for print, web, and other digital media. Prerequisite: ART 250. Fall, Spring.

ART 258 TYPOGRAPHY I
Students study type as graphic form and means of communication. Through related projects, students analyze the history, design, and use of letterforms. Includes study of typographic grids. Prerequisite: ART 250. Fall, Spring.

ART 290 TOPICS IN ART HISTORY
Subjects vary according to current scholarship and events in Art. Emphasis is on topics not usually offered in regular courses of instruction. Prerequisite: ART 111 or IAART 110. May be repeated for credit as topics change.

ART 295 SOPHOMORE STUDIO/EXHIBIT PRACTICE
2 credits
Introduction to concepts, theories, and schools of contemporary visual art over the last 50 years through field trips, guest speakers, readings, discussions, and research paper. Introduction to studio processes, practice, and careers available for contem-
porary artists. Introductory experience documenting work and participation in curatorial methods. Prerequisites: Art major and sophomore status or permission of instructor. *Spring.*

**ART 308 CERAMICS II**
The design and construction of both wheel and hand-built pottery problems in conjunction with the history of pottery. May be repeated for credit with approval of instructor. Prerequisite: ART 208 or permission of instructor. *Spring.*

**ART 324 PHOTOGRAPHY II**
An in-depth studio investigation of digital photography and contemporary practice. Emphasis will be placed on building a professional portfolio of 15 to 20 prints through the use of darkroom printing, negative scanning, digital manipulation, and inkjet printing. May be repeated for credit with permission of instructor. Prerequisite: ART 224. *Fall, Spring.*

**ART 325 DRAWING III**
Special graphic studies involving independent projects and research. Emphasis is on the unique personal attitudes and interests of the student. Prerequisites: ART 125 or IAART 120 and ART 225 or permission of instructor. May be repeated for credit with approval of instructor. *Fall, Spring.*

**ART 326 PAINTING II**
Advanced studio work in painting media. Will explore either figure or landscape subjects. Traditional and contemporary approaches are emphasized. Students are encouraged to explore their own interests regarding the subject. May be repeated for credit as subject matter changes. Prerequisites: ART 225 and ART 226 or permission of instructor. *Fall, Spring.*

**ART 333 PRINTMAKING I**
A survey of techniques and history of printmaking. Investigation of relief, lithography, and intaglio processes. Covers both back-and-white and color printing processes. Further brainstorming, drawing and design skills, and professional printmaking practice will be emphasized. Prerequisites: ART 225 and ART 226 or permission of instructor. *Fall, Spring.*

**ART 334 PRINTMAKING II**
An in-depth investigation on the technical and conceptual aspects of selected printmaking processes. Emphasis will be placed on the development of one or more printmaking mediums: intaglio, lithography, relief, mixed-media, and photo printmaking. May be repeated for credit with approval of instructor. Prerequisite: ART 333. *Spring.*

**ART 344 SCULPTURE II**
A comprehensive investigation of the technical and conceptual aspects of selected processes associated with contemporary sculptural construction. Emphasis is placed on individual creativity and style. May be repeated for credit with approval of instructor. Prerequisite: ART 244. *Spring.*

**ART 350 GRAPHIC DESIGN II**
This course emphasizes the relationship between text and image in creating effective designs and powerful graphic messages. Assignments focus on type hierarchy, composition, computer production skills, client projects, and graphic design history. Prerequisites: ART 250, ART 253, and ART 258. *Fall, Spring.*

**ART 351 HISTORY OF GRAPHIC DESIGN**
Study of cultural prevalence and social significance of graphic design throughout history. Readings, lectures, and projects explore history of the visual message from prehistory through the digital era and the origins of European typography. Discussion of the role of design in printing and the impact of industrial technology upon visual communications. Prerequisite: ART 350. *Fall.*

**ART 352 ELECTRONIC IMAGING**
Students apply computer skills to produce complex computer-generated designs. Students explore text and image manipulation using Illustrator, Photoshop, etc. Service bureau output methods are discussed and applied. Prerequisite: ART 250. *Fall, Spring.*

**ART 354 WEB-BASED MEDIA I**
Web design blends technical skills, creativity, visual communication, and information science. Course emphasizes fundamental web design skills as well as the design principles that characterize exceptional websites. Students will plan, design, and launch a complete website with creative interfaces, strong graphic images, functional site organization, and logical navigation. Prerequisite: ART 253. *Fall, Spring.*

**ART 355 WEB-BASED MEDIA II**
Intermediate study in web design. Emphasis is placed on web page-style formatting, typography, and interactivity. Covers methods in digital communication and visual problem solving through project-based learning processes. The integration of creativity, visual communication, and technical skills will be stressed. Prerequisite: ART 354. *Fall, Spring.*

**ART 356 TIME-BASED MEDIA I**
This project-based course introduces fundamental vocabulary, principles, tools, and techniques of time-based multimedia design. Students learn to design effective interfaces, create motion graphics, work with video and audio, study logical navigation methodologies, and produce interactive multimedia projects. Emphasis is on visual design strategies as well as some programming language. Prerequisite: ART 350. *Fall, Spring.*
ART 358 TYPOGRAPHY II
Advanced investigations into meaning of style and its historic examples in typography. Students develop original typographic styles as a foundation for development of individual design identity. Course projects explore logo and typeface development. Prerequisites: ART 258 and ART 350.

ART 408 CERAMICS III
Advanced study of wheel and hand built pottery problems, including theory and principles of clay bodies, glazes, kiln construction, and firing. Prerequisite: ART 308 or permission of instructor. May be repeated for credit with permission of instructor. Fall.

ART 424 PHOTOGRAPHY III
Advanced and individualized study in photography. Students must be sufficiently proficient in the understanding of art principles and photography techniques to carry their research project to a successful conclusion with the assistance of the instructor and invited critics. Prerequisite: ART 324. Spring.

ART 426 PAINTING III
Advanced and independent study of painting. Students must be sufficiently advanced in the understanding of art to design, initiate, and carry to a successful conclusion their own research with the assistance of the instructor and invited critics. May be repeated for credit with the permission of instructor. Prerequisite: ART 326 or permission of instructor. Spring.

ART 434 PRINTMAKING III
Advanced and individualized study in a specific printmaking media. Students must be sufficiently proficient in the understanding of art principles and printmaking techniques to carry their research project to a successful conclusion with the assistance of the instructor and invited critics. Prerequisite: ART 334. Spring.

ART 444 SCULPTURE III
Advanced and independent study of sculptural materials, concepts, and techniques. Students must be sufficiently advanced in the understanding of conceptual development and sculptural techniques and processes to carry their own research projects to a successful conclusion with the assistance of the instructor and invited critics. Prerequisite: ART 344.

ART 450 GRAPHIC DESIGN III
Advanced study of visual communication through investigating modern graphic design, visual languages, visual problem-solving techniques, and researching conceptual-thinking skills. Concentration is on the integration of expressive forms and their communicative functions. Constructive and deconstructive approaches of design and concepts of sequential graphics are studied. Prerequisite: ART 350. Fall, Spring.

ART 455 TOPICS IN GRAPHIC DESIGN
Topics rotate each semester and include the following: Advanced Topics Time-Based Media, Three-Dimensional Animation, Advertising Design, Pre-Press, Book Design, Magazine Design, Package Design, and Illustration. May be repeated for credit as topics change. Prerequisites: ART 354 and ART 356. Fall, Spring.

ART 459 GRAPHIC DESIGN PORTFOLIO
Required capstone course in Graphic Design Options with focus on producing a professional-quality portfolio of design work. Readings, discussions, critiques, and studio work are aimed at preparing students for their move from college to the professional world and/or advanced design studies. Prerequisite: ART 450. Spring.

ART 490 ADVANCED STUDIO TOPICS
Advanced study and research in a specific studio discipline. Emphasis is placed on individual theoretical development. May be repeated for credit with approval of instructor. Prerequisite: To be determined as topics change or permission of instructor. Fall.

ART 492 ART HISTORY SEMINAR
Advanced study in art history and aesthetics. Subjects vary according to contemporary scholarship. Emphasis is placed on theory rather than historical chronology. May be repeated for credit as topics change. Prerequisite: ART 111 or IAART 110, or permission of instructor. Spring.

ART 495 SENIOR STUDIO/EXHIBIT PRACTICE
2 credits
Topics will include the discussion and criticism of contemporary visual art through gallery visits, guest speakers, readings, and research paper. The course will also focus on the planning and execution of the senior exhibition as well as the development of portfolios and slide and digital disc preparation for graduate school and career opportunities. Prerequisites: Art major and senior status. Spring.

ART 496 BFA SENIOR STUDIO
Independent advanced studio work in preparation for the BFA Senior Exhibition. Individuals will work directly with their BFA advisors to develop a body of work consistent with their BFA option. May be repeated to a total of 8 credits. Prerequisite: Senior BFA standing. Fall, Spring.
ART 497 GRAPHIC DESIGN/STUDIO INTERNSHIP
A seminar and experiential learning opportunity to integrate graphic design and studio theory with practice through on-the-job experience. Seminar meetings provide discussion topics and the sharing of workplace experiences. May be repeated once. Prerequisite: ART 350 or ART 333 or permission of departmental advisor.

ART 498 INDEPENDENT STUDY
1-8 credits
An opportunity for a qualified student to research and study a selected topic in art history, studio art, or graphic design in consultation with a faculty member. May be repeated to a total of 8 credits. Prerequisites: Art major, senior status, and permission of both the instructor and the Art Department chair. Fall, Spring.

Astronomy
INASTR 101 INTRODUCTION TO ASTRONOMY
Quantitative and descriptive view of current knowledge/developments in the field and methods used to acquire/analyze data and draw conclusions. Emphasis is on historical and cultural perspective, modeling, tools of the astronomer, underlying physical principles. Some lab exercises. Topics include stellar astronomy, origin, structure, and evolution of the universe, Earth-Sun system, and planetary origins. Fall, Spring.

INASTR 313 VISIONS OF THE UNIVERSE
An in-depth study of the solar system, stellar evolution, exoplanets, binary and variable stars, black holes, and the effects of dark matter and dark energy on the evolution of the universe. Emphasis will be given to historical and cultural influences leading to present-day understanding. Prerequisites: 24 credits in ISP, including IQL 101 and ITW 101. Fall, Spring.

ASTR 298 INDEPENDENT STUDY
1-4 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Prerequisite: Permission of instructor who will supervise the independent study.

Biology
INBIO 101 TOPICS IN BIOLOGY
An exploration of biological issues and methods for nonmajors. Applying basic principles to modern problems, the course may focus on a theme such as evolution and conservation of biodiversity, plants and society, or ecology and environmental issues. Can be repeated for elective credit but not ISP credit as topics change. Fall, Spring.

INBIO 104 LAB BIOLOGY TOPICS
An integrated lecture-lab course for nonmajors that explores biological topics through hands-on investigative activities. Will focus on a theme, such as marine biology or ecology. Can be repeated for elective credit but not ISP credit as topics change. Will satisfy the lab science requirement for education majors. Fall, Spring.

INBIO 300 ADVANCED TOPICS IN BIOLOGY
Topics in the biological sciences such as genetics, health, ecology, and others will be explored at an in-depth level. Socially relevant and ethical issues such as AIDS, genetic engineering, embryo research, environmental crises and other issues will be emphasized. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Fall, Spring.

BIO 110 MOLECULES AND CELLS
Introduction to the life processes from the molecular to the physiological level using an integrated lecture and lab experience. Topics include the chemistry of macromolecules, cell structure and function, cellular respiration, photosynthesis, and gene expression. Use of experimental inquiry to integrate course content into a physiological context. Fall.

BIO 111 EVOLUTION
An integrated lecture-lab experience that introduces the basic principles of heredity, evolution, and systematics. Students will investigate variation within and among species, evolutionary patterns, processes, and innovations, evidences of evolutionary change, and social controversies surrounding this concept. Lab and field projects include experience with scientific method and communication. Spring.

BIO 210 ECOLOGY
This integrated lecture-lab course explores the basic concepts and mechanisms that explain the abundance and distribution of organisms at the individual, population, community, and ecosystem levels. Field and lab exercise emphasize the basics of sampling and experimental design, hypothesis formation, spreadsheet use, statistics, data presentation, and scientific proposal writing. Prerequisite: BIO 111. Fall.
BIO 211 GENETICS
An integrated lecture-lab treatment of transmission, chromosomal, and population genetics; gene mapping, genetic interactions, and mutations; and historical and social aspects of genetics. Assignments emphasize quantitative analysis and the use of experimental and statistical hypotheses. Lab activities promote familiarity with model organisms and the execution and presentation of genetic experiments. Prerequisites: MATH 141, BIO 110, and BIO 111. Spring.

BIO 212 CELLS AND PHYSIOLOGY
An integrated lecture-lab experience using animal, microbial, and plant models to introduce fundamentals of physiology and cell biology. Topics include the cell cycle, apoptosis, motility and locomotion, the endocrine system and cell signaling, the nervous system and neuronal function, and animal metamorphoses. Prerequisite: BIO 110 and BIO 111. Spring.

BIO 230 HUMAN ANATOMY AND PHYSIOLOGY I
A lecture-lab experience covering the structure and function of the human body for students in physical education and allied health programs. Body organization and terminology, basic chemistry, the cell, histology, integumentary, skeletal, muscular, sensory, central, and somatic nervous systems. Prerequisite: INCHEM 100, INCHEM 103, or INCHEM 111, depending on the requirements of a student's major. Spring.

BIO 232 HUMAN ANATOMY AND PHYSIOLOGY II
Continuation of BIO 230. A lecture-lab experience covering the structure and function of the endocrine, cardiovascular, immune, respiratory, digestive, urinary, reproductive, and autonomic nervous systems, and consideration of metabolism, nutrition, heredity, and regulation of temperature, fluid, electrolytes, and acid-base balance. Prerequisite: BIO 230. Fall.

BIO 240 CELL AND MICROBIAL BIOLOGY
Introduction to cell and microbial biology. Topics include basic biological chemistry, microbial cell structure and function, and microbial physiology and genetics. Experimental inquiry into areas of food microbiology, including food production, food spoilage, and food-borne diseases, will integrate course content into the health science context. Prerequisites: Students must be health science majors in their sophomore year and have taken or be enrolled in HLSC 215. A background in basic chemistry is also recommended. Spring.

BIO 290 SPECIAL TOPICS
1-4 credits
Exploration and analysis of major topics of biology, such as human genetics, algae and fungi, marine biology, freshwater ecology, and biological aspects of sexual reproduction. Prerequisite: permission of instructor.

BIO 294 COOPERATIVE EDUCATION
1-6 credits
Introductory work-learning experience related to career interests for which compensation may be received. Positions arranged by students with sponsorship, approval, and evaluation by full-time faculty. Elective credit only (normally 20 hours per credit) to maximum of 12 credits per degree program. Prerequisites: 24 total credits earned, 2.0 cumulative GPA, and permission of instructor. Graded Pass/Fail.

BIO 298 INDEPENDENT STUDY
1-6 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Consent required of the instructor, who will supervise the independent study. May be repeated to a total of 6 credits. Fall, Spring.

BIO 333 INVERTEBRATE ZOOLOGY
An integrated lecture-lab course focusing on invertebrate anatomy, physiology, behavior, development, ecology, natural history, evolution, and systematics. Field trips may be required. Prerequisites: BIO 210, BIO 211, and BIO 212. Occasionally.

BIO 334 VERTEBRATE ZOOLOGY
Integrated lecture, laboratory, and field course focusing on vertebrate anatomy, physiology, behavior, ecology, natural history, evolution, systematics, and conservation. Students will become acquainted with local vertebrate communities and with primary research literature and research methods. Field trips may be required. Prerequisites: BIO 210, BIO 211, and BIO 212. Occasionally.

BIO 335 ORNITHOLOGY
Integrated lecture, lab and field activities introduce important features of avian anatomy, physiology, behavior, life histories, breeding, ecology, conservation, evolution, and systematics. Students will gain experience in ornithological research and will practice species identification and field observation and reporting. Field trips may be required. Prerequisites: BIO 210, BIO 211, and BIO 212. Occasionally.

BIO 343 ECOSYSTEM ECOLOGY
This integrated lecture-lab course focuses on the controls and dynamics of ecosystem function and community structure. Some of these fundamental concepts are discussed in the context of human-caused environmental problems. In guided research projects students will learn and apply state-of-the-art methodologies and further develop their skills in scientific investigation. Prerequisites: BIO 210, BIO 211, BIO 212 or ENST 220, ENST 240, and BIO 210. Occasionally.
BIO 345 ANIMAL BEHAVIOR
An integrated lecture-lab course that examines how interactions between genes, physiology, development, and the environment determine animal behavior; the adaptive value of behavior; and how behavior has changed over evolutionary time. This course will also involve exercises designed to instruct students in the process of conducting independent research in animal behavior. Prerequisites: BIO 210, BIO 211, and BIO 212. Occasionally.

BIO 363 PLANT BIOLOGY
A lecture and laboratory course emphasizing the fundamental principles in plant biology, including systematics and evolution, anatomy and morphology, physiology, biotechnology, ecology, conservation biology, and ethnobotany. Lab and field projects will provide first-hand experience with organisms, the process of scientific inquiry, and scientific writing skills. Prerequisites: BIO 210, BIO 211, and BIO 212. Occasionally.

BIO 365 PLANT EVOLUTION
A lecture-lab course integrating the evolution, phylogenetics, and taxonomy of green plants. Laboratory activities emphasize the identification of representative green plant groups in New England and phylogeny reconstruction based upon molecular and morphological data. Occasional field trips. Prerequisites: BIO 210, BIO 211, and BIO 212. Occasionally.

BIO 367 MICROBIAL DIVERSITY
An introduction to the microbial world emphasizing biological diversity. Topics include fundamentals of microbial cell biology, physiology, metabolism, genetics, evolution, classification and ecology. Laboratory experience emphasizes a research perspective and includes isolation, culture, enumeration, characterization and classification of microbes found in the environment. Prerequisites: BIO 210, BIO 211, and BIO 212. Occasionally.

BIO 373 NEUROETHOLOGY
An ethological approach to the molecular, cellular and circuit-level interactions governing the function of the nervous system. Model ethological systems are used to investigate such topics as membrane biophysics, sensorimotor processing, synaptic integration, neuroendocrinology and learning and memory. Prerequisites: BIO 210, 211, and 212. 4 credits. Fall.

BIO 375 BIOCHEMISTRY
An integrated lecture-lab experience exploring the relationship between structure and function of macromolecules and other biologically active compounds to metabolism and energy utilization of the cell. Practical experiences will introduce students to methodologies, analytical techniques, and data analyses associated with biochemical research. Prerequisites: BIO 210, BIO 211, BIO 212, CHEM 221, and CHEM 222. Fall.

BIO 376 MOLECULAR BIOLOGY
An integrated lecture-lab experience covering the structure and organization of DNA; DNA replication, repair, and modification; transcription and RNA processing; protein biosynthesis; evolutionary and posttranscriptional control mechanisms, using examples from prokaryotes, eukaryotes, and viruses; and genomics and bioinformatics. Experimentation in modern recombinant DNA techniques. Prerequisites: BIO 210, BIO 211, and BIO 212. Occasionally.

BIO 377 IMMUNOLOGY
Integrated lecture-lab experience covering the cellular and molecular basis of vertebrate adaptive immune response. Topics include structures and cells of the immune system, antibody formation and diversity; role of immune system in health and disease, and evolution of adaptive immunity. Applied immunology and disorders of immunity will also be covered. Prerequisites: BIO 210, BIO 211, and BIO 212. Occasionally.

BIO 378 DEVELOPMENTAL BIOLOGY
An integrated lecture-lab course examining fundamental developmental phenomena, such as the differentiation and patterning of tissues and organs. Classic experiments in the field using a variety of model organisms will be discussed, and students will complete original laboratory research projects investigating the genetic basis of animal development. Prerequisites: BIO 210, BIO 211, and BIO 212. Occasionally.

BIO 379 COMPARATIVE ANIMAL PHYSIOLOGY
An integrated lecture-lab experience that investigates how animals function in their environment through the comparison of different strategies for solving fundamental physiological problems, including those of gas exchange, food acquisition and digestion, maintenance of water and ion balance, and reproduction. Prerequisites: BIO 210, BIO 211, and BIO 212. Occasionally.

BIO 490 ADVANCED SPECIAL TOPICS
1-4 credits
Exploration and analysis of major topics of Biology, such as microtechnique, vertebrate and invertebrate zoology, plant physiology, algae, and biological aspects of sexual reproduction. Prerequisite: Permission of instructor.

BIO 494 ADVANCED COOPERATIVE EDUCATION
1-6 credits
Sequential work-learning experience for which compensation may be received. Positions arranged by students with sponsorship, approval, and evaluation by full-time faculty. Elective credit (normally 120 hours per credit) to a maximum of 12 credits per degree program. Prerequisites: BIO 294, 2.0 cumulative GPA, declaration of major, and permission of instructor. May be repeated for credit. Graded Pass/Fail.
**BIO 495 SENIOR SEMINAR**
Within the context of an overarching biological theme, students integrate and advance their experience and knowledge. Students will recognize their important roles as scientists in their communities and further enhance their research, critical thinking, and oral and written communication skills. This course prepares students for professional careers or postgraduate opportunities. Prerequisite: Permission of instructor. *Fall.*

**BIO 498 INDEPENDENT STUDY**
1–6 credits
Advanced independent study related to experimental aspects of various fields of biology. The student is required to initiate a scholarly project and to submit a written progress report. One-hour conference. Prerequisites: Two advanced courses in biology. May be repeated as desired.

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**Chemistry**

**INCHEM 100 INTRODUCTION TO CHEMISTRY**
An introductory course providing a survey of general chemical principles and their application to current environmental and social issues. Topics include atomic and molecular structure, chemical bonding, energy, reaction chemistry, solutions, and nuclear power. (Not open toward a major program in biology, chemistry, geology, or chemistry/physics.) *Fall, Spring.*

**INCHEM 103 FUNDAMENTALS OF CHEMISTRY**
Lecture-lab course providing a survey of general chemical principles. Topics include matter, energy, atomic and molecular structure, bonding, reaction chemistry, and radioactivity. Knowledge of algebra, exponentials, and logarithms is expected. Three-hour lecture, two-hour laboratory. (Not open toward a major program in biology, chemistry, geology, or chemistry/physics.) *Fall, Spring.*

**INCHEM 111 GENERAL CHEMISTRY I**
The first course in a one-year sequence covering fundamental principles and concepts, including stoichiometry, atomic and molecular structure, bonding, periodicity, gases, and thermochemistry. Previous chemistry recommended. For students who plan to take further chemistry courses. Knowledge of algebra, exponentials and logarithms is expected. Three-hour lecture, two-hour laboratory. *Fall.*

**INCHEM 201 FORENSIC SCIENCE**
Forensic science is the interdisciplinary application of science to law. The course will explore the forensic aspects of famous trials, scientific advances, and media coverage. Using a case study approach, students will learn forensic techniques, which will ultimately be applied to the production or analysis of mystery fiction. Prerequisites: ITW 101 and IQL 101. *Fall, Spring.*

**CHEM 112 GENERAL CHEMISTRY II**
The second course in a one-year sequence covering solids and liquids, solutions, kinetics, chemical equilibria, acid-base equilibria, electrochemistry, nuclear chemistry, and qualitative and quantitative analysis. For students who plan to take further chemistry courses. Three-hour lecture, two-hour laboratory. Prerequisite: INCHEM 111 or permission of instructor. *Spring.*

**CHEM 220 FUNDAMENTAL ORGANIC CHEMISTRY**
Fundamental introduction to the functional aspects of organic compounds, with emphasis on the biochemical relevance of structural and chemical properties. Designed for those whose one semester of organic chemistry is sufficient. Three-hour lecture, three-hour laboratory. Prerequisite: INCHM 103 or CHEM 112 or permission of instructor. *Spring.*

**CHEM 221 ORGANIC CHEMISTRY I**
The first of a two-course sequence in organic chemistry, emphasizing modern concepts and problem-solving in structure, synthesis and mechanism, based on a functional group approach. Theoretical and practical aspects of modern spectroscopy supports its use in the laboratory course. Three-hour lecture, three-hour laboratory. Prerequisite: Grades C or higher in INCHEM 111 and CHEM 112 or permission of instructor. *Fall.*

**CHEM 222 ORGANIC CHEMISTRY II**
The second of a two-course sequence in organic chemistry, emphasizing modern concepts and problem-solving in structure and synthesis and mechanism, based on a functional group approach. Theoretical and practical aspects of modern spectroscopy supports its use in the laboratory course. Three-hour lecture, three-hour laboratory. Prerequisite: Grade C or higher in CHEM 221 or permission of instructor. *Spring.*

**CHEM 251 QUANTITATIVE ANALYSIS**
Basic principles of quantitative chemical analysis, including solution stoichiometry, statistics, acid-base equilibria, and calibration methods. Topics include chemical equilibria, titrations, electrochemistry, and spectroscopy. Three-hour lecture, four-hour laboratory. Prerequisite: Grade C or higher in CHEM 112 or permission of instructor. *Fall.*
CHEM 294 COOPERATIVE EDUCATION  
1-4 credits  
Introductory work-learning experience related to career interests for which compensation may be received. Positions arranged by students with sponsorship, approval and evaluation by full-time faculty. Elective credit only (normally 40 hours per credit) for a total of 8 credits per degree program. Prerequisites: 24 total credits earned, 2.0 cumulative GPA, and permission of instructor. Graded Pass/Fail. Fall, Spring.

CHEM 298 INDEPENDENT STUDY  
1-4 credits  
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Consent required of the instructor who will supervise the independent study. May be repeated for a total of 4 credits.

CHEM 321 ORGANIC CHEMISTRY III  
A continuation of modern methods of organic synthesis with a focus on reaction mechanisms, carbon-carbon bond-forming reactions, and approaches to the synthesis of complex organic molecules. Prerequisite: CHEM 222 or permission of instructor. Spring, alternate years.

CHEM 333 MEDICINAL CHEMISTRY  
Where do drugs come from? How do they work? These questions are addressed from an organic chemical perspective. Topics covered include the action and synthesis of antimicrobials, heart drugs, hormones, and others. Prerequisites: CHEM 222 or permission of instructor. Spring, odd years.

CHEM 341 PHYSICAL CHEMISTRY I  
Introduction to quantum chemistry and its applications to atomic and molecular electronic structure and spectroscopy. Three-hour lecture, four-hour laboratory. Prerequisites: MATH 141, MATH 151, and MATH 152, INPHYS 141 and PHYS 142, and CHEM 112, or permission of instructor. CHEM 251 and MATH 251 are desirable, but not required. Fall.

CHEM 342 PHYSICAL CHEMISTRY II  
Properties of gases, liquids, solids, and solutions. Thermodynamics, chemical and phase equilibria, conductance, electrical potentials, and kinetics. Three-hour lecture, four-hour laboratory. Prerequisites: MATH 141, MATH 151, and MATH 152, INPHYS 141 and PHYS 142, CHEM 251 or permission of instructor. MATH 251 is desirable, but not required. Spring.

CHEM 363 INORGANIC CHEMISTRY  
An introduction to modern inorganic chemistry, including a description of transition-metal complexes and their role as catalysts, a discussion of structure and bonding in cluster compounds, and a survey of the reactivity of selected elements of the main group. Three-hour lecture, three-hour laboratory. Prerequisites: CHEM 221 and CHEM 222, CHEM 341 or CHEM 342, or permission of instructor. Spring.

CHEM 365 ORGANOMETALLICS  
This course introduces the organometallic chemistry of the transition metals and main group elements with emphasis on common structural features and basic reaction types. The role of organometallic complexes in catalysis is also explored. Prerequisite: CHEM 222 or permission of instructor. Spring, odd years.

CHEM 373 POLYMER CHEMISTRY  
Introduction to polymeric materials and polymer chemistry. Includes methods of polymerization, polymer characterization, physical and chemical properties of polymers, test methodologies, and uses of various commercially important polymeric materials. Prerequisite: CHEM 222 or permission of instructor. Spring, odd years.

CHEM 375 BIOCHEMISTRY  
Integrated lecture-lab experiences exploring the relationship between structure and function of macromolecules and other biologically active compounds to metabolism and energy utilization of the cell. Practical experiences will introduce students to methodologies, analytical techniques, and data analyses associated with biochemical research. Prerequisites: CHEM 221, CHEM 222, and BIO 110 or permission of instructor. Course also listed as BIO 375. Fall.

CHEM 421 ADVANCED SYNTHETIC CHEMISTRY  
An advanced, project-oriented laboratory focusing on multistep inorganic and organic synthesis. Prerequisites: Grade C or higher in CHEM 222 and CHEM 363 or permission of the instructor. Spring.

CHEM 454 INSTRUMENTAL ANALYSIS  
Theory and practice of current methods of analysis. Methods include spectroscopy (UV-Visible, IR, and atomic absorption), chromatography (gas, liquid, and ion), NMR, and coupled instrumentation such as the GC-Mass spectrometer. Three-hour lecture, four-hour laboratory. Prerequisites: CHEM 221, CHEM 222, CHEM 341, and CHEM 342 or permission of instructor. Spring.

CHEM 461 X-RAY CRYSTALLOGRAPHY  
Principles of X-ray crystallography as applied to molecular structure determination. Introductory and advanced methods for X-ray structure analysis, including computational chemistry modeling and database retrieval practice. Three-hour lecture, two-hour laboratory. Prerequisites: CHEM 112, and CHEM 220 or CHEM 221, or permission of instructor. Spring, occasionally.
CHEM 481 LABORATORY TEACHING PRACTICUM  
2 credits  
Teaching of a college chemistry laboratory under the guidance of a mentor. Students participate in the preparation, instruction, and evaluation necessary for effective teaching in an experimental laboratory setting. Prerequisite: Permission of instructor. Fall, Spring.

CHEM 490 ADVANCED SPECIAL TOPICS  
2-4 credits  
Advanced topics in chemistry such as environmental chemistry, forensic chemistry, radiological health physics, solid-state chemistry, bio-organic chemistry, or others. May be repeated for credit as topics change. Prerequisites: CHEM 222, one chemistry at the 300 level or higher, and permission of instructor. Occasionally.

CHEM 494 ADVANCED COOPERATIVE EDUCATION  
1-4 credits  
Sequential work-learning experience for which compensation may be received. Positions arranged by students with sponsorship, approval, and evaluation by full-time faculty. Elective credit (normally 40 hours per credit) for a total of 8 credits per degree program. Prerequisites: CHEM 294, 2.0 cumulative GPA, declaration of major, and permission of instructor. May be repeated for credit. Graded Pass/Fail. Fall, Spring.

CHEM 498 INDEPENDENT STUDY  
1-4 credits  
Advanced study of various fields of chemistry through individual reading, writing, or laboratory work. Requires a research project conducted under the supervision of chemistry faculty and a written report. One-hour conference. May be repeated for a total of 4 credits.

Communication  
IHCOMM 171 PUBLIC SPEAKING  
Through experience in a variety of speaking situations, students gain self-confidence in the organization of thought and self-expression. Fall, Spring.

IHCOMM 270 HOW TO WIN AN ARGUMENT  
Through reading and writing, students explore arguments presented in a variety of texts. Arguments from credibility, reason, emotion, and values will be understood prior to analysis of them in both print and electronic media. Fall, Spring.

COMM 175 INTRODUCTION TO COMMUNICATION STUDIES  
A survey of the basic principles and theories of communication applied to the following contexts: interpersonal, group, organizational, public, mass media, and online communication. Prerequisite: Not open to juniors and seniors except by permission. Fall, Spring.

COMM 220 ETHICS IN COMMUNICATION  
4 credits  
Examines ethical values and arguments as they apply to interpersonal, small group, public, organizational, and intercultural contexts. Students develop methods of ethical analysis through discussion, lecture, experiential activities, observation, case studies, and research papers. Prerequisites: COMM 175 or permission of instructor. Fall.

COMM 235 SPORTS BROADCASTING  
4 credits  
An introductory course in sports broadcasting. Students will learn the fundamentals of directing, producing, and on-air performance for both a weekly sports magazine program and sports programs covering live sports events, including, but not limited to, KSC soccer, basketball, and lacrosse. Occasionally.

COMM 250 CHILDREN AND THE MEDIA  
The relationship of children and their development to their use of the mass media, including television, radio, magazines, and the Internet. This course is a reading and writing course. May be used to fulfill the IHJRN 267 requirement for the journalism major and the elective requirement for the communication major. Prerequisite: JRN 100. Occasionally.

COMM 275 INTERPERSONAL COMMUNICATION  
Advanced study and application of the principles of interpersonal communication: communication ethics, family relationships, problem-solving, nonverbal communication, and small-group communication. Prerequisite: COMM 175 or permission of instructor. Spring.

COMM 278 GROUP INTERACTION  
Group dynamics, interaction, problem solving, and leadership. Case study, analysis, and research are required. Fall.
COMM 280 RADIO TRAINING
2 credits
Required for all on-air WKNH members. This course teaches the basics of board operation, FCC regulation and station policy. Fall, Spring.

COMM 290 SPECIAL TOPICS
An exploration of areas not covered by the regular curriculum. Content depends on available faculty. May be repeated for credit.

COMM 294 COOPERATIVE EDUCATION
2 credits
Introductory work-learning experience related to career interests for which compensation may be received. Positions arranged by students with sponsorship, approval, and evaluation by full-time faculty. Elective credit only (normally 80 hours for 2 credits). Prerequisites: 24 total credits earned, 2.0 cumulative GPA, and permission of instructor. Graded Pass/Fail.

COMM 298 INDEPENDENT STUDY
2-8 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Consent required of the instructor who will supervise the independent study. May be repeated for a total of 8 credits.

COMM 371 SPEECH WRITING
Advanced study of the theory and practice of public speaking, with a focus on the crafting of persuasive messages. Prerequisites: IHCOMM 171 and junior standing or permission of instructor. Spring.

COMM 372 INTERCULTURAL COMMUNICATION
This course applies interpersonal and intercultural theories to the understanding of intercultural communication and the fostering of intercultural communication competence. Prerequisite: COMM 175. Spring.

COMM 375 BUSINESS AND PROFESSIONAL COMMUNICATION
A study of effective principles and techniques of writing and speaking in organizational settings. Through research, writing, and oral presentations students will learn techniques for successful communication with internal and external audiences. Topics include business research for report generation, correspondence, resume preparation, employment application, and performance interviews. Prerequisites: IHCOMM 171 and COMM 175. Spring, odd years.

COMM 376 THEORY OF COMMUNICATION AND RHETORIC
A survey of the major theories and methodologies of communication and rhetoric and their application to the analysis and appraisal of discourse. Prerequisite: COMM 175. Fall, Spring.

COMM 378 PERSUASION
Contemporary approaches to persuasion theory and an examination of past and current persuasive efforts. Research, writing, and speaking required. Prerequisites: Two courses in communication. Fall, alternate years.

COMM 379 INTERNSHIP
2-8 credits
A supervised, contracted experience applying communication theory and skills in a professional setting. Internships are arranged by the student with approval from the communication faculty. On-site and faculty supervision are required. Prerequisites: 12 credits in communication and permission of instructor.

COMM 380 ANALYSIS OF ORGANIZATIONS
The course explores communication in organizations and their culture using theoretical frameworks and hands-on empirical research methods. Additionally, the course focuses on problem solving respecting organizational values and beliefs. Prerequisite: COMM 375 or permission of instructor. Fall.

COMM 473 RHETORICAL CRITICISM
Traditional, dramatistic, fantasy theme, narrative, and cultural approaches to rhetorical criticism are examined. Research, writing, and speaking are required. Prerequisite: COMM 175 or permission of instructor. Fall.

COMM 478 RHETORICAL THEORY
Classical, medieval, Renaissance, Enlightenment, 19th-century, modern, and postmodern approaches to rhetorical theory are examined. Research, writing, and speaking are required. Prerequisites: COMM 175, COMM 376, or permission of instructor. Fall, alternate years.

COMM 479 SENIOR PROJECT
An individual research or application project for communication majors. Students will design and implement a project that will complete their study of communication. Prerequisites: COMM 175, COMM 376, and permission of instructor. Fall, Spring.
COMM 490 ADVANCED SPECIAL TOPICS
An exploration of areas not covered by the regular curriculum. Content depends on available faculty. May be repeated for credit.

COMM 495 SEMINAR
An intensive study of a particular communication theme or topic. May be repeated for credit as topics change. Prerequisites: A COMM course related to seminar topic and junior standing or permission of instructor.

COMM 498 INDEPENDENT STUDY
2-8 credits
An intensive study of an issue, a problem, or a topic related to communication. May be repeated for a total of 8 credits. Prerequisites: junior standing and permission of instructor.

Computer Science

CS101 INTRODUCTION TO COMPUTER INFORMATION PROCESSING
An introductory course in the academic use of computers. Includes Internet, e-mail, the Information Highway, information resources, components for student computer systems, the campus-computing environment, computer operation fundamentals, computer ethics and the law, and selective software applications. Fall, Spring, Summer.

CS110 COMPUTER WORKSHOP
1 credit
Computer software applications. May be retaken with permission of instructor.

CS 140 COMPUTER PROGRAMMING I
Introduction to problem-solving methods and algorithm development using the latest programming language. Emphasizes good programming techniques for designing, coding, debugging, and documenting programs. Fall, Spring, Summer.

CS 150 WEB PAGE CONSTRUCTION
Preliminary course in web page design using HTML and other web page development software. Course covers looking critically at the design of web pages, learning the basics of HTML, and how programming can aid in the creation of HTML web pages. Additional topics may be covered. Fall, Spring.

CS 160 MICROCOMPUTER SYSTEMS
A course in the general interaction of a microcomputer system: hardware, operating system, and application software. For people who will purchase, support, or maintain PC systems. Content will reflect current hardware, software, and Internet standards. Fall, Spring.

CS 185 COMPUTER PROGRAMMING II
Extends the CS 140 concepts to include arrays, methods, sorting, searching, dynamic memory, objects, and self-referencing objects. Prerequisite: Grade C or higher in CS 140. Fall, Spring.

CS 205 USER INTERFACE AND VISUAL PROGRAMMING
An introduction to various principles, theories, and approaches to user interface design and implementation. Includes a study of the factors that affect user interface design, user acceptance factors, and mastery of at least one Rapid Application Development (RAD) tool. Prerequisite: Grade C or higher in CS 185. Fall.

CS 210 MIDRANGE SYSTEMS
An introduction to the basic architecture, facilities, and tools of the eServer i5 Midrange Computer. Covers CL syntax, spool file concepts, SEU, PDM, SDA, Query/400, DFU, DDS, CPYF, database concepts including physical and logical files, Operations Navigator, Websphere Development client, and basic CL programming. Prerequisite: Grade of C or higher in CS 185 or permission of instructor. Fall.

CS 215 UNIX
Covers the basic working environment of a Unix system. Introduces commonly required operations performed, including listing directory contents, displaying files, basic file management, getting help, sending e-mail, using UNIX tools to search for text strings and files, sort files, set file permissions, and perform other operations. Prerequisite: Grade of C or higher in CS 185 or permission of instructor. Spring.

CS 220 COBOL PROGRAMMING
Introduction to the business-oriented language COBOL. Covers the reading and writing of data manipulation, including search and sort routines; table creation and processing; and processing such as master/transaction file updating. Prerequisite: Grade C or higher in CS 185. Spring, odd years.
CS 225 C++ PROGRAMMING
This course introduces the student to fundamental programming concepts with the C++ programming language. It includes concepts such as sequence, iteration, conditional branching, functions, recursion, function overloading, object-oriented programming, operator overloading, and file processing. It also includes a cursory treatment of fundamental data structures. Prerequisite: Grade C or higher in CS 185. Spring.

CS 230 RPG PROGRAMMING
Covers concepts and programming techniques of RPG IV. Covers file, data, and calculation specifications, command structure, looping constructs, subroutines, physical and logical file creation, file access, record manipulation, interactive applications and file maintenance. Prerequisite: Grade of C or higher in CS 185. Fall, alternate years.

CS 265 COMPUTER ARCHITECTURE
Introduces the student to the computer as an electronic device. It includes digital logic as well as design of critical internal components of the computer system. May also include topics such as hardware compilation, microcode, content-addressable memories, and parallel architectures. Prerequisites: Grade C or higher in CS 185. Fall.

CS 280 DATA STRUCTURES AND ALGORITHMS
This course guides the student through an elementary study of data structures and algorithms. Additionally several fundamental ideas for the organization and manipulation of data are presented. Programming for efficiency is emphasized. The programming language used will be Java. However, principles will be covered in a manner that facilitates implementation in any programming language. Prerequisite: Grade C or higher in CS 185. Fall, Spring.

CS 290 SPECIAL TOPICS
1-4 credits
Elementary topics as determined by changes taking place in the discipline. Repeatable as topics change. Prerequisite: Minimum of 8 credits in CS. Fall, Spring, Summer.

CS 293 SUPERVISED FIELD EXPERIENCE
1-2 credits
Allows students to participate in field experience, combining theory with practice. Prerequisites: 16 credits in CS and permission of instructor. Graded Pass/Fail. Fall, Spring.

CS 294 COOPERATIVE EDUCATION
1-4 credits
Introductory work-learning experience related to career interests for which compensation may be received. Positions arranged by students with sponsorship, approval, and evaluation by full-time faculty. Prerequisites: 8 credits in CS and permission of instructor. Graded Pass/Fail. Fall, Spring.

CS 298 INDEPENDENT STUDY
1-4 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Prerequisites: 8 credits in CS and consent of the instructor who will supervise the independent study. Repeatable to a total of 4 credits. A maximum of 4 credits may be applied to the 200-level CS elective requirement.

CS 310 ASSEMBLY LANGUAGE
Introduction to programming at the lowest software level using assembly language. Proper use of registers, basic CPU operations, and the efficient use of low-level system resources are emphasized. Some digital logic concepts may also be introduced. Prerequisites: CS 280. Spring, odd years.

CS 320 OPERATING SYSTEMS DESIGN
Operating systems programming techniques are examined. Areas of concentration are multiprogramming, managing memory, communicating with input/output devices, synchronizing and communicating with processes, managing time, processing various classes of interrupts, and scheduling the processor. Prerequisite: CS 280. Spring, even years.

CS 340 INTERNET PROGRAMMING
The art and science of programming internet applications from a client-side perspective. Topics cover designing interactive web applications, using cascading style sheets, reading and writing database files, as well as usability and design considerations. Current web programming languages will be utilized. Prerequisites: CS 185. Spring.

CS 350 SYSTEMS ANALYSIS AND PROJECT MANAGEMENT
Introduction to fundamentals of systems analysis and design using project management. Discusses the role of the systems analyst with emphasis on oral and written communication with business users and the project team. Emphasizes structured design techniques. Requires detailed systems development case study using project management techniques. Prerequisites: CS 280. Spring.

CS 355 TELECOMMUNICATIONS AND COMPUTER NETWORKS
Introduces the concepts, principles, and rudiments of telecommunication systems, focusing on computer networks. Examines the various issues and alternate approaches in the design, implementation, and administration of computer networks. Covers the OSI layers, network protocols, TCP/IP, sub-netting, wireless technology, network security, and network expansion. Prerequisite: CS 280. Spring.
CS 360 DATABASE SYSTEMS
This course covers the theoretical foundation of modern database systems, concentrating on practical use of relational database management systems to model, design and implement business and commercial systems. It includes Structured Query Language (SQL), normalization, and rational algebra. It does not use any specific language. Prerequisite: Grade C or higher in CS 280. Fall.

CS 367 COMMAND LANGUAGE PROGRAMMING
Prepares students with an understanding of Command Language (CL) programming message handling, and debugging techniques. Students also introduced to advanced techniques such as OPNQQRVF creating custom commands and applying contextual help to those unique commands. Prerequisite: CS 210. Spring. even years.

CS 375 SOFTWARE ENGINEERING
Introduces the fundamental concepts and principles of software planning, construction, implementation and management. Students become intimately familiar with the software development life cycle, the various activities that occur, and methodologies for designing, developing, and maintaining effective computer software. Prerequisite: CS 280. Fall.

CS 410 ADVANCED SOFTWARE DEVELOPMENT
The study of advanced programming techniques of timely interest. Topics may include object-oriented techniques, special purpose languages, graphical programming, or advanced design techniques. Emphasizes continued development of problem-solving and programming skills. Prerequisites: CS 280. Fall, alternate years.

CS 420 E-COMMERCE DEVELOPMENT
Covers e-business development using both conceptual and hands-on orientations. Includes significant web-page construction using HTML and XML, group case analysis and presentations. Internet exercises involving the exploration and written analysis of various e-Commerce websites. Prerequisites: CS 280. Fall, even years.

CS 430 SURVEY OF PROGRAMMING LANGUAGES
This course guides the student through a comparative study of programming languages, guided by a well-defined set of criteria. It involves an introduction to the fundamentals of programming language design. It also involves a review of different types of programming languages. Prerequisite: CS 280. Spring. odd years.

CS 440 SOFTWARE ENGINEERING PROJECT
Provides the opportunity to apply the principles and skills acquired in earlier courses, and to investigate and design the blueprints for a software engineering project. Software will then be constructed in accordance with its design specifications. Emphasis will be placed on the various activities in the SDLC. Prerequisites: CS 375. Spring. even years.

CS 460 DATA WAREHOUSING AND MINING
Introduces the principles, techniques and approaches to the construction and management of data warehouses and data marts. Includes a discussion of various data warehouse topologies as well as information extraction techniques. Prerequisite: CS 360. Spring. odd years.

CS 462 DBS PROJECT AND ADVANCED SQL
Implementation and management of databases using DB2, DDS, physical/logical files, and advanced SQL in an OS-400 environment. It includes manipulating data to extract required information using database manager software. Topics include database, creating it, loading data, and access, plus relational theory, referential integrity, joining, indexing, triggers, and constraints. Prerequisite: CS 280. Spring.

CS 485 STRATEGIC INFORMATION MANAGEMENT
Introduces the student to advanced topics in computerization of a business enterprise. It includes areas such as role of management, information engineering, data modeling, planning tools, linkage analysis, planning technology impact analysis, business area analysis, critical success factor analysis, goal and problem analysis, and backup/recovery. Prerequisite: 32 credits in CS. Fall.

CS490 ADVANCE SPECIAL TOPICS
1-4 credits
Advanced topics as determined by changes taking place in the discipline. May be repeated as topics change Prerequisite: Minimum of 32 credits in CS. Occasionally.

CS493 ADVANCED SUPERVISED FIELD EXPERIENCE
1-2 credits
Allows students to participate in field experience, combining theory with practice. Prerequisites: 16 credits in CS and permission of instructor. Graded Pass/Fail. Fall, Spring, Summer.

CS494 ADVANCED COOPERATIVE EDUCATION
1-4 credits
Sequential work-learning experience for which compensation may be received. Placements are arranged, supervised, and evaluated by full-time faculty. May be repeated for a total of 4 credits. Prerequisites: 16 credits in CS, and permission of instructor. Graded Pass/Fail. Fall, Spring.
CS 495 SEMINAR
Exploration of current topics in computer science under the direction of CS faculty member. Each student is required to complete a project that applies various skills and principles learned in earlier CS courses, and making a formal presentation on the project at a departmental seminar. Students will also construct an electronic portfolio of their work. Prerequisites: 32 credits in CS. Fall, Spring.

CS 498 INDEPENDENT STUDY
1-4 credits
Individual research into selected topics in computer studies under the direction of a faculty member. Prerequisites: 16 credits in CS and consent of the instructor who will supervise the independent study. May be repeated to a total of 4 credits. A maximum of 4 credits may be applied to the upper-level (300- and 400-level) CS elective requirement. Occasionally.

Criminal Justice

CJS 101 INTRODUCTION TO CRIMINAL JUSTICE STUDIES
An overview of the criminal justice system as it currently operates in its three major components: police, courts, and corrections. A broad-based interdisciplinary perspective is employed to introduce students to the process of criminal justice in the United States. Fall, Spring.

CJS 201 CORRECTIONS
An overview of the correctional process with an emphasis on the social, political, and economic influences upon this process. Topics to be examined include the impact of race, class, and gender on the correctional system; the uses and effectiveness of institutional placements; and intermediate sanctions and community-based programming. Fall.

CJS 290 TOPICS IN CRIMINAL JUSTICE
1-4 credits
Selected topics in Criminal Justice Studies. May be repeated as topics change, however, only a maximum of 4 credits can be used to satisfy the depth requirements of the CJS minor. Prerequisites: Prerequisites vary as topics change. See course listings for details. Occasionally.

CJS 390 STUDIES IN CRIMINAL JUSTICE
1-4 credits
Selected studies in Criminal Justice. May be repeated as topics change, however only a maximum of 4 credits can be used to satisfy the depth requirements of the CJS minor. Prerequisites: Prerequisites vary as topics change. See course listings for details. Occasionally.

CJS 494 COOPERATIVE EDUCATION
Optional work-learning experience for Criminal Justice Studies minors. Introductory work-learning experience related to career interests for which compensation may be received. Placements arranged by students. This experience is supervised, approved, and evaluated by full-time faculty. Elective credit only (normally 120 hours for 4 credits) for a total of 4 credits. Prerequisite: Permission of instructor. Graded Pass/Fail.

Economics

IIECON 310 GAME THEORY
An introduction to game theory and strategic interactions with cases drawn from economics, business, politics, sociology, psychology, international studies, and sports. Topics include prisoner’s dilemma, Nash equilibrium, backward induction, signaling, mixed strategies, cooperative and noncooperative games, bargaining, conventions, “the tragedy of commons,” evolutionary game theory, and behavioral critiques of rationality. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Fall.

IIECON 380 MODERN MIDDLE EAST
This interdisciplinary course provides a broad but detailed overview of the Middle East region with a focus on patterns of economic and social transformation during the last century. The course material draws from the fields of Political Science, Sociology, History, Economics, and Women’s Studies. Prerequisites: 24 credits in ISP, including ITW 101 and IQL 101. Spring.

ISECON 104 INTRODUCTION TO MACROECONOMICS
An introduction to macroeconomic terminology, concepts, and theories using historical context, quantitative tools, graphical analysis, and macroeconomic models. Course concepts are examined in a social and/or political context as appropriate. Fall, Spring.
ISECON 360 HISTORY OF ECONOMIC THOUGHT
Examines the philosophical debates that underlie modern economic models through texts by Adam Smith, Karl Marx, and John Maynard Keynes. Topics such as the relationship between competition and justice, prices and ethics, and free markets vs. government regulation will be explored. Prerequisite: One Integrative Studies course from ISECON, ISPOSC, IHHIST, or IHPHIL. Spring.

ECON 103 INTRODUCTION TO MICROECONOMICS
An introductory course on how individual consumers and firms make decisions in line with their economic objectives. We analyze the workings of supply and demand in the determination of price, resource allocation, income distribution, and economic efficiency. Fall, Spring.

ECON 203 INTERMEDIATE MICROECONOMICS
This course focuses on a rational choice model as the underlying framework for behavior of consumers and firms and their interactions in various market structures. Examination of models requires extensive use of mathematical and graphical analysis. The effects of government policies, market power, and externalities on market efficiency are among the topics. Prerequisite: ECON 103. Fall, Spring.

ECON 204 INTERMEDIATE MACROECONOMICS
Examines macroeconomic concepts and theories using historical context, quantitative tools, graphical analysis, and macroeconomic models. Critically explores competing schools of macroeconomic thought and their relative effectiveness at explaining macroeconomic phenomena. Culminates in construction and manipulation of the Mundell-Fleming open-economy model. Prerequisites: ECON 103 and ISECON 104. Fall.

ECON 290 SPECIAL TOPICS
Economics survey course for nonmajors. Includes topics not covered in other listed courses, including current and historical economic issues. This course may not be used to satisfy requirements for the minor in Economics. May be repeated as topics change.

ECON 298 INDEPENDENT STUDY
1-8 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Consent is required of the instructor who will supervise the independent study. May be repeated for a total of 8 credits.

ECON 325 ECONOMICS OF DISCRIMINATION
Uses economic models to explore topics such as growing wage inequality, changing demand for children, occupational segregation by gender, economic assumptions behind affirmative action, and demand and supply of immigrant labor. Prerequisite: ECON 103 or ISECON 104. Fall.

ECON 340 ENVIRONMENTAL ECONOMICS
Detailed evaluation of policy alternatives for environmental protection with regard to other economic goals. Prerequisite: ECON 103 or ISECON 104. Fall.

ECON 361 ECONOMICS OF PUBLIC POLICY
Topics include the basic problems underlying public revenues and public expenditures, budgetary theory and procedures, tax theory and reform, debt management policy, fiscal policy at both federal and state levels. Prerequisites: ECON 103 or ISECON 104. Spring.

ECON 370 ECONOMICS OF DEVELOPING COUNTRIES
Introduces economic theories, including dependency, structuralism, and neo-liberalism, and applies them to topics such as World Bank and IMF loans, NAFTA, oil dependency, growth of manufacturing in India and China, and environmental implications. Prerequisite: ECON 103 or ISECON 104. Spring, odd years.

ECON 410 MONEY AND BANKING
A survey of direct and indirect finance, the determination of interest rates, asymmetric information, financial crises, and monetary policy. The course integrates economic theory and historical context into an exploration of the economics of money and banking. Competing schools of thought are considered as appropriate. Prerequisites: ISECON 104 and ECON 103.

ECON 420 ECONOMETRICS
The theory of economic model building, both determinate and stochastic, together with the essential analytical methods. Where possible, these models are used to analyze current real-world economic conditions. Prerequisites: ECON 103, ISECON 104, and MATH 175 or MGT 202 or MATH 141 or PSYC 251. Fall.
ECON 440 INDUSTRIAL ORGANIZATION
Addresses questions of imperfect competition, the effect of market structure on behavior of firms, concentration and monopoly power, cartel formation, anticompetitive practices, and antitrust issues. The course uses game theory to analyze strategic behavior of firms with a focus on case studies from industries in the U.S. economy. Prerequisite: ECON 103 or ISECON 104. Spring, odd years.

ECON 455 U.S. ECONOMIC HISTORY
The development of the U.S. economy from its colonial origins to modern times, including the slave system, ties with Europe, and the subsequent development of industry, banking, and commerce. Prerequisite: ECON 103 or ISECON 104. Occasionally.

ECON 470 INTERNATIONAL TRADE AND FINANCE
Applies advanced economic theory to global trade and finance through theories of comparative advantage, balance of payments accounts, fixed and flexible exchange rates, and currency crises. Prerequisite: ECON 103 or ISECON 104. Spring.

ECON 490 ADVANCED SPECIAL TOPICS
Topics not covered in other listed courses; for example, current and historical economic issues, student group research projects, and student- and faculty-initiated topics. Prerequisites: ECON 103 or ISECON 104, and permission of instructor.

ECON 491 RESEARCH PROJECT
A term project, scheduled for fall semester of senior year, involving original research of a subject approved by the Economics faculty. Prerequisites: ECON 203 and ECON 204. Fall.

ECON 498 INDEPENDENT STUDY
1-8 credits
Individual research on selected topics in economics under direction of a faculty member. Prerequisites: ECON 103 or ISECON 104, and permission of instructor. May be repeated for a total of 8 credits.

Education

IIEDUC 306 WOMEN AND EDUCATION
An exploration of schooling and its relationship to culture and society, focusing on women's role in education as both students and educators. Uses a historical, sociological, and feminist lens in examination of women's struggle for equality in education, with parallels drawn to struggles of other subjects of marginalization. Prerequisites: 24 credits in ISP, including ITW 101 and IQL 101. Spring.

IIEDUC 310 STUDENT EMPOWERMENT AND ACTIVISM
This interdisciplinary course traces roots and growth of student activism on local and national levels. It examines youth empowerment within the United States since 1960 using the disciplines of History and Political Science. Emphasis given to addressing how student activism in previous decades compares to 21st-century American student activism. Prerequisites: 24 credits in ISP, including ITW and IQL. Fall, Spring.

EDUC 100 ISSUES IN EDUCATION
2 credits
Contemporary and historical analysis of public education. Orientation to the teaching profession as a career choice through personal reflection, professional readings, and field experience. Introduction to professional standards through electronic portfolio development. Fall, Spring, Summer.

EDUC 200 SOCIAL CONTEXTS OF EDUCATION
Critical analysis of educational systems within cultural, social, political, and economic contexts. Major issues in education are addressed through a variety of perspectives, including practices for democratizing classrooms and schools, teaching for social justice and equity in a diverse society, multicultural education, and school reform. Admission to Teacher Education required for enrollment. Prerequisite: EDUC 100. Fall, Spring, Summer.

EDUC 203 INTRODUCTION TO MEDITATION
1 credit
Students will experience the basic forms of mindfulness meditation – awareness of breath, body, sounds, thoughts, and feelings – mindfulness while doing yoga, and loving-kindness meditation. Students will experience various informal practices: mindfulness while eating, walking, and conversing, and doing routine activities. A focus on reducing stress is interwoven into the course. Pass/Fail. Cross-listed as HLSC 203.

EDUC 231: CURRICULUM FOR A DIVERSE WORLD
An introduction to the scope and sequence of secondary education curricula. Development of an interdisciplinary unit based on state and national standards. Course will focus on adolescent development, differentiated instruction, and assessment strategies to meet the needs of diverse learners. Prerequisite: EDUC 100. Fall, Spring.
EDUC 290 SPECIAL TOPICS IN EDUCATION
1-4 credits
Study of a selected topic in education. May be repeated as topics change. Prerequisite: Permission of instructor. Occasionally.

EDUC 298 INDEPENDENT STUDY
1-4 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Consent required of the instructor who will supervise the independent study. May be repeated for a total of 8 credits.

EDUC 311 EARLY CHILDHOOD METHODS I: INFANT/TODDLER/PRESCHOOL
8 credits
Study of developmentally appropriate practices using NAEYC standards. Emphasizes curriculum development, diversity, antibias approaches, environmental design, child guidance, observation, assessment, family centered practice, health, safety, and the development of a professional role in childcare settings. Field experience in an infant, a toddler, or preschool classroom at KSC Child Development Center. Prerequisites: Admission to Teacher Education, EDUC 200 and EDSP 202, and MATH 171. Fall, Spring.

EDUC 312 EARLY CHILDHOOD METHODS II: PRIMARY GRADES (K-3)
8 credits
Study of developmentally appropriate practices using NAEYC standards. Emphasizes curriculum development in math, science, language arts, and social studies; classroom design; child guidance; assessment; family involvement; health and safety; and the development of a professional role in the public school-early childhood classroom. Field experience in a public school, primary grades classroom. Prerequisites: EDUC 311. Fall, Spring.

EDUC 321 ELEMENTARY METHODS I: INTEGRATING LITERACY, SOCIAL STUDIES, AND THE ARTS
8 credits
Practical approaches to creating literacy-rich environments in which children can grow and develop as listeners, speakers, readers, and writers. Lesson-planning techniques are introduced, including writing objectives and designing assessments. Curriculum integration is examined through literacy, social studies, and the arts. Supervised field experience included. Prerequisites: Admission to Teacher Education, EDUC 200 and EDSP 202, and MATH 171. Fall, Spring.

EDUC 322 ELEMENTARY METHODS II: INTEGRATING MATH, SCIENCE, AND LITERACY
8 credits
Practical approaches to creating literacy-rich learning environments in which children can develop mathematical and scientific knowledge. Application of lesson and unit planning through extended supervised field experience with emphasis on assessment and impact on student learning. Classroom management skills, including behavioral considerations and techniques, are applied in the elementary classroom. Prerequisite: EDUC 321 and MATH 172. Fall, Spring.

EDUC 331: SECONDARY METHODS I
An introduction to secondary methods of instruction, including designing lesson plans, understanding middle and high school philosophies, and writing standards-based objectives or outcomes. Includes a minimum of 10 hours of fieldwork. Prerequisites: EDUC 231 and admission to Teacher Education. Fall.

EDUC 332: SECONDARY CLASSROOM MANAGEMENT
2 credits
An examination of techniques for positive classroom management, tools for intervention, and strategies for creating a positive classroom environment. Legal issues and responsibilities will be discussed. Corequisite or prerequisite: EDUC 231 and admission to Teacher Education. Fall, Spring.

EDUC 400 STUDENT TEACHING
12 credits
Full-time placement in educational setting(s) appropriate to intended certification. Supervision provided by college supervisor and field-based professional toward mastery of principles, attitudes, and techniques for successful teaching. Graded Pass/Fail. Prerequisite: Permission of Teacher Education Office. Fall, Spring.

EDUC 405 STUDENT TEACHING
6 credits
Full-time placement in educational setting(s) appropriate to intended certification. Supervision provided by college supervisor and field-based professional toward mastery of principles, attitudes, and techniques for successful teaching. Prerequisite: Permission of Teacher Education Office. Graded Pass/Fail. Fall, Spring.
EDUC 410 EARLY CHILDHOOD STUDENT TEACHING SEMINAR
2 credits
Seminar taken during student teaching focuses on current social, legal, and ethical issues affecting early childhood education. Includes reflection on professional identity and culminating portfolio development. Corequisite: Student teaching. Fall, Spring.

EDUC 420 ELED STUDENT TEACHING SEMINAR
2 credits
Seminar taken during student teaching focuses on current social, legal, and ethical issues affecting education. Includes reflection on professional identity and culminating portfolio development. Corequisite: Student teaching. Fall, Spring.

EDUC 431: SECONDARY METHODS II
4 credits
Advanced secondary methods of instruction including standards-based unit plans, current issues, and reflective professional practice. Includes a minimum of 30 hours of fieldwork. Prerequisite: EDUC 331 and 332, and EDSP 333. Fall.

EDUC 432 EDUCATIONAL THEORIES/TRENDS
Development of a Professional Learning Community in order to explore trends and issues in education within their historical context. Prerequisite: EDUC 331. Fall, Spring.

EDUC 490 ADVANCED SPECIAL TOPICS IN EDUCATION
1-4 credits
Study of a selected topic in education at an advanced level. May be repeated as topics change. Prerequisite: Permission of instructor. Occasionally.

EDUC 495 SEMINAR
1-4 credits
Group study of topics in selected area of education. Elective credit only. Prerequisites: Senior status and permission of instructor. Fall, Spring.

EDUC 498 INDEPENDENT STUDY
1-4 credits
Intensive study of an educational problem encountered in a school or community. May be repeated to a total of 8 credits. Prerequisite: Permission of instructor. Fall, Spring.

EDUC 560 INTERNSHIP: TEACHING
12 credits
A clinical experience in which students who are under contract within a school district or agency acquire fuller understanding of the principles, attitudes, and techniques related to a successful teaching career. Prerequisite: Permission of Teacher Education Office. Fall, Spring.

EDUC 565 INTERNSHIP: TEACHING
6 credits
A clinical experience in which students who are under contract within a school district or agency acquire fuller understanding of the principles, attitudes, and techniques related to a successful teaching career. Prerequisite: Permission of Teacher Education Office. Fall, Spring.

EDUC 595 SEMINAR
1-4 credits
Group study of topics in selected area of education. Elective credit only. Prerequisite: Graduate students or seniors with permission of divisional dean. Fall, Spring.

EDUC 601 RESEARCH STRATEGIES IN EDUCATION
Strategies for identifying, developing, analyzing, and evaluating educational interventions. Emphasis is on accessing and evaluating resources for intervention ideas. Introduction to statistical concepts related to assessment and professional ethics. Fall, Spring.

EDUC 602 STUDENTS, FAMILIES, SCHOOLS, AND SOCIETY
2 credits
Cross-disciplinary course emphasizing current issues in public education and professional roles in schools. Team building and collaboration methods are emphasized together with social responsibility and ethics. Fall.

EDUC 612 DEMONSTRATED CERTIFICATION COMPETENCE
12-26 credits
Students who earn certification as an education professional, after completing a program at an approved collaborating institution, may be awarded credits for documented field-based learning experiences. The amount and award of credit is contingent upon matriculation at KSC, current certification, and completion of requirements specified in a current memorandum of understanding.
EDUC 630 LIFE-SPAN DEVELOPMENT
3 credits
Examination of human development, with particular emphasis on school-aged children. Focus is on understanding the physical, cognitive, language, social, emotional, and spiritual domains, as well as ecological and cultural context. Contemporary theories of development are explored and applied to educational settings to define developmentally appropriate practice. Prerequisite: Admission to graduate program or permission of instructor. Fall.

EDUC 641 SCHOOL LAW
3 credits
Legal rights, duties, and responsibilities of school personnel, including the ethical and legal considerations related specifically to the practice of school counseling, special education, and educational leadership. Current issues, policies, laws, and legislation will be emphasized in accordance with professional standards. Prerequisite: Admission to graduate program or permission of instructor. Spring.

EDUC 661 INTEGRATING READING AND LANGUAGE ARTS
3 credits
This course will address teaching and learning strategies for integrating all the language arts areas: reading, writing, listening, and speaking. Prerequisite: A reading course or permission of instructor.

EDUC 670 EDUCATIONAL RESEARCH FOUNDATIONS
3 credits
Strategies for identifying, analyzing, and evaluating educational research. Introduction to research concepts and instrumentation in qualitative and quantitative research. Prerequisite: Admission to graduate program and permission of instructor. Summer.

EDUC 675 EDUCATIONAL RESEARCH DESIGN
3 credits
Practical application of research in educational settings to research-based school reform initiatives. Focus is on creating a research design for systematic inquiry of a problem or issue in school. Part I of a yearlong research project designed by students to be implemented in an educational setting. Prerequisite: EDUC 670. Fall.

EDUC 680 EDUCATIONAL RESEARCH CAPSTONE
6 credits
Implementation of research-based school reform initiatives designed in EDUC 675; includes data analysis, research report writing, and professional presentation skills. Part II of a yearlong research project designed by students to be implemented in an educational setting. Prerequisite: EDUC 675. Spring.

EDUC 690 ADVANCED SPECIAL TOPICS IN EDUCATION
1-3 credits
Study of a selected topic in education at the graduate level. May be repeated as topics change. Prerequisite: Permission of instructor. Occasionally.

EDUC 698 INDEPENDENT
1-3 credits
Intensive study of an educational problem encountered in a school or community. Offered as directed study if designed by the faculty member or independent study if proposed by the student. Prerequisite: Permission of instructor. Fall, Spring.

EDUC 699 CAPSTONE
3 credits
Development of a comprehensive case study of a student, classroom, or school in collaboration with students in each of the specialty areas. Prerequisites: Admission to graduate program and 30 hours of specialty area course work. Spring.

Education: Curriculum and Instruction

EDUCI 610 CURRENT ISSUES IN P-12 EDUCATION
3 credits
Examines current issues affecting public education from multiple perspectives, emphasizing diversity, ethical responsibility, collaboration, and professional behavior. Master's candidates begin development of a professional portfolio aligned with national standards, set goals for M.Ed. study, and identify specialization focus. Hybrid delivery requires Internet access. Prerequisite: Admission to graduate program or permission of instructor. Summer.

EDUCI 620 SPECIALIZATION I
First of a two-semester sequence of specialized research conducted on a topic of the graduate student's choice, under guidance of a faculty mentor. Prerequisite EDUCI 610 or permission of instructor. Fall.
EDUCCI 621 DESIGN AND REFORM OF AMERICAN EDUCATION
3 credits
Advanced study through original sources of philosophies of American education and reform movements. Emphasis on current reform efforts and strategies. Prerequisite: Admission to graduate program or permission of instructor. Spring.

EDUCCI 625 TECHNOLOGY-INTEGRATED TEACHING
3 credits
This course addresses the use of technology in the P-12 classroom in areas of curriculum development, instructional design, and assessment. The students will explore the theoretical and practical issues of educational technology in teaching and learning and will be exposed to the diversity of educational technology through practical use. Summer.

EDUCCI 630 SPECIALIZATION II
Continuation of specialized research begun in EDUCCI 620 Specialization I. Culminates with preparation for demonstration of professional leadership project. Prerequisite: EDUCCI 620. Spring.

EDUCCI 631 ASSESSMENT AND EVALUATION IN SCHOOLS
3 credits
Focus on understanding the diagnostic process and developing the necessary skills for collaboration in a team setting with parents and professionals. Includes formal and informal assessment approaches. Prerequisite: Admission to graduate program. Summer.

EDUCCI 635 CURRICULUM THEORY AND PRACTICE
3 credits
Examination of theoretical frameworks for the development of curriculum for specific professional applications in the P-12 classroom. Focus on critical exploration of identities, values, and beliefs in relation to the professional role of curriculum designer. Professional mentoring for individualized curriculum designs that address developmentally appropriate content, state and national standards. Prerequisite: Admission to Curriculum and Instruction Professional Development graduate program or permission of instructor. Fall.

EDUCCI 641 APPLIED LEARNING THEORY
3 credits
Study of contemporary learning theories and translations of theory to educational practice. Learning styles, multiple intelligence theory, and brain behavior research are included. Prerequisite: Admission to graduate program or permission of instructor. Summer.

EDUCCI 651 CURRICULUM DEVELOPMENT
3 credits
Examination of different models of curriculum development. Includes the study of context, delivery, standards, and frameworks in all academic areas. Prerequisite: Admission to graduate program or permission of instructor. Summer.

EDUCCI 661 COLLABORATION AND SERVICE DELIVERY OPTIONS
3 credits
Examination of the cooperative nature of the roles of classroom teachers and special educators and implications for delivering instruction and related support services. Emphasis on developing working relationships. Course addresses collaboration skills for participating in change efforts, working with families, prereferral, IEP development, co-teaching, and supervision of paraprofessionals. Prerequisites: Admission to graduate program or permission of instructor. Fall.

EDUCCI 686 FIELD PLACEMENT
No credit
Direct work in classrooms applying content, skill, and materials learned in methods course(s). Emphasis is on acquiring an understanding of the role of the teacher in implementing curriculum and accommodating diverse learners. Hours and activities are documented in a professional portfolio. Corequisite: Appropriate undergraduate methods course. Prerequisite: Admission to graduate program. Fall, Spring.

EDUCCI 687 CLASSROOM/INSTRUCTIONAL MANAGEMENT
3 credits
Study of approaches to organizing and maintaining a classroom environment that supports student learning. Emphasis is on developing a comprehensive approach to managing instruction in cognitive, social, and physical domains. Includes strategies for successful inclusion of students with special needs. Prerequisite: Admission to graduate program. Fall.

EDUCCI 695 SEMINAR: TEACHER AS LEADER
3 credits
Designed to challenge and reshape students' conceptions of school organization, culture, curriculum, and formal and informal leadership. Includes exploration of personal and professional theoretical frameworks of leadership, including introduction to theories of transformative leadership, systems theory, and issues of gender within leadership paradigms. Prerequisite: Admission to Curriculum and Instruction Professional Development graduate program or permission of instructor. Fall.
EDUCI 696 STUDENT TEACHING
15 credits
Full-time placement in educational setting(s) appropriate to certification sought. Supervision provided by college supervisor and field-based professional. Development of principles, attitudes, and techniques for successful teaching. Seminar included. Within this experience students will complete a project that synthesizes the entire program. Graded Pass/Fail. Prerequisite: Successful completion of all program requirements in the Curriculum and Instruction Option Certification-WEL Track. Spring.

EDUCI 697 INTERNSHIP
3 credits
Supervised practice related to focus of student’s professional portfolio development. Prerequisite: admission to graduate program and completion of all other Curriculum and Instruction Option course requirements. Fall, Spring.

EDUCI 698 INDEPENDENT STUDY
1-3 credits
Intensive study of an educational curriculum topic encountered in a school or community. Topics are usually initiated by the graduate student. Prerequisite: Permission of instructor. Fall, Spring.

Education: Educational Leadership

EDUCEL 621 ORGANIZATIONAL LEADERSHIP
3 credits
Leadership and organizational theories and development as they relate to the school principal’s instructional role. Special emphasis on vision and mission, group process, and collaboration with parents, community members, and other professionals, including special educators, change and the change process, motivation, decision-making, problem-solving, and conflict management. Prerequisite: Admission to graduate program or permission of instructor. Fall.

EDUCEL 622 SCHOOL EFFECTIVENESS, REFORM, AND TECHNOLOGY
3 credits
Advanced study through the history and philosophies of American education. Emphasis on contemporary reform efforts and strategies, including current research and the use of technology in schools. Processes and procedures for instructional and program development and evaluation such as state testing, school climate, and school effectiveness. Prerequisites: Admission to Educational Leadership option or permission of instructor. Summer.

EDUCEL 631 STAFF SELECTION, SUPERVISION, AND EVALUATION
3 credits
Recruiting, inducting, and mentoring school personnel. Observation methods and conferencing techniques are practiced in the process of supervision and evaluation of school personnel. Related legal and personnel issues are discussed. Prerequisite: Admission to graduate program or permission of instructor. Spring.

EDUCEL 652 BUDGET, FACILITIES, AND SAFE SCHOOLS
3 credits
Participation in the school budget process, building consensus, and aligning resources with the organizational vision. Collaboration with school personnel, families, business, community, and government groups by framing partnerships. Application of fiscal and legal principles to provide safe and effective facilities. Prerequisites: Admission to Educational Leadership option or permission of instructor. Fall.

EDUCEL 655 CURRICULUM MANAGEMENT: USING DATA TO TRANSFORM SCHOOLS
3 credits
Approaches to coordinating and managing curriculum or programs at the classroom, department, school, or district level and the utilization of data in curricular and programmatic improvement in schools and school districts. Prerequisites: Admission to Educational Leadership option or permission of instructor. Spring.

EDUCEL 696 INTERNSHIP I: SCHOOL AND COMMUNITY RELATIONS
3 credits
A supervised practical experience in educational leadership with seminar sessions addressing national and state standards for educational leaders. The focus of this internship will be working with staff, parents, and the community. Prerequisites: Admission to Educational Leadership option or permission of instructor. Fall.

EDUCEL 697 INTERNSHIP II: CONNECTIONS
3 credits
A supervised practical experience in educational leadership with seminar sessions addressing national and state standards for educational leaders. The focus of this internship will be integrating leadership, curriculum, school improvement and data-driven decision-making. Prerequisites: Admission to Educational Leadership option or permission of instructor. Spring.
EDUCEL 698 INDEPENDENT STUDY
1-3 credits
Intensive study of an educational leadership topic encountered in a school or community. Topics are usually initiated by the graduate student. Prerequisite: Permission of instructor.

Education: School Counselor

EDUCSC 622 SCHOOL COUNSELING: ROLES, RESPONSIBILITIES, AND INTERVENTIONS
3 credits
Examines the role of the school counselor in relation to the philosophy and curriculum of school. Emphasis is on defining professional responsibilities and relationships among counselors, teachers, administrators, students, and family in the delivery of school counseling services. Fall.

EDUCSC 623 THE INCLUSIVE SCHOOL COUNSELOR: DIVERSITY AND MULTICULTURALISM IN SCHOOLS
3 credits
Investigates approaches to school counseling focused on working in a culturally sensitive and responsive way with the diverse range of students, families, faculty, and staff. Explores critical issues related to race, culture, class, social status, gender, and affectional orientation, as well as cognitive diversity and psychological and physical challenges. Spring.

EDUCSC 626 PROFESSIONAL SEMINAR IN SCHOOL COUNSELING
3 credits
This course integrates a focus on personal and professional issues in an environment of continuous feedback and self-reflection. Content areas focus on critical issues in school counseling. Prerequisite: Admission to School Counseling graduate program. Fall.

EDUCSC 631 ASSESSMENT AND EVALUATION FOR SCHOOL COUNSELORS
3 credits
Focus on theory and practice of assessment for school counselors. Includes formal and informal assessment approaches as well as how these approaches will inform effective interventions. Emphasis is on developing the necessary skills for collaboration in a team setting with families and professionals. Prerequisite: Admission to School Counseling graduate program or permission of instructor. Spring.

EDUCSC 641 CAREER DEVELOPMENT
3 credits
Exploring career development theories. Examines and evaluates career materials as they relate to school philosophy and curriculum. Summer.

EDUCSC 651 METHODS AND SKILLS OF COUNSELING
3 credits
Emphasizes the practice of ethical counseling skills integrating developmental, multicultural, and ecological perspectives. Includes role-playing, videotaping, and analysis/evaluation by self, peers, and instructor. Prerequisites: Admission to School Counseling graduate program or permission of instructor. Fall.

EDUCSC 652 GROUP COUNSELING IN SCHOOLS
3 credits
Introduces skills, knowledge base, and practice of group counseling in schools. Focuses on ethical issues, developmental perspectives, working with diverse populations, and current research. Includes experiential components, including cofacilitation of a group in a school. Prerequisite: Admission to School Counselor graduate program and ESECEL 651.

EDUCSC 662 SCHOOL COUNSELING: THEORETICAL FOUNDATIONS
3 credits
An exploration of major theoretical approaches to school counseling. Emphasis is on the formulation of perspectives on emotional growth and development, as well as the helping relationship. Includes case studies that illustrate strategies for intervention from an ecological perspective. Prerequisites: ESECSC 622, ESECSC 626, and ESECSC 651. Spring.

EDUCSC 696 INTERNSHIP: ELEMENTARY SCHOOL
3 credits
Weekly seminar in conjunction with site-supervised practice in required, semester-long, minimum 300-hour elementary/middle school counseling internship. In addition to required field experiences totaling a minimum of 300 hours, students meet weekly with student interns and instructor to integrate internship experience. Cannot be taken in conjunction with EDUCSC 697. Prerequisite: Permission of instructor. Fall, Spring.
EDUCSC 697 INTERNSHIP: SECONDARY SCHOOL
3 credits
Weekly seminar in conjunction with site-supervised practice in required, semester-long, minimum 300-hour elementary/middle school counseling internship. In addition to required field experiences totaling a minimum of 300 hours, students meet weekly with student interns and instructor to integrate internship experience. Cannot be taken in conjunction with EDUCSC 696. Prerequisite: Permission of instructor. Fall, Spring.

EDUCSC 698 INDEPENDENT STUDY
1-3 credits
Intensive study of an educational counseling topic encountered in a school or community. Topics are usually initiated by the graduate student. Prerequisite: Permission of instructor.

Education: Special Education

EDUCSP 601 FOUNDATIONS IN SPECIAL EDUCATION
3 credits
Historical perspectives, trends, impacts of legislation, and school contexts on the evolving field of special education, K-12; learning theory, styles, and differences – including language and psychological processing; characteristics of students with exceptional learning needs; and implications for assessment, instruction, curriculum accommodations, and modifications within a continuum of services. Corequisite: EDUCSP 602. Summer.

EDUCSP 602 CURRICULUM AND INSTRUCTIONAL DESIGN
3 credits
Designing curriculum, instructional strategies, and selecting educational strategies to create learning environments and address transition for individuals with exceptional learning needs (ELN). Adaptations to the general curriculum and alternative teaching approaches in K-12 settings in order to integrate and facilitate independence for individuals with ELN will be addressed. Corequisite: EDUCSP 601. Summer.

EDUCSP 603 POSITIVE BEHAVIOR SUPPORTS
2 credits
Prepares students to carry out a variety of behavior change support strategies in educational settings K-12. Emphasis is on the development of positive, problem-solving approach, positive behavior interventions, and strategies for classroom management. It provides theoretical foundations and practical applications for preventing behavior problems and for intervening when problems occur. Prerequisite: EDUCSP 601 and EDUCSP 602. Summer.

EDUCSP 604 ASSESSMENT AND EVALUATION IN SPECIAL EDUCATION
3 credits
Focuses on the theory and practice of assessment for general special education educators at the post-baccalaureate level. Includes procedures to identify and assess student learning and behavior needs and outcomes. Informal and formal strategies, including standardized tests, observational tools, and curriculum/criterion referenced tests. Prerequisites: EDUCSP 601 and 602, or permission of instructor. Fall.

EDUCSP 605 TRANSITION PLANNING AND PROGRAMMING
3 credits
Examination of the transition from secondary school environments to post-school activities for youth with disabilities relative to career development and self-determination. Critical components include legal foundations, functional assessment, access to career and technical education, employment, postsecondary training, and independent living. Prerequisites: EDUCSP 601 and 602, or permission of instructor. Spring.

EDUCSP 610 PORTFOLIO DEVELOPMENT AND ASSESSMENT
1 credit
Portfolio development procedures and assessment strategies. Requires students seeking advanced certification in special education to begin development of professional portfolio, including plan for professional development achieved through M.Ed. study. Prerequisite: Admission to graduate program or permission of instructor. Fall.

EDUCSP 612 DEMONSTRATED CERTIFICATION COMPETENCE
18 credits
Students with advanced certification in learning disabilities and emotional and behavior disorders obtained in conjunction with Granite State College are awarded 18 credits for documented field-based learning experiences. Graduate credit is contingent on completion of required modules and evidence of certification.
EDUCSP 621 CONTEXT FOR SPECIAL EDUCATION
3 credits
Exploration of current issues in special education based on historical context of philosophy, legislation, litigation, models of service delivery, and future trends. Prerequisite: Admission to graduate program or permission of instructor. Fall.

EDUCSP 660 INTERNSHIP IN SPECIAL EDUCATION I
6 credits
This post-baccalaureate internship is the first half of a yearlong field experience and seminar that focuses on the application of special education knowledge and skills in a K-12 school setting. Interns receive support from a college supervisor and mentor/cooperating teacher to meet identified special education program competencies. Prerequisites: EDUCSP 601 and 602. Fall.

EDUCSP 661 COLLABORATION AND SERVICE DELIVERY OPTIONS
3 credits
Examination of the cooperative nature of the roles of classroom teachers and special educators and implications for delivering instruction and related support services. Emphasis is on developing working relationships. Course addresses collaboration skills for participating in change efforts, working with families, prereferral, IEP development, co-teaching, and supervision of paraprofessionals. Prerequisites: Admission to graduate program or permission of instructor, EDUCSP 610, and EDUCSP 621. Cross-listed with EDUCCI 661. Spring.

EDUCSP 665 INTERNSHIP IN SPECIAL EDUCATION II
6 credits
This post-baccalaureate internship is the second half of a yearlong field experience and seminar that focuses on the application of special education knowledge and skills in a K-12 school setting. Interns receive support from a college supervisor and mentor/cooperating teacher to meet identified special education program competencies. Prerequisite: EDUCSP 660. Spring.

EDUCSP 697 INTERNSHIP
3 credits
Supervised practice related to focus of student’s professional portfolio development. Prerequisites: Admission to graduate program, all required EDUCSP specialty area courses. Spring.

EDUCSP 698 INDEPENDENT STUDY
1-3 credits
Intensive study of an educational counseling topic encountered in a school or community. Topics are usually initiated by the graduate student. Prerequisite: Permission of instructor.

English

IAENG 204 CREATIVE WRITING
Introduction to the basic strategies and techniques of writing fiction and verse. Assigned exercises, accompanied by readings, are discussed in class. Opportunity to develop creative and critical skills through assignments and independent work. Prerequisite: ITW 101. Full, Spring.

IHENG 220 READINGS IN BRITISH LITERATURE
Examines a particular period or literary movement, works of a particular author or group of authors from the British Isles, or a recurring theme in fiction or other literary forms. Prerequisite: ITW 101. Full, Spring.

IHENG 240 READINGS IN AMERICAN LITERATURE
An introduction to significant writers of the United States and their work, which may include fiction, drama, poetry, and nonfiction prose. May explore a particular theme, period, genre, or group of writers. Prerequisite: ITW 101. Full, Spring.

IHENG 250 READINGS IN CONTINENTAL LITERATURE
Examines 18th- to 21st-century European literature in historical and cultural contexts. Prerequisite: ITW 101. Annually.

IHENG 251 LITERATURE OF THE HOLOCAUST
Examines the culture of European Jews before the Holocaust and literature that reflects the destruction of that culture in World War II. Includes texts by such authors as Ida Fink, Elie Wiesel, Primo Levi, Nelly Sachs, Imre Kertesz, and Jurek Becker. Prerequisite: ITW 101. Cross-listed as IHHGS 251. Spring.

IHENG 260 READINGS IN WORLD LITERATURE
Reading and discussion of selected literary texts from the ancient to the modern world. Course will investigate literary production and reception in relation to historical, social, religious, economic, biographical, or textual contexts. May be repeated once as topics change. Prerequisite: ITW 101.
IHENG 286 CHILDREN’S LITERATURE  
Reading and discussion of representative texts and illustrations from the genres of children’s literature, such as folklore, fantasy, contemporary realistic fiction, historical fiction, biography, poetry, and information books. Prerequisite: ITW 101. Fall, Spring.

IHENG 391 STUDIES IN LITERATURE  
A course in literary genre and theme for nonmajors. This course will explore the distinctive features of one or more literary genres and themes. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. (Not open for credit toward the English major.) Annually.

IHENG 392 THE WRITER AND THE WORLD  
An in-depth study of a particular author’s work. Emphasis is placed on the importance of context (social, historical, economic, cultural). Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. (Not open for credit toward the English major.) Annually.

IIENG 245 READINS IN AFRICAN AMERICAN LITERATURE AND CULTURE  
An interdisciplinary introduction to African American literature and culture, which considers oral, written, and performed texts by African American cultural practitioners. Literary texts from 18th-, 19th-, and 20th-centuries. African American writers will be read in conversation with critical musical, political, and theoretical works. Prerequisite: ITW 101. Fall.

IIENG 270 LITERATURE AND THE ENVIRONMENT  
This interdisciplinary course introduces students to the traditions of environmental literature. Students will learn to think across the humanities, arts, and sciences. May explore a particular group of writers, genre, historical period, or bioregion. May be repeated once as topics change. Prerequisite: ITW 101. Annually.

ENG 202 CREATIVE NONFICTION WRITING  
Introduction to the basic strategies and techniques of writing creative nonfiction. Extensive writing and reading of creative nonfiction will be discussed in class. Opportunity to develop creative and critical writing skills through assignments and independent work. Prerequisite: ITW 101. Fall, Spring.

ENG 203 WOMEN’S WRITING  
Focuses on effective rhetorical strategies for communicating women’s experiences, opinions, and knowledge, as well as personal, political, and feminist issues. Prerequisite: ITW 101. Fall.

ENG 208 TOPICS IN WRITING  
Selected topics in specific areas of creative, nonfiction, professional, or other modes of writing. May be repeated once as topics change. Prerequisite: ITW 101. Annually.

ENG 215 LITERARY ANALYSIS  
An introduction to the major in English, the course concentrates on refining critical reading abilities through intensive writing. Students will learn to ask questions about literary texts – their authorship, historical contexts, genres, construction, and the reasons for their complexity. Prerequisite: ITW 101. All English majors must take ENG 215 before completing 9 credits in English. English majors and minors only. Fall, Spring.

ENG 280 CULTURAL STUDIES  
Interdisciplinary study of texts and contexts. Texts examined may be selected from a number of fields. Topics may focus on popular culture, a cultural concept, a subculture, region, or period. May be repeated once as topics change. Prerequisite: ITW 101. Annually.

ENG 290 TOPICS  
Selected topics in literature. May be repeated as topics change. Prerequisite: ITW 101. Annually.

ENG 298 INDEPENDENT STUDY  
1-4 credits  
Reading/writing in a selected area of English with a faculty member. Must be 4 credits to count as one of the two 200-level courses required for the English major. Prerequisite: ITW 101 and permission of instructor.

ENG 300 LITERARY FORM AND HISTORY  
A study of literary form and history through readings and theoretical investigations of a single genre, such as poetry, fiction, drama, or the essay. Prerequisites: ITW 101 and ENG 200. Fall, Spring.

ENG 301 FICTION WORKSHOP  
Discussion and evaluation of original manuscripts combined with reading and discussion of the theory of fiction. Prerequisites: ITW 101 and one 200-level English course. Spring.
ENG 302 POETRY WORKSHOP
Class discussion of original student work combined with extensive reading in poetry and poetics. Analysis of major theories, technical innovations, and innovators. Prerequisites: ITW 101 and one 200-level English course. Fall.

ENG 303 NONFICTION WORKSHOP
Nonfiction essay writing, focusing on style, rhetorical theory and strategies, and publication. Workshop format. Prerequisites: ITW 101 and one 200-level English course. Fall.

ENG 306 AUTOBIOGRAPHY WORKSHOP
Writing and revising several chapters of an autobiographical manuscript combined with extensive reading and discussion of the theories of autobiographical writing. Prerequisites: ITW 101 and one 200-level English course. Spring.

ENG 307 WRITING IN THE WORLD
Drawing on the field of professional writing, this course focuses on analyzing and generating writing in workplace and local community contexts. Through discussion, collaborative writing, and a service-learning project, students will explore the importance of communicating clearly and ethically and will design, develop, and present professional documents for specific audiences. Prerequisites: ITW 101 and one 200-level English course. Spring, odd years.

ENG 308 ADVANCED TOPICS IN WRITING
Intensive study of writing techniques and applications in specialized areas of creative, nonfiction, or professional writing, as well as writing that does not easily fit into these categories. May be repeated once as topics change. Prerequisites: ITW 101 and one 200-level English course. Annually.

ENG 312 DESCRIPTIVE GRAMMAR
Examination of English grammar and theory, including traditional, transformational-generative, and case grammar. Collateral readings will focus on applied linguistics and American dialects. Students develop skills for teaching grammar through written/oral exercises. Required for secondary English teacher certification. Open only to junior and senior English majors or by permission of instructor. Prerequisites: ITW 101 and one 200-level English course. Fall.

ENG 315 LITERARY FORM AND HISTORY
A study of literary form and history through readings and theoretical investigations of a single genre, such as poetry, fiction, drama, or the essay. Prerequisites: ITW 101 and ENG 215. Fall, Spring.

ENG 321 ENGLISH LITERATURE: BEGINNINGS TO 18TH CENTURY
Survey of English literature from Anglo-Saxon times to the Enlightenment. Attention to historical and intellectual contexts, as well as development of the English language. Study of various genres: epic, lyric, drama, romance, and prose. Prerequisites: ITW 101 and one 200-level English course. Fall.

ENG 323 MEDIEVAL LITERATURE
Advanced survey of medieval literature focusing particularly, but not exclusively, on the development of literary genres and themes in the British Isles. All texts will be read in translation. Prerequisites: ITW 101 and one 200-level English course. Fall.

ENG 324 CHAUCER
A close study of Geoffrey Chaucer’s The Canterbury Tales, with special attention to the connection between pilgrims and tales. We will read all tales in the original Middle English. Prerequisites: ITW 101 and one 200-level English course. Spring.

ENG 326 ENGLISH RENAISSANCE LITERATURE
Intensive study of the drama, poetry, and prose of the English renaissance. Special attention will be paid to a particular social or aesthetic dimension of these literary texts. Prerequisites: ITW 101 and one 200-level English course. Fall.

ENG 327 SHAKESPEARE: POETRY AND PLAYS
A close study of Shakespeare’s poems and drama with special attention to the development of Shakespearean comedy, history, and tragedy. Prerequisites: ITW 101 and one 200-level English course. Spring.

ENG 329 19TH-CENTURY ENGLISH LITERATURE
Writers and works best representing the ideals and controversies of 19th-century England from the Romantic movement to the Victorian era. Readings in such writers as Wordsworth, Shelley, Keats, Tennyson, Browning, Dickens, and others. Prerequisites: ITW 101 and one 200-level English course. Every third year.

ENG 330 STUDIES IN BRITISH LITERATURE
Examines a particular author, period, or movement with a focus on the social, intellectual, and literary significance of the works considered. May be repeated as topics change. Prerequisites: ITW 101 and one 200-level English course. Fall.
ENG 341 EARLY AMERICAN LITERATURE
Major developments of American literature, culture, and thought from the pre-Columbian period to the 19th century. Emphasis is on American Indian oral literature, European visions, the formation of an Anglo-American literary tradition, the Enlightenment, and the American Revolution. Prerequisites: ITW 101 and one 200-level English course. Fall, alternate years, beginning 2000.

ENG 344 STUDIES IN AMERICAN LITERATURE
Focuses on a particular theme, period, movement, or genre. Emphasis may be aesthetic, historical, or cultural. May be repeated as topics change. Prerequisites: ITW 101 and one 200-level English course. Every third semester.

ENG 345 STUDIES IN AFRICAN AMERICAN LITERATURE
Examines literary traditions of African American cultural practitioners, including relations between oral and literary works, performance and reading, tradition and innovation. Texts by Black writers from the 18th, 19th, and 20th centuries are read in conversation with those from the contemporary moment. Prerequisites: ITW 101 and one 200-level English course. Spring.

ENG 346 TRANSCENDENTALISM
Explores American Transcendentalism. Intensive reading and discussion of such writers as Emerson, Thoreau, Margaret Fuller, and Whitman. Prerequisites: ITW 101 and one 200-level English course. Alternate years.

ENG 347 MODERN AMERICAN INDIAN LITERATURE
Examines the major American Indian writers of the 20th century; emphasizes the American Indian literary renaissance. Historical, cultural, and aesthetic contexts are explored. Authors include Momaday, Silko, Welch, Erdrich, Hogan, and Rose. Prerequisites: ITW 101 and one 200-level English course. Spring.

ENG 350 STUDIES IN CONTINENTAL LITERATURE
Intensive study of 18th- to 21st-century European literature with a focus on the social, intellectual, and literary significance of the works considered. May be repeated as topics change. Prerequisites: ITW 101 and one 200-level English course. Every third spring.

ENG 360 STUDIES IN WORLD LITERATURE
Examines texts from the Ancient World: Asia, Africa, and the Pacific. May be repeated as topics change. Prerequisites: ITW 101 and one 200-level English course. Every third spring.

ENG 370 STUDIES IN LITERATURES OF THE AMERICAS
Compares literatures such as those of Canada, the United States, and Central and South America. Attention to topics such as the writer's voice, interrogation of traditions, the constructions of literary geography. May be repeated as topics change. Prerequisites: ITW 101 and one 200-level English course. Alternate years.

ENG 381 WOMEN WRITERS
Emphasis is on the images, forms, contexts that shape women's literary expression and that identify women's lives in cultural, social, political spheres. Prerequisites: ITW 101 and one 200-level English course. Annually.

ENG 390 STUDIES
Intensive study of selected topics in literature, language, and culture. May be repeated as topics change. Prerequisites: ITW 101 and one 200-level English course. Occasionally.

ENG 395 SEQUENCE I
Acquaints students with a particular aspect of the field of English studies and exposes them to primary and secondary texts, as well as historical and cultural contexts. Prepares students for the advanced seminar, ENG 495 Sequence II, which completes the yearlong sequence. Prerequisites: ITW 101, ENG 215, and ENG 315. English majors only. Fall, Spring.

ENG 402 THEORY AND PRACTICE
This course examines the critical and theoretical contexts of various genres. Readings will include both theory and the genre under discussion. Students are required to write original work in the genre as well as critical and interpretive essays. May be repeated as topics change. Prerequisites: ITW 101, one 200-level English course, and one 300-level English course. Annually.

ENG 405 WRITING MINOR PORTFOLIO
Independent selection and intensive revision of writing completed for the writing minor. Students will compile a portfolio under the direction of an English faculty member. May be taken concurrently with another writing minor course. Prerequisites: ITW 101, one 200-level and one 300-level English course, 12 credits completed toward the writing minor, and permission of instructor. Fall, Spring.

ENG 490 ADVANCED STUDIES
Advanced study of selected topics in literature, language, and culture. May be repeated as topics change. Prerequisites: ITW 101, one 200-level English course, and one 300-level English course.
ENG 495 SEQUENCE II
Builds upon the student's knowledge of the primary texts in ENG 395 Sequence I and involves students in theoretical and critical discussions in the field. Requires writing that incorporates advanced theory. Prerequisites: ITW 101, ENG 200, ENG 300, and ENG 395. Fall, Spring.

ENG 497 WRITING/PUBLISHING INTERNSHIP
This seminar and experiential learning opportunity allows students to gain practical writing/publishing experience in a professional site. Seminar meetings involve discussion of readings on writing/publishing theory/practice, investigations of graduate and professional writing opportunities, and sharing of internship experiences. Students will develop a portfolio showcasing work developed for the internship site. Prerequisites: ITW 101, one 200-level English course, one 300-level English course, and permission of instructor. Annually.

ENG 498 INDEPENDENT STUDY
1-8 credits
Advanced reading or writing in a selected area of English with a faculty member. Must be 4 credits to count as one of the three 400-level courses required for the English major. Repeatable for up to 8 credits. Prerequisites: ITW 101, one 200-level and one 300-level English course, and permission of instructor.

English as a Second Language

ESL 101 ENGLISH AS A SECOND LANGUAGE
4 credits
A course for non-native speakers of English focusing on self-assessment and needs analysis. Curriculum is developed according to student needs in writing, reading, vocabulary, grammar, listening, speaking, and pronunciation. May be repeated once for credit. Does not satisfy General Education requirements. Fall, Spring.

Environmental Studies

IIENST 110 FOOD, HEALTH, AND THE ENVIRONMENT
This interdisciplinary course explores the connection between food choices and food production systems and their impact on public health and the environment. Considering social, political, economic, and ethical factors, students will compare different agricultural systems and assess the ecological footprint and sustainability of our daily decisions of what to eat. Fall, Spring.

IIENST 151 THE ENVIRONMENT OF CENTRAL NEW ENGLAND
Introduces the geology and ecology, the natural and human history, and the social systems and governance structures that shape our regional environment. Explores the concept of place using interdisciplinary approaches, including hands-on field work, to prepare students to become responsible environmental stewards of the places where they live. Fall.

IIENST 152 PRINCIPLES OF SUSTAINABILITY
Students evaluate the worldviews and assumptions that brought us to the current crisis in worldwide environmental degradation and social injustice, and examine scientific laws needed to increase the prospects for a sustainable future. Students reflect on solutions that lead to a more harmonious and sustainable relationship between humans and nature. Spring.

ENST 251 MATTER AND ENERGY IN ENVIRON
Introduces fundamental concepts governing the distribution of matter and energy in the Earth system that determine our environment. Field and laboratory exercises emphasize the basics of sampling and experimental design, hypothesis formation, data analysis, and interpretation. Prerequisites: IQL 101 and IIENST 151. Spring.

ENST 252 ECOLOGY OF A CHANGING PLANET
This integrated lecture-lab course will provide an understanding of biological and ecological principles and relate them to different environmental issues, such as global climate change, conservation of habitats and biodiversity, land use change, and pollution. Field and lab exercises emphasize sampling and experimental design, hypothesis formation, data analysis, and interpretation. Prerequisites: IIENST 151 and IQL 101 or alternative. Fall.

ENST 253 ENVIRONMENTAL GOVERNANCE
Making environmental decisions is extremely challenging due to the complex interaction of science, politics, associated uncertainties, conflicting individual/social values, and decision urgency. This course provides an overview of the current and emerging processes by which communities, businesses, and governments make decisions relating to environmental governance. Prerequisites: IIENST 151 and ITW 101. Spring.
ENST 290 SPECIAL TOPICS
1-4 credits
Study of selected topics related to Environmental Studies. May be repeated as topics change. May be cross-listed with AMST 290, BIO 290, ENG 290, GEOG 290, HIST 290, POSC 290, PSYC 290, SOC 290, or other courses as appropriate depending on topic. Applicability to satisfying general education distribution requirements depends on the area with which the particular topic is cross-listed. Occasionally.

ENST 304 ENVIRONMENTAL LAW AND REGULATION
Develops an understanding of the system of laws and regulations that protect the environment, human health, and natural resources. The role of science in the legal/regulatory process will be emphasized, as will federal/state regulatory processes and requirements. Cross-listed as SAFE 304. Prerequisite: ENST 253 or SAFE 302 or permission of instructor. Fall.

ENST 308 ENVIRONMENTAL ISSUE MANAGEMENT
Environmental professionals frequently confront issues involving high levels of uncertainty in contentious political environments. This course covers the methods for informing the public and engaging stakeholders in addressing environmental problems. Students create and critique environmental messages, public participation strategies, and information dissemination styles for multiple audiences and purposes. Prerequisite: ENST 253. Spring.

ENST 311 ENVIRONMENTAL HEALTH
This course will examine the impact of environmental factors on human health. Basic principles of toxicology will be reviewed. Conceptual understanding of chemical, biological, and physical hazards and their associated health effects will be emphasized. Contemporary challenges of environmental health policy-making will be discussed. Prerequisite: ENST 251 or INCHEM 103 or CHEM 112. Spring, alternate years.

ENST 312 ENERGY AND SUSTAINABILITY
Many significant world problems can be attributed to our use of energy. To ensure a livable future, we need to understand energy and be able to effectively evaluate different options, including new energy technologies as well as changes in the way we live our lives. Prerequisites: ENST 251 and IENST 152. Spring, alternate years.

ENST 315 ENVIRONMENTAL GEOLOGY
Examines the relationships between humans and our geological environment, including resources, hazards, and human impacts. Field methods in obtaining geologic information for resource evaluation and protection, risk reduction, and environmental remediation. Three-hour lecture, three-hour lab. Required field trips. Cross-listed as GEOL 315. Prerequisite: INGEOL 151. Fall.

ENST 352 CONSERVATION OF ECOLOGICAL SYSTEMS
This course focuses on the practical and theoretical aspects of conservation and restoration biology through lectures, discussions, and student projects. It examines the degradation and loss of biodiversity and ecosystems due to human activity and considers alternatives for avoiding and/or mitigating these impacts. Prerequisite: ENST 252. Spring.

ENST 363 WRITING IN AN ENDANGERED WORLD
This course traces environmentalism as a social movement in relation to the development of environmental writing. Students will consider the relationship between literature and social change, the development of literary strategies in environmental writing, and commentaries on the environmental movement by cultural critics and environmental historians in developing countries. Cross-listed with AMST 363. Prerequisites: IENST 152 and ENST 253. Fall, alternate years.

ENST 395 JUNIOR SEMINAR
In-depth analysis of environmental research literature and methodologies. Emphasis on proposal writing and oral presentation. Development of a project proposal to be completed in ENST 495. Exploration of postgraduate opportunities. Prerequisite: Grade C or higher in ENST 251, ENST 252, and ENST 253. Spring.

ENST 404 RISK AND THE ENVIRONMENT
Risk decision-making regarding the environment involves multiple stakeholders and is often controversial. This course examines the theory and practice of environmental risk assessment and management, with an emphasis on the social, political, and technical dimensions of risk decision-making. Prerequisite: ENST 253. Spring, alternate years.

ENST 411 POLLUTION CHEMISTRY
This course examines the chemistry of pollution in the environment. Conceptual understanding of significant natural and manmade chemical processes in air, water, and soil will be emphasized. Pollution fate and transport, monitoring, control technologies, and remediation strategies are explored. Lab component. Prerequisite: ENST 251, INCHEM 103, or CHEM 112. Spring, alternate years.
ENST 412 ENVIRONMENTAL GEOCHEMISTRY
Examination of the principles and mechanisms governing distribution of the chemical elements and their isotopes in natural environments, with application to selected problems and geochemical analysis research projects. Three-hour lecture, three-hour lab. Prerequisites: ENST 251 or INGEOL 151, and INCHEM 103 or CHEM 112. Spring, alternate years.

ENST 431 ENVIRONMENTAL POLICY ANALYSIS
This course provides a framework for navigating the complex dimensions of environmental policy and reconciling scientific information with the often divergent social values and perspectives associated with environmental issues. Students examine environmental problems at multiple scales and propose common interest solutions based on an in-depth interdisciplinary case study analysis. Prerequisite: ENST 253. Fall.

ENST 452 ECOSYSTEMS AND THE ENVIRONMENT
This course focuses on the controls and dynamics of ecosystem function and community structure. A central theme in this course is to apply the concepts learned to human-caused environmental problems such as global climate change, industrial farming, loss of biodiversity, invasion by nonnative species, and acid rain. Prerequisite: ENST 252. Fall.

ENST 460 GROUNDWATER IN THE ENVIRONMENT
Examines the occurrence and movement of groundwater as it relates to the hydrologic cycle, the environment and ecosystems, water resources, and the transport and fate of contaminants. Theoretical and practical aspects. Three-hour lecture, three-hour lab. Field trips may be required. Prerequisite: ENST 251 or INGEOL 151. MATH 151 and PHYS 141 are desirable but not required. Fall, alternate years.

ENST 490 ADVANCED SPECIAL TOPICS
1-4 credits
Study of selected topics related to environmental studies at an advanced level. May be repeated as topics change. May be cross-listed with BIO 490, CHEM 490, ECON 490, GEOG 490, GEOL 490, TDS 490, or other courses as appropriate, depending on topic. Applicability to satisfying general education distribution requirements depends on the area with which the particular topic is cross-listed. Occasionally.

ENST 494 ADVANCED COOPERATIVE EDUCATION
1-6 credits
Sequential work-learning experience for which compensation may be received. Positions arranged by students, with sponsorship, approval, and evaluation by full-time faculty. Elective credit (normally 120 hours per credit) for a total of 12 credits per degree program. Prerequisites: ENST 294, 2.0 cumulative GPA, declaration of major, and permission of instructor. May be repeated for credit. Graded Pass/Fail.

ENST 495 SENIOR SEMINAR
In this capstone course, students explore in-depth environmental issues, integrating science, and policy aspects. Completing the research project developed in ENST 395, students further enhance their research, critical thinking, and oral and written communication skills. The seminar prepares students for professional careers or postgraduate opportunities. Prerequisites: ENST 395. Fall.

ENST 498 INDEPENDENT STUDY
1-6 credits
Advanced work in various fields of environmental science through individual reading, writing, laboratory work, and/or field investigation. Requires research project and a written report. One-hour conference. May be repeated for a total of 6 credits.

Film
IAFILM 150 INTRODUCTION TO DIGITAL VIDEO PRODUCTION
This course provides an introduction to basic filmmaking technique, aesthetics, and skills in digital media management through production of digital video projects. Students gain an understanding of the art of narrative filmmaking through emphasis on story development, cinematography, editing, directing, and sound design. Course participation demands outside-class production time.

IAFILM 330 SCREENWRITING
This course introduces students to the fundamentals of writing a feature-length film narrative in a proper screenplay form. Class is conducted as a series of workshops in which students study several different types of screenplays, and then do a series of projects that prepares students to write original scripts. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Fall, Spring.
**IHFILM 260 INTRODUCTION TO FILM ANALYSIS**

This course is designed to equip students with the tools necessary to become critically aware and capable film viewers by introducing elements of film form, processes of textual analysis, a variety of cinematic techniques used in narrative and non-narrative cinema, and other models of critical analysis used in film criticism. Not open to students who have completed FILM 270. **Fall, Spring.**

**IHFILM 261 INTRODUCTION TO FILM HISTORY**

This course examines the history of narrative film's technical, aesthetic, industrial, and social development within an international context, particularly in relation to wider cultural and political movements. Film screenings and frequent writing assignments are employed to encourage critical skills in terms of cinema aesthetics and cultural criticism. Not open to students who have completed IH FILM 260. **Fall, Spring.**

**IHFILM 310 WOMEN AND CINEMA**

Presenting the works of women film- and video makers in the social, economic, and historical contexts of their production and reception, this course develops a critical understanding of women's concerns in a transnational world. Prerequisite: 24 credits in ISP courses, including ITW 101 and IQL 101. **Spring.**

**IHFILM 320 MOVEMENTS IN WORLD CINEMA**

Addresses major issues in thinking about both national and international cinema in the context of globalization. By examining "global Hollywood" movies and international art cinema as well as transnational film genres, the course explores critical approaches to the intensifying flows of ideas and influences in world film culture. Prerequisite: 24 credits in ISP courses, including ITW 101 and IQL 101. **Fall.**

**FILM 240 INTRODUCTION TO DIGITAL MEDIA MANAGEMENT**

2 credits

The students will be introduced to the basic terms, concepts, and techniques involved in the postproduction of film and video projects. The class is comprised of lecture, demonstration, and in-class exercises. All editing is performed on the Avid Xpress DV platform. Prerequisite: For Film majors only or permission of instructor.

**FILM 250 FILM PRODUCTION I**

Introduction to basic filmmaking technique, structure, and aesthetics through production of video projects. Students gain skills in narrative filmmaking through emphasis on story, cinematography, editing, and directing. Course participation demands outside-class production time and either ownership of or access to a digital video camera. Prerequisite: FILM 240 (may be taken concurrently). For Film majors only. **Fall, Spring.**

**FILM 259 FILM STUDIES CREDIT**

1 credit

With approval of the faculty member concerned, a student may earn credit for film archival work, indexing and repair, or for participation in a faculty-directed film production. May be repeated for credit. By permission only. Graded Pass/Fail. **Fall, Spring.**

**FILM 270 INTRODUCTION TO FILM ANALYSIS**

This course is designed to equip students with the tools necessary to become critically aware and capable film viewers by introducing elements of film form, processes of textual analysis, a variety of cinematic techniques used in narrative and non-narrative cinema, and other models of critical analysis used in film criticism. For Film majors only. Not open to students who have completed IH FILM 260. **Fall, Spring.**

**FILM 271 INTRODUCTION TO FILM HISTORY**

This course examines the history of narrative film's technical, aesthetic, industrial, and social development within an international context, particularly in relation to wider cultural and political movements. Film screenings and frequent writing assignments are employed to encourage critical skills in terms of cinema aesthetics and cultural criticism. For Film majors only. Not open to students who have completed IH FILM 261. **Fall, Spring.**

**FILM 290 SPECIAL TOPICS**

An exploration of areas not covered by the regular curriculum. Content depends on available faculty and resident artists. May be repeated for credit.

**FILM 294 COOPERATIVE EDUCATION**

1-8 credits

Introductory work-learning experience in film and video production, distribution, exhibition, or preservation, for which compensation may be received. Positions arranged by students, with sponsorship, approval, and evaluation by full-time faculty. Elective credit only (normally 120 hours per credit) for a total of 12 credits per degree program. Prerequisites: 24 total credits earned, 2.0 cumulative GPA, and permission of instructor. Graded Pass/Fail.
FILM 298 INDEPENDENT STUDY
1-8 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Consent required of the instructor who will supervise the independent study. May be repeated for a total of 6 credits.

FILM 350 FILM PRODUCTION II
Study of 16mm synchronous-sound, non-dialogue black-and-white film emphasizing preplanning, script writing, and development, and pursuing advanced directing, cinematography, editing, and sound issues. Participation demands significant outside-class production time and substantial student financial output. Films should be produced by teams of two; prearranged partnerships are encouraged. Prerequisites: Grade B or higher in FILM 250 (or equivalent) and permission of instructor. Must be taken concurrently with FILM 351. Film Production Option students only. Fall, Spring.

FILM 351 INTERMEDIATE PRODUCTION STUDIO
Film production studio emphasizing hands-on equipment, facilities, and technique demonstrations. Prerequisites: Grade of B or better in FILM 250 (or equivalent) and instructor's permission. Must be taken concurrently with FILM 350. Film Production Option students only. Fall, Spring.

FILM 352 TOPICS IN FILM STUDIES
Examines a body of narrative and/or non-narrative films related by virtue of theme, director, country, or period from historical and theoretical perspectives. May be repeated for credit as topics change. Prerequisites: FILM 270 and FILM 271, or permission of instructor. Fall, Spring.

FILM 353 CINEMA AND DIVERSITY
This course invites students to consider films in their social, economic, and historical contexts of production and reception. By surveying key critical ideas, students will recognize political issues in filmic representations and gain an understanding of how power functions in the reproduction of social boundaries and cultural differences through cinema. Prerequisite: FILM 270 and FILM 271. Fall.

FILM 355 FILM THEORY
The study of major film theories and their application to specific films. Formalist, structural, and ideological theories are covered. Prerequisites: FILM 271, and FILM 353, or permission of instructor. Spring.

FILM 440 ADVANCED PRODUCTION TECHNIQUES
Exploration of film production areas not usually addressed through the regular curriculum. Specific topics and techniques covered vary. May be repeated for credit. Prerequisites: FILM 350 and permission of instructor. Fall, Spring.

FILM 450 FILM PRODUCTION III
4 credits
First semester of yearlong course emphasizing preproduction for all crew positions toward production of 30-minute sync-sound, dialogue, 16mm color project. Participation demands substantial student financial output. Films should be produced in crews of seven to 10; prearranged crews are encouraged. May be retaken once for a total of 8 credits with instructor's permission. Prerequisites: Grade B or higher in FILM 350 or FILM 351 (or equivalent) and permission of instructor. Fall.

FILM 451 FILM PRODUCTION IV
Second semester of yearlong course emphasizing preproduction for all crew positions toward production of 30-minute sync-sound, dialogue 16mm color project. Participation demands substantial student financial output. Films are designed to be produced in crews of seven to 10; prearranged crews are encouraged. May be retaken once for a total of 8 credits with instructor's permission. Prerequisites: FILM 450 and permission of instructor. Fall.

FILM 460 DIRECTING THE ADVANCED FILM PROJECT I
This course is designed to give an advanced production student experience directing the annual yearlong advanced project. Students will select his or her crew and fully preproduce the film, guiding the project and crew through the first (preproduction) semester of the course. Students will work closely with the instructor outside of class to fully prepare the project and facilitate communication between crewmembers. Prerequisites: Film Production Option students only, FILM 451, and permission of instructor.

FILM 461 DIRECTING THE ADVANCED FILM PROJECT II
This course is designed to give an advanced production student experience directing the annual yearlong advanced project. Students will continue the process initiated in FILM 460 by producing and postproducing an advanced film or video project, guiding the project and crew through the second semester of the course. Students will work closely with the instructor outside of class to fully prepare the project and facilitate communication. Prerequisites: Film Production Option students only, FILM 460, and permission of instructor.
FILM 490 ADVANCED SPECIAL TOPICS
An exploration of areas not covered by the regular curriculum. Content and prerequisites depend on available faculty and resident artists. May be repeated for credit.

FILM 495 SEMINAR
Intensive study of a particular theme or topic relating to film or film production. May be repeated for credit as topics change. Prerequisites: Junior standing and FILM 270, 271, and FILM 353, or permission of instructor. Fall, Spring.

FILM 498 INDEPENDENT STUDY
1-8 credits
Intensive study of an issue, problem, or topic related to film or film production. May be repeated for a total of 6 credits. Prerequisites: Junior standing and permission of instructor.

FILM 499 SENIOR RESEARCH PROJECT
Culminating course for critical studies in film. Under the guidance of a faculty member, students develop, research, and present an individualized project on a chosen historical or critical topic. Prerequisite: FILM 353 and FILM 495 or permission of instructor.

French

IHFR 100 BASIC FRENCH LANGUAGE AND CULTURE
Introduction to basic skills to communicate about personal and everyday topics and exploration of cultural diversity within the contemporary French-speaking world. For students with no prior knowledge of French. Does satisfy the Arts and Humanities language requirement. Fall, Spring, Summer.

IHFR 101 ELEMENTARY FRENCH I
Introduction to basic skills to communicate about personal and everyday topics, including informal conversations with native speakers, finding information in newspapers and on Internet sites, and exploring the contemporary French-speaking world. For students with little or no prior knowledge of French.

IHFR 102 ELEMENTARY FRENCH II
Development of skills to communicate about personal and everyday topics, including informal conversations with native speakers, finding and reading information in newspapers and on Internet sites, and exploring contemporary issues in the French-speaking world. Students should have prior knowledge of basic French.

IHFR 200 INTERMEDIATE READINGS IN FRENCH
Selected readings in French from literary texts, scholarly journals, magazines, newspapers, and websites. Class discussions are mainly in English. This course meets the Arts and Humanities language requirement and does not count for the French major. Students should have an elementary knowledge of French. Fall, Spring.

IHFR 201 INTERMEDIATE FRENCH I
Development of skills to converse with native speakers, explore contemporary issues in the French-speaking world, narrate events in present and past tenses, and read newspapers, websites, and short fiction with a dictionary. Students should have prior knowledge of elementary French.

IHFR 240 FRANCO-AMERICAN WOMEN’S VOICES
4 credits
An exploration of Franco-American culture through the lens of gender. Topics will include family structure, employment, migration patterns, Franco-American contributions to literature and music, and the factors contributing to making this ethnic minority an “invisible” population. Readings and discussion in English. Counts toward the French major, the American Studies major, and the Women’s Studies minor. Does not satisfy the Arts and Humanities language requirement. Fall, even years.

FR 190 ELEMENTARY SPECIAL TOPICS IN FRENCH
Study of selected topics in French. May be repeated as topics change. Occasionally.

FR 202 INTERMEDIATE FRENCH II
Advanced development of writing and speaking skills to discuss contemporary issues in the French-speaking world; read newspapers, websites, and short fiction; and understand French films. Students should have intermediate-level knowledge of French.

FR 290 INTERMEDIATE SPECIAL TOPICS
Study of a selected topic in French. May be repeated as topics change. Occasionally.
FR 298 INDEPENDENT STUDY
1-4 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Consent required of the instructor who will supervise the independent study and the appropriate divisional dean. May be repeated for a total of 8 credits.

FR 315 CONVERSATION IN FRENCH
The vocabulary of spoken French and guided practice to increase oral proficiency. Prerequisite: FR 202 or permission of instructor. Fall.

FR 316 COMPOSITION IN FRENCH
Study and practice of French writing styles for various purposes: journals, letters, essays, and creative pieces. Prerequisite: FR 315 or permission of instructor. Spring.

FR 325 INTRODUCTION TO FRENCH LITERATURE
A study of various critical approaches to French literature conducted in French. Prerequisite: FR 315 or permission of instructor. Fall, alternate years.

FR 330 THE FRENCH-SPEAKING WORLD
Backgrounds in French civilization and culture stressing major themes and topics necessary for understanding the contemporary Francophone world. Conducted in French. Students should have an advanced command of written and spoken French. Spring, alternate years.

FR 350 STUDY IN FRANCE OR QUEBEC
Maximum of 18 credits per semester
Study in a College-approved program. May be used to meet the Arts and Humanities language requirement. Students must meet with Modern Languages faculty for preapproval of their program of study and for an exit interview upon their return. Fall, Spring.

FR 405 CONTEMPORARY FRENCH USAGE
Advanced study of syntax, semantics, and lexicon based on actual usage in the contemporary Francophone world. Prerequisite: FR 315 or equivalent. Occasionally.

FR 410 ADVANCED FRENCH GRAMMAR
A study of contemporary French grammar and a treatment of the typical pitfalls for nonnative users of French. Prerequisite: FR 405 or permission of instructor. Occasionally.

FR 490 ADVANCED SPECIAL TOPICS
Study of a selected topic in French at an advanced level. May be repeated as topics change.

FR 495 SEMINAR
The capstone experience for French majors. Topics based on needs and interests of the group. Prerequisites: FR 405 and senior status. Spring.

FR 498 INDEPENDENT STUDY
1-4 credits
Intensive study of some aspect of French language, literature, or culture adapted to the student’s needs. May be repeated for a total of 8 credits. Prerequisite: Permission of instructor.

General Science

GS 301 THE WEB OF SCIENCE
This course provides extensive hands-on experience in a laboratory setting for elementary education majors. Students plan and teach science lessons to elementary school children. Lessons include discovery-based and inquiry-based learning. It’s an integrated natural science, content-oriented curriculum, based on the National Science Standards and New Hampshire Science Curriculum Frameworks. Prerequisites: BIO 110, BIO 111, INGEOL 151, INCHEM 103, MATH 171, MATH 172 or permission of the instructor.
Geography

ISGEOG 100 INTRODUCTION TO GEOGRAPHY
A systematic introduction to the discipline, designed to give the beginning student exposure to major topics associated with the subfields of geography. Geographic concepts and theories using real world examples will be presented in order to examine spatial information and patterns that exist on the earth. Fall, Spring.

ISGEOG 101 WORLD REGIONAL GEOGRAPHY
Introduction to the geography of the world's peoples and places. Adopting a regional perspective, the course examines the homogenizing and diversifying forces inherent among the world's countries, peoples, and physical environments. Includes resource materials for teaching geography. Students may not receive credit for both ISGEOG 101 and GEOG 105. Fall, Spring.

ISGEOG 203 THE HUMAN CULTURAL MOSAIC
Focuses on a global analysis of cultural systems, spatial patterns, and processes underlying cultural evolution, resource systems, and the impact of humans on the environment. Fall, Spring.

ISGEOG 204 PHYSICAL GEOGRAPHY
This course examines the dynamic processes that shape the Earth's landscapes. Special attention is given to weather, climate, maps, and landforms. Fall, Spring.

ISGEOG 205 ENVIRONMENTAL GEOGRAPHY
Explores the complex relationships between nature, culture, and place. Emphasis is placed on spatial aspects of human interactions with the environment resulting in serious issues, including pollution, global climate change, and resource depletion. Environmentally sustainable actions will be examined and assessed. Prerequisite: IQL 101 or ITW 101. Fall, even years.

GEOG 105 GEOGRAPHY FOR TEACHERS
A combination of world regional geography and its application in the K-12 classroom. Course is based on the five themes of geography and the national geography standards. Appropriate for both elementary and secondary preservice teachers. Not open to students who have completed GEOG 105. Fall, Spring.

GEOG 221 MAPS INTERPRETATION
The fundamentals of maps, map contents, and the theory of map reproduction, as well as an overview of the maps of the United States and other countries. Emphasis is on interpreting and analyzing map information and data. Spring.

GEOG 223 METHODS OF SPATIAL ANALYSIS
Introduction to statistical analysis in Geography. Principles learned include the use of the map as a model for statistics prediction and hypothesis testing. SPSSx computing on the PC through simulation experiments conducted in the computer lab of the Geography department. Three hour lecture, two-hour lab. Prerequisite: ISGEOG 203 or ISGEOG 204. Spring, even years.

GEOG 290 SPECIAL TOPICS
1-4 credits
Study of a selected topic in Geography. May be repeated as topics change. Occasionally.

GEOG 294 COOPERATIVE EDUCATION
1-4 credits
Introductory work-learning experience related to career interests for which compensation may be received. Placements arranged, supervised and evaluated by a full-time faculty. Elective credit only (normally 120 hours per credit) for a total of 8 credits per degree program. Prerequisites: 24 total credits earned, 2.0 cumulative GPA, and permission of instructor. Graded Pass/Fail. Fall, Spring.

GEOG 298 INDEPENDENT STUDY
1-4 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Prerequisite: Permission of the instructor who will supervise the independent study. May be repeated for a total of 4 credits. Occasionally.

GEOG 303 THE POLITICS OF PLACE
Provides a systematic introduction to the geographical dimensions of political systems, with emphasis on the physical environment, economic and cultural systems, location, resources, and political patterns. Spring, odd years.
GEOG 304 POPULATION GEOGRAPHY
Global demographic analysis of birth rates, death rates, and migration rates. Provides a spatial, temporal, and structural investigation of the relationship between demographic and cultural, economic, and environmental factors. Prerequisite: ISGEOG 203 or ISGEOG 204. Spring, odd years.

GEOG 305 THE GLOBAL ECONOMY
Analysis of the world economy from the spatial perspective, emphasizing resources, location, trade, and development. Attention is focused on population issues; the primary, secondary, and tertiary sectors; development and underdevelopment issues, environmental relationships, and the global economy. Prerequisite: 4 credits in Geography. Fall, even years.

GEOG 307 URBAN GEOGRAPHY & PLANNING
Combines attention to urbanism, growth of cities, morphological theories of urbanization, and modern urban problems with theory and methods of land use planning. Emphasis is placed on concepts, principles, and practices of land analysis and evaluation of planning and design. Prerequisite: 4 credits in Geography. Spring, odd years.

GEOG 321 GEOSPATIAL TECHNOLOGY FOR K-12
Exploration of geospatial technologies such as Geographic Information Systems (GIS), Global Positioning Systems (GPS), and Remote Sensing and their applications in the K-12 classroom. Emphasis is on geospatial technology skills and its associated K-12 pedagogy. This course is only recommended as one of the required skills courses for teacher certification candidates. Prerequisite: One course in Geography. Spring.

GEOG 323 CARTOGRAPHY AND SURVEYING
Fundamental and modern techniques of surveying and map making. Three-hour lecture, three-hour lab. Fall, alternate years.

GEOG 324 VECTOR GIS
This vector-based Geographic Information Systems (GIS) course provides an introduction to the fundamental components of GIS. Lecture and lab-based instruction emphasize data input, manipulation, and production of maps for geographic analysis. Prerequisite: GEOG 204 or GEOG 221. Fall.

GEOG 325 CARTOGRAPHIC DESIGN AND ANALYSIS
Analysis of statistical geographical data is used to design and produce publishable maps with computer programs. Three-hour lecture, two-hour lab. Prerequisite: GEOG 204 or GEOG 221. Fall, even years.

GEOG 326 RASTER GIS
The raster-based Geographic Information Systems (GIS) IDRISI is used to manage databases, process remotely sensed images, and produce a geographic analysis. Three-hour lecture, two-hour lab. Prerequisite: GEOG 204 or GEOG 221. Spring.

GEOG 327 ENVIRONMENTAL REMOTE SENSING
The basics of aerial photography and remote sensing and the identification and analysis of objects. Imagery of low as well as high altitude is interpreted. Spring, odd years.

GEOG 330 NATURAL RESOURCE MANAGEMENT
Examination of the use and management of renewable and nonrenewable resources, including patterns of assessment, conservation policies and practices, and human impact on the environment. Resources discussed include land, water, air, forests, wilderness, and recreation from an international perspective. Prerequisites: ENST 120 and 4 credits in Geography. Fall, even years.

GEOG 332 GLOBAL WATER RESOURCES
Spatial investigation of the social, political, and environmental consequences of water resources development and use. Case studies used to compare hydrologic conditions, social institutions, and hydropolitics in watersheds around the world. Emphasis is on emerging global change (e.g., population and climate). Prerequisite: ENST 120 or ISGEOG 204 or permission of instructor. Spring, even years.

GEOG 340 TOPICS IN REGIONAL GEOGRAPHY
A systematic analysis of the physical, social, and economic resources of the region under study. Focuses on historical development, physical and cultural diversity, natural resources, demographic trends, spatial interaction, the environment, and prospects for growth. May be repeated as topics change. Spring, Fall.

GEOG 341 GEOGRAPHY OF THE U.S. AND CANADA
Examines the complex mosaic of peoples and places that make up the United States and Canada. A systematic analysis of the physical, environmental, cultural, political, and economic aspects of the North American region using a geographic perspective. Spring.
GEOG 371 GEOGRAPHY FIELD STUDIES
1-8 credits
Off-campus field study. Themes include aspects of physical and/or cultural Geography depending on the expertise of the instructor and the areas under observation. Course may be repeated for a maximum of 16 credits, only 8 of which are applicable toward the major in Geography. Prerequisite: Permission of instructor. Fall, Spring.

GEOG 395 SEMINAR I
An in-depth analysis of geographic literature and research. Stresses research methodologies and design, survey analysis, report preparation, and oral presentations of research. Develops critical analysis and critical thinking skills in Geography. Prerequisites: IQL 101 and 12 credits of Geography at the 200-level or above. GEOG 324 or GEOG 325 is recommended. Spring.

GEOG 424 ADVANCED GIS
Builds on existing Geographic Information System skills to explore a range of topics using current software. Students learn tools for representing and analyzing vector, raster, network, and 3-D data, while examining the theoretical contributions of GIScience. Emphasis on spatial data creation, editing, modeling, and programming. Prerequisite: GEOG 324. Spring.

GEOG 490 ADVANCED SPECIAL TOPICS
1-4 credits
Individual study and discussion of selected topics in Geography under direction of a faculty member. Prerequisites: GEOG 203 or 204 and permission of instructor. Occasionally.

GEOG 494 ADVANCED COOPERATIVE EDUCATION
1-6 credits
Sequential work-learning experience related to career interests (compensation is allowed). Placements are arranged with and approved, supervised, and evaluated by full-time faculty. Elective credit only (normally 120 hours per credit). Prerequisites: GEOG 294, 2.5 cumulative GPA, and permission of instructor. May be repeated for a total of 12 credits. Graded Pass/Fail. Fall, Spring.

GEOG 495 SEMINAR II
The capstone course stressing integration and application of geographic studies and research. Focus on quantitative and qualitative methodologies and skills necessary for pursuing a Geography-related career. Culminates with the design and implementation of a major career-oriented research project. Prerequisites: Grade C or higher in GEOG 395. Fall.

GEOG 498 ADVANCED INDEPENDENT STUDY
1-4 credits
Exploration of a major area of Geography under direction of a Geography faculty member. Topics contingent on student interest and available staff. Prerequisite: ISGEOG 100, ISGEOG 203, ISGEOG 204, and permission of instructor. May be repeated for a total of 4 credits. Fall, Spring.

GEOG 571 GEOGRAPHY FIELD STUDIES
1-8 credits
Off-campus field study. Themes include aspects of physical and/or cultural Geography depending on the expertise of the instructor and the areas under observation. A research project is required. Prerequisite: Permission of instructor. Fall, Spring.

Geology

INGEOL 110 EARTH SYSTEMS SCIENCE
An overview of earth's systems (geosphere, atmosphere, hydrosphere, and biosphere) and their interactions. Includes a survey of earth materials, internal and external processes, global cycles (carbon, water), and feedback loops between humans and earth's systems. Environmental and resource issues are addressed. Includes an integrated laboratory component. Fall, Spring, Summer.

INGEOL 151 PHYSICAL GEOLOGY
An overview of the earth. Includes description and origin of minerals and rocks, internal and external processes and recognition of the landforms they produce, global cycles (carbon, water), and feedback loops between humans' and earth's systems. Environmental and resource issues are addressed. Three-hour lecture, two-hour lab. Required field trips. Fall, Spring.

INGEOL 300 GEOSCIENCE ISSUES AND SOCIETY
A course focusing on the cause and effect of geologic processes that impact society. Content may vary, but includes earthquakes, tsunamis, floods, volcanic activity, resource issues, and the geologic record of climate change. Students are expected to closely monitor popular media to document current geologic events and their effects. Prerequisites: 24 credits in ISP, including ITW 101, IQL 101, and one course from the IS category. Occasionally.
INGEOL 320 EARTH’S CLIMATE: PAST AND FUTURE
The tools of climatic science are used to investigate the evidence and mechanisms for earth’s climatic change throughout geologic time. Includes climate classification and reasons for climate, climate forcing mechanisms, anthropogenic forcing, the global-warming crisis, and potential remedies. Combined lecture/lab. Prerequisites: 24 credits in ISP, including ITW 101 and IQL 101. Occasionally

GEOL 100 PERSPECTIVES OF THE EARTH
An overview of earth’s systems (geosphere, atmosphere, hydrosphere, and biosphere) and their interactions. Includes a survey of earth materials, internal and external processes, global cycles (carbon, water), and feedback loops between humans’ and earth’s systems. Environmental and resource issues are addressed. Fall, Spring.

GEOL 206 OCEANOGRAPHY
Introduction to ocean science emphasizing waves, tides, coastal marginal processes, marine sediments and resources, the importance of technology in ocean studies, and the origin of the ocean basins through plate tectonics. Some coverage of ocean chemistry and biota. Fall.

GEOL 252 EVOLUTION OF THE EARTH
Introduction to Earth history and the processes that have shaped the Earth since its formation. Topics include absolute and relative correlations, plate tectonics, and the origin and evolution of the lithosphere, biosphere, and atmosphere. Three-hour lecture, two-hour lab. Required weekend field trip(s). Prerequisite: INGEOL 151. Spring.

GEOL 290 TOPICS
1-4 credits
Exploration and analysis of topics of geology, such as plate tectonics, environmental geology, and geologic history of particular terrains. Prerequisite: Permission of instructor. Occasionally.

GEOL 298 INDEPENDENT STUDY
1-4 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Consent required of the instructor who will supervise the independent study. May be repeated for a total of 8 credits.

GEOL 301 MINERALOGY
Introduction to crystallography, physical and chemical nature of minerals, and description and hand-specimen recognition of important economic and rock-forming minerals and mineral associations. Introduction to the petrographic microscope. Three-hour lecture, three-hour lab. Required weekend field trips. Prerequisite: INGEOL 151 or permission of instructor. Fall, odd years.

GEOL 302 IGNEOUS AND METAMORPHIC PETROLOGY
The origin, occurrence, and classification of igneous and metamorphic rocks. Hand-specimen and thin section techniques are emphasized. Three-hour lecture, three-hour lab. Required weekend field trips. Prerequisite: GEOL 301 and CHEM 111. Spring, even years.

GEOL 305 PALEONTOLOGY
The description, classification, and uses of invertebrate fossils, including their spatial and stratigraphic distribution, evolution, and paleoecology. Three-hour lecture, three-hour lab. Prerequisite: GEOL 252 or permission of instructor. Spring, even years.

GEOL 306 SEDIMENTATION AND STRATIGRAPHY
Principles of sedimentation and stratigraphy, properties and classification of modern sediments and sedimentary rocks, sedimentary processes and environmental analysis, stratigraphic procedures and correlations, and stratigraphic relationships of North America. Three-hour lecture, three-hour lab. Required weekend field trips. Prerequisite: GEOL 252 or permission of instructor. Fall, even years.

GEOL 309 GEOMORPHOLOGY
Nonglacial surface processes. The evolution of landforms and the influence of lithology, tectonics, and climate on landforms. Surface processes related to land use and environmental planning. Labs involve interpreting topographic and geologic maps, field projects. Three-hour lecture, three-hour lab. Prerequisite: INGEOL 151 or permission of instructor. Fall, odd years.

GEOL 310 GLACIAL GEOLOGY
Study of the mechanics of glacial origin and movement, characteristics of existing glaciers, and an interpretation of Pleistocene glacial features. Emphasizes the glacial topography of northeastern North America, with special attention to New Hampshire examples of alpine and continental glaciation. Three-hour lecture, three-hour lab. Required weekend field trips. Prerequisite: GEOL 309 or permission of instructor. Spring, odd years.
GEOL 315 ENVIRONMENTAL GEOLOGY
Examines the relationships between humans and our geological environment, including resources, hazards, and human impacts. Field methods in obtaining geologic information for resource evaluation and protection, risk reduction, and environmental remediation. Three-hour lecture, two-hour lab. Required field trips. Prerequisites: INGEOL 151. Cross-listed as ENST 315. Fall, alternate years.

GEOL 403 STRUCTURAL GEOLOGY
Study of the structural features of rock bodies and the interpretation of these features in terms of the forces that caused them, methods of geological field work, graphic representation of geological field data, interpretation of geological maps, and preparation of field reports. Three-hour lecture, three-hour lab. Required weekend field trips. Prerequisites: GEOL 252 and 4 credits in Geology at the 300-level or higher, or permission of instructor. Spring, odd years.

GEOL 412 ENVIRONMENTAL GEOCHEMISTRY
Examination of the principles and mechanisms governing distribution of the chemical elements and their isotopes in natural environments, with application to selected problems and geochemical analysis research projects. Three-hour lecture, three-hour lab. Required field trips. Prerequisites: INGEOL 151, CHEM 112, and PHYS 142 or PHYS 242, or permission of instructor. Spring, even years.

GEOL 460 HYDROGEOLOGY
Occurrence and movement of groundwater as it relates to the hydrologic cycle, water resource evaluation (well hydraulics), and transport and fate of contaminants. Theoretical and practical aspects, including computer modeling. Three-hour lecture, two-hour lab. Field trips may be required. Prerequisites: INGEOL 151, MATH 151, and PHYS 141 or PHYS 241, or permission of instructor. Spring, odd years.

GEOL 490 ADVANCED SPECIAL TOPICS
1-4 credits
Study of a selected topic in Geology at an advanced level. May be repeated for a total of 8 credits as topics change. Prerequisite: Permission of instructor. Frequently.

GEOL 498 INDEPENDENT STUDY
1-4 credits
Advanced study of various fields of Geology through individual reading, writing, laboratory work and/or field investigation; involves a research project and submission of a written report. May be repeated for a total of 8 credits. Fall, Spring.

German

IHGER 101 ELEMENTARY GERMAN I
Introduction to basic skills to communicate about personal and everyday topics, including informal conversations with native speakers, finding information in newspapers and on Internet sites, and exploring contemporary German-speaking Europe. For students with no prior knowledge of German.

IHGER 102 ELEMENTARY GERMAN II
Development of skills to communicate about personal and everyday topics, including informal conversations with native speakers, finding and reading information in newspapers and on Internet sites, and exploring contemporary issues in German-speaking Europe. Students should have prior knowledge of basic German.

IHGER 201 INTERMEDIATE GERMAN I
Development of skills to converse with native speakers, explore contemporary issues in German-speaking Europe, narrate events in present and past tenses, and to read newspapers, websites, and short fiction with a dictionary. Students should have prior knowledge of elementary German.

IHGER 202 INTERMEDIATE GERMAN II
Advanced development of writing and speaking skills to discuss contemporary issues in German-speaking Europe; read newspapers, websites, and short fiction; and understand German films. Students should have intermediate-level knowledge of German. Spring only.

GER 290 INTERMEDIATE SPECIAL TOPICS
Study of a selected topic in German. May be repeated as topics change. Occasionally.

GER 298 INDEPENDENT STUDY
1-4 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Consent required of the instructor who will supervise the independent study. May be repeated for a total of 8 credits.
**GER 315 CONVERSATION AND COMPOSITION**
Review and practice aimed at increasing listening and speaking proficiency. Practice in writing German: essays, narratives, and creative pieces. Prerequisite: GER 202 or equivalent. Fall only.

**GER 350 STUDY IN GERMANY OR AUSTRIA**
Maximum of 18 credits per semester
Study in a College-approved program. May be used to meet the Arts and Humanities language requirement. Students must meet with Modern Languages faculty for preapproval of their program of study and an exit interview upon their return.

**GER 498 INDEPENDENT STUDY**
1-4 credits
Intensive study of some aspect of German language, literature, or culture adapted to the student’s needs. May be repeated to a maximum of 8 credits. Prerequisite: permission of instructor.

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### Health Science

**IIHLSC 350 WOMEN AND HEALTH: WITCHES, HARLOTS, AND HEALERS**
A survey of women's health from the biological, social, economic, and political perspectives, drawing from the interdisciplinary field of health science. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101.

**IIHLSC 445 HUMAN SEXUALITY**
An interdisciplinary examination of human sexual development and behavior, including reproduction, sexual anatomy, psychosexual development, sexual socialization, values, and various forms of sexual expression. This course will explore human sexuality from biological, cultural, legal, and political perspectives. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Fall, Spring.

**HLSC 101 HEALTH AND WELLNESS**
An overview using a balanced, integrated, holistic model of health and an exploration of the dimensions of wellness. Focus on self-assessment, development of critical thinking, and behavior change skills to facilitate personal awareness and well being. Fall, Spring.

**HLSC 115 NUTRITION AND WELL BEING**
Introduction to nutrients and their relationship to individual well being. Health issues associated with diet and nutrition, lifestyle choices, and the role of nutrition for a healthy person. Assessing nutrient intake and strategies for making informed choices are presented. Prerequisite: Freshman or sophomore standing or permission of instructor. Fall, Spring.

**HLSC 125 NUTRITION AND THE PROFESSION**

**HLSC 200 ALCOHOL AND OTHER DRUGS: THE FUNDAMENTALS**
An introduction to alcohol and other drugs and their biophysical effects across the lifespan. Topics include the history and classification of drugs; the physical, cognitive, emotional, and societal impact of psychoactive substances; levels of use; poly substance abuse; and addiction liability. Prerequisites: Health Science majors, Substance Abuse/Addictions minors, or Criminal Justice minors, or by permission only. Fall, Spring.

**HLSC 203 INTRODUCTION TO MEDITATION**
1 credit
Students will experience the basic forms of mindfulness meditation – awareness of breath, body, sounds, thoughts, and feelings – mindfulness while doing yoga, and loving-kindness meditation. Students will experience various informal practices: mindfulness while eating, walking, and conversing, and doing routine activities. A focus on reducing stress is interwoven into the course. Pass/Fail. Cross-listed as EDUC 203.

**HLSC 214 NUTRITION FUNDAMENTALS**
Understanding nutrition concepts and its practical application. Review of digestion, absorption, utilization, and function of the macronutrients and micronutrients with emphasis on using food for disease prevention and wellness. Additional topics: energy metabolism, eating disorders, and sports nutrition. Prerequisites: HLSC 101 and BIO 230. Fall, Spring

**HLSC 215 NUTRITION SCIENCE AND APPLICATION**
Principles of nutrition, including macro- and micronutrients and their functions, DRIs, and assessment of nutritional status and dietary patterns are explored. In-depth review of digestion, absorption, utilization, and function of nutrients, with emphasis on using food for disease prevention and wellness. Concepts and skills are developed through an integrated lab. Prerequisites: HLSC 125, BIO 230, and Nutrition option only. Fall, Spring.
HLSC 216 CURRENT TOPICS IN FOOD CULTURE
Introduction to the effects of economic, cultural, aesthetic, and sociopsychological factors related to food and nutrition. Analysis of contemporary issues related to food, people, and culture. Prerequisite: HLSC 125 or HLSC 214. Fall, Spring.

HLSC 285 HEALTH IN SOCIETY
An introduction to the social, cultural, economic, environmental, and political factors that affect health. Topics of social justice and ethics will be explored. Prerequisites: HLSC 101, PSYC 101, or ISPSYC 100; sophomore or junior standing only; and Health Science majors only. Fall, Spring.

HLSC 290 TOPICS IN HEALTH SCIENCE
Study of a selected topic in Health Science. May be repeated as topics change. Prerequisites vary as topics change. Occasionally.

HLSC 298 INDEPENDENT STUDY
1-6 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Consent required of the instructor who will supervise the independent study. May be repeated for a total of 6 credits. Fall, Spring.

HLSC 305 EPIDEMIOLOGY IN HEALTH SCIENCE
An introduction to the basic principles and methods of epidemiology and their applicability in the field of Health Science. Students will examine factors governing health and disease in populations. Skills will be introduced to critically interpret the epidemiologic literature relevant to health professionals. Prerequisites: HLSC 285 and IQL 101 or permission of instructor. Fall, Spring.

HLSC 310 FOOD SCIENCE
Introduction to physical and chemical changes in ingredients and nutrients during food preparation and storage. Experimentation through manipulation of food variables. Development of professional skills: menu design, food preparation, recipe modification, nutrient analysis, culinary techniques, and economics of nutrition management. Prerequisites: HLSC 215, HLSC 216, and INCHEM 103. Fall, Spring.

HLSC 313 FOOD SERVICE MANAGEMENT
Theory and integrated practice in management of planning, directing, and coordinating food service systems. Topics: menu design, purchasing, inventory, food production and service, finances, personnel management, space or equipment layout and use, and food safety or sanitation certification. Application of principles through service-learning field experiences. Prerequisite: HLSC 125. Fall, Spring.

HLSC 318 NUTRITION THROUGHOUT THE LIFESPAN
Comprehensive examination of nutritional requirements, physiological demands, and health concerns from preconception through late adulthood. Challenges posed by physical and psychological growth, development, and lifelong wellness are discussed. Nutrition assessment, intervention, and evaluation of individuals, groups, and communities are addressed. Integrated application of skills through community-based observations. Prerequisites: HLSC 214 or HLSC 215. Fall, Spring.

HLSC 320 NUTRITION, FITNESS, AND HEALTH
2 credits
The relationship between physical fitness and nutrition is examined. The effects of diet on physical performance and misconceptions surrounding food, fluids, and supplements are studied. The role of nutrition in enhancing performance, achieving desired caloric balance, and preventing disease and injury is analyzed. Prerequisites: HLSC 214 or HLSC 215. Odd years.

HLSC 330 HEALTH PSYCHOLOGY
A biopsychosocial examination of the factors underlying health and disease. Students explore these factors in relation to health promotion, health compromising and enhancing behaviors, stress management, coping strategies, use of health services, addictive behaviors, pain management, and coping with disease. Prerequisites: PSYC 101 or ISPSYC 100, HLSC 285, HLSC major, or permission of instructor. Fall, Spring.

HLSC 365 EXERCISE SCIENCE AND APPLICATION
2 credits
Fundamentals of exercise physiology and basic design and implementation of physical activity or exercise programs for apparently healthy adults and those with chronic conditions. Discussion of lifestyle and health factors on activity behavior. Prerequisites: HLSC 214 or HLSC 215. Fall, Spring.

HLSC 380 ADDICTION AND COMPULSIVE BEHAVIORS
4 credits
The analysis of drug use, abuse, dependence, and other compulsive behaviors through theoretical perspectives and models, including the Public Health model, family systems, and sociocultural and psychological perspectives. Drug research and evidence based practices are examined. Prerequisites: HLSC 101 and PSYC 101 or ISPSYC 100, or permission of instructor; junior standing or above; Health Science majors or Substance Abuse/Addictions minors only. Fall, Spring.
HLSC 382 ADDICTION COUNSELING AND CASE MANAGEMENT
Overview of addiction counseling and case-management service coordination. Students integrate knowledge from both research and practice to develop professional helping relationships with individuals, groups, and families dealing with chemical abuse and dependency. Prerequisites: HLSC 200 and HLSC 380. Annually.

HLSC 385 BEHAVIOR CHANGE FACILITATION
Expands on knowledge and skills of the behavioral change process. Students analyze and apply behavior or education theories appropriate for diverse population groups. Interviewing, assessment, and motivation skills are enhanced. Students develop and implement a behavioral change-based project for a community audience. Prerequisites: HICOMM 171, HLSC 285, HLSC 380, and one from the following: HLSC 200, HLSC 318, PSYC 311, or PSYC 314. Fall, Spring.

HLSC 386: CHEMICAL DEPENDENCY DIAGNOSIS AND TREATMENT
An introduction to the application and practice of drug-abuse and addiction screening, assessment, diagnosis, and an overview of treatment. Topics include treatment modalities, treatment planning, interviewing strategies, and referral techniques. Prerequisite: HLSC 382 or permission of instructor. Fall, Spring.

HLSC 410 EXPERIMENTAL FOODS
2 credits
Introduction to food research methods and technical writing. Experimental investigation of the chemical and physical reactions involved in food preparation, sensory and objective testing of food quality, and food product formulation. Prerequisite: HLSC 310. Fall, Spring.

HLSC 415 NUTRITIONAL BIOCHEMISTRY
In-depth analysis of digestion, absorption, transport, and intermediary nutrient metabolism. Review and analysis of research methodologies. Integrated lab to develop skills in critiquing current literature while researching, designing, and delivering a professional seminar on a micronutrient. Prerequisites: HLSC 215, BIO 240, and CHEM 220. Fall.

HLSC 416 MEDICAL NUTRITION THERAPY

HLSC 431 STRESS MANAGEMENT
Examination of the nature of stress from biopsychosocial perspectives. A variety of stress-management practices are explored, including coping strategies and relaxation techniques. Prerequisite: Health Promotion and Fitness option or permission of instructor. Spring.

HLSC 472 ADVANCED PRACTICUM: EXERCISE SCIENCE
3-12 credits
A supervised experience designed to provide the advanced student with an applicable exposure to career opportunities in Exercise Science. Planning and supervising selected activities appropriate to the assigned work site. Prerequisite: HLSC 372 or permission of instructor. Fall, Spring.

HLSC 473 PRACTICUM: NUTRITION
Supervised field experience in community, clinical, or food-service management environments providing nutrition, health, and/or wellness practice opportunities for the advanced student. Hands-on experience aimed at developing critical professional skills in the application of theory to practice. Prerequisites: HLSC 313, HLSC 318, and HLSC 385. Fall, Spring.

HLSC 474 PRACTICUM: COMMUNITY HEALTH
Supervised field experience in community health for the advanced student. Hands-on experience aimed at developing professional skills in the application of theory to practice. Prerequisites: HLSC 305, HLSC 385, and permission of instructor. Occasionally.

HLSC 485 HEALTH PROMOTION PRACTICE
Development of planning, implementation, evaluation, and management skills to effectively deliver health promotion programming. Application of theory to practice, including community-based assessment, risk management, financial planning, quality assurance, marketing, and personnel management. Prerequisites: HLSC 385. Fall, Spring.

HLSC 489: DRUG ABUSE PREVENTION
Current topics in chemical dependency prevention, including the examination of theories and methods in alcohol and other drug prevention. Application and evaluation of contemporary techniques, models, and methods. Prerequisite: HLSC 380. Alternate years.
HLSC 490 ADVANCED SPECIAL TOPICS
1-4 credits
Study in an area of Health Science beyond that provided in other courses. May be repeated as topics change. Prerequisite: Varies with topic. Fall, Spring.

HLSC 491 ADVANCED DRUG TREATMENT METHODS
Examination of new or developing theories, methods, models, techniques, and/or concepts in alcohol and other drug treatment. Prerequisite: HLSC 386. Alternate years.

HLSC 492 INTERNSHIP IN SUBSTANCE ABUSE AND ADDICTIONS
4-8 credits
Field-based internship opportunity for students to apply theory, strategies, interventions, and knowledge learned in the classroom. Prerequisites: HLSC 386, HLSC 489, or HLSC 491, and application completion with permission of instructor. Fall, Spring.

HLSC 494 HEALTH SCIENCE CAPSTONE
This senior level class is designed to integrate, examine, and enhance the knowledge, skills, and attitudes learned throughout the Health Science major. It provides academic and professional development activities including the completion of a senior portfolio. Prerequisites: HLSC 385, Health Science major with senior standing, or permission of instructor. Fall, Spring.

HLSC 495 SEMINAR: HEALTH SCIENCE RESEARCH
This senior level course is designed to integrate, examine, and enhance the knowledge, skills, and attitudes learned throughout the Health Science major. Students engage in an extensive Health Science research project and present results in a public forum. This course is recommended for students who intend to pursue graduate education. Prerequisites: HLSC 385, health science major with senior standing, or permission of instructor. Fall.

HLSC 498 INDEPENDENT STUDY
1-6 credits
Independent study under faculty supervision of a problem in an area of Health Science. Initiative and self-direction required. May be repeated for a total of 6 credits. Prerequisite: Permission of instructor. Fall, Spring.

History

IHHIST 111 THE ANCIENT AND MEDIEVAL WORLD
Examines the development of first civilizations of the Near East, South Asia, East Asia, and the Americas; ancient Greece and Rome; the growth of the Byzantine, Islamic, and Western civilizations; European imperialism in Africa, the Americas, and Asia; and religious, political, and cultural change in Europe in the early-modern era. Annually.

IHHIST 112 THE MODERN WORLD
Examines the evolution of the major civilizations of the world (Western, Middle Eastern, South Asian, East Asian, sub-Saharan African, and Latin American) from the early-modern era to the present. It focuses upon the revolutionary intellectual, political, and economic changes that occurred during this period and their effects upon the world. Annually.

IHHIST 141 THE WEST IN THE WORLD
This course will follow the rise and spread of early civilizations from Mesopotamia, Egypt, India, and China to the political, economic, and cultural foundations of the West in ancient Greece and Rome. Course concludes with an examination of the classical age of Muslim culture during the European Middle Ages. Fall.

IHHIST 161 AMERICAN PERSPECTIVES TO 1877
In this course, students will be exposed to a variety of American perspectives through time. Emphasis will be placed on the voices of the traditionally unheard such as the poor, women, African Americans, and American Indians. Issues of class, race, and gender will be explored from a comparative approach.

IHHIST 162 AMERICAN PERSPECTIVES FROM 1877
In this course, students will be exposed to a variety of American perspectives through time. Emphasis will be placed on the voices of the traditionally unheard such as the working poor, women, African Americans, and Native Americans. Issues of class, race, and gender will be explored from a comparative approach. Fall, Spring.

IHHIST 210 “WHO WAS BEN FRANKLIN?”
Explores identity and power in the British Empire and American Revolution through an examination of Benjamin Franklin’s presentation of self in his autobiography. Additionally, through various biographies, we will consider Franklin as a “self-made man,” as the embodiment of empire, Enlightenment scientist, Revolutionary diplomat, runaway servant, and slave owner.
THE WORLDS OF EARLY AMERICA
The years between 1500 and 1750 witnessed numerous encounters and conflicts as American Indians, Africans, and Europeans came into contact with one another for the first time. This course examines the new worlds in early America that resulted from these exchanges. The use of primary sources is emphasized.

BECOMING HELEN KELLER
An examination of the life and career of Helen Keller as a path to understanding the meanings of disability in American life. We will read Keller's autobiography as a starting point for an exploration of what her life has meant in various historical contexts.

THE CRUSADES: IDENTITY AND RELIGIOUS WAR IN THE MIDDLE AGES
Course examines the Crusades with the aim of understanding how markers of identity and religious differentiation were used to support and perpetuate the ideology of crusade and holy war, and how cross-cultural contact eventually altered the European Christian constructs of identity that had motivated the initial 11th-century call for Crusade. Fall.

THE AXIAL AGE
This course will follow the emergence of world, historical, philosophical, and religious systems in India, China, Greece, and the Near East between 800 to 300 BCE. Through primary and secondary sources, students will explore the origins and development of classical Hinduism, Buddhism, Confucianism, Taoism, Platonic thought, and messianic Judaism. Occasionally.

MARRIAGE AND FAMILY IN WESTERN CIVILIZATION: THE ANCIENT WEST
The class examines the institutions of marriage and family in the ancient civilizations of Mesopotamia, Egypt, the Israelites, Greece, and Rome. By studying the development of the family, this course offers an examination of the roles of both men and women in the development of the western culture and civilization. Fall.

THE HOLOCAUST
Examines the genocide and mass murder committed by the Nazi regime during 1939 to 1945. Also surveys long- and short-term factors, including World War I and Germany's failed post-war democratic experiment, that help explain the consolidation of a racially based totalitarian regime. Cross-listed as IHHGS 252. Spring.

THE SECOND WORLD WAR
Examines the origins and outbreak of WWII, the course of the war in Europe and the Pacific, the complexity of military priorities and operations, the evolution of mass murder in Nazi-occupied Europe, and the war's social and political impact. Fall, even years.

TRADITIONAL WORLD CIVILIZATION
A survey of the four major civilizations (Western, Middle Eastern, South Asian, and East Asian) from antiquity to 1500. Provides a generalized view of cultural, political, economic, and religious evolution. Fall.

MODERN WORLD CIVILIZATION
A survey of the four major civilizations (Western, Middle Eastern, South Asian, and East Asian) from the beginning of European world dominance (1500) to the emergence of the modern world. Provides a generalized view of cultural, political, economic, and religious evolution. Spring.

TRADITIONAL CIVILIZATION OF EAST ASIA
A survey of China and Japan from antiquity to approximately 1800. Establishes a broad picture of cultural values, social structures, and political institutions. Attempts to convey a sense of how both the common people and the elite lived. Spring.

MODERN EAST ASIA
A sequel to HIST 121. A survey of Chinese and Japanese experiences with modernization from the beginning of the 19th century to the present. The theme of revolution provides focus for the study of China. In the case of Japan, the main emphasis is on its rapid adaptation to the modern world. Fall.

WESTERN CIVILIZATION I: ORIGINS TO 1500
An introduction to the crucial ideas, institutions, and events of the formative centuries of Western civilization, from Moses and Machiavelli to the Parthenon and St. Peter's. Fall.

WESTERN CIVILIZATION II: 1500 TO PRESENT
The revolutionary modern era is examined, from Luther's dissent to contemporary student protest. Important landmarks include the birth of modern science; the Enlightenment; political revolutions in England, North America, France, and Russia; industrialization; and the tragedies and triumphs of the 20th century. Fall, Spring.

TOPICS IN UNITED STATES HISTORY I
A systematic introduction to U.S. history before 1877, emphasizing major topics within a chronological framework. Topics vary with each instructor, but always include Puritan and plantation colonies, formation of the United States, slavery and abolition, foreign relations and territorial expansion, the rise of mass politics, and the Civil War and Reconstruction. Not open to juniors and seniors except by permission. Fall, Spring.
HIST 162 TOPICS IN UNITED STATES HISTORY II
A systematic introduction to United States history since 1865, emphasizing major topics within a chronological framework. Topics vary with each instructor, but always include: industrialization and labor, immigration, the growth of cities, nativism and extremism, segregation, civil rights, centralization of American life, and the rise of the United States as a world power. Not open to juniors and seniors except by permission. Fall, Spring.

HIST 200 READING AND WRITING IN HISTORY
An introduction to various ways of reading and interpreting historical documents and to the major forms of historical writing. This course is intended to prepare students for advanced course work. HIST 200 must be taken prior to completing 13 credits in History. Fall, Spring.

HIST 225 MEDIEVAL WORLD: EUROPEAN CULTURE AND SOCIETY FROM 500-1400
This class is intended as an introductory survey of medieval Europe. During this period Europe developed a civilization that was a synthesis of its classical heritage, Christianity, and the tribal cultures that replaced the Roman Empire. This course examines the formation and flowering of medieval European society and culture. Spring.

HIST 261 U.S. SOCIAL HISTORY I: 1603-1865
Evolution of American institutions, including the family, social classes, work, economic relationships, roles of the sexes, churches, child rearing, education, and governments, from colonial origins to the mid-19th century. Not open to students who have completed HIST 161 with a passing grade. Fall.

HIST 265 MILITARY IN U.S. SOCIETY I
A social history of war, peace, and the military in America from the Colonial period through the Civil War. Surveys the development of U.S. military institutions, the nation's wartime experiences, and how the military reflected American society and culture.

HIST 266 MILITARY IN U.S. SOCIETY II
A social history of the U.S. military from Reconstruction to the present. Focuses on the social composition of the military, the growth of federal power, American attitudes toward war and peace, and the development of modern warfare.

HIST 290 SPECIAL TOPICS
1-4 credits
Study of a selected topic in History. May be repeated as topics change. Fall, Spring.

HIST 291 WORLD OF THE OLD TESTAMENT
A historical, literary, and philosophical introduction to the Hebrew Bible, one of the most important and influential texts in the history of world civilization. Particular attention is paid to the relationship between rhetoric and theology in the Bible. Fall, Spring.

HIST 321 LATE IMPERIAL CHINA
The relationship between the Chinese polity and society in the late imperial period (Ming and Qing dynasties, from the 14th century to 1911). Topics include the family system, important socioeconomic changes, and the persistence of traditional culture, thought and institutions into modern times.

HIST 322 THE CHINESE REVOLUTION
China's revolutionary transformation in the 20th century. Includes the social and political origins of revolution, the Communist movement and rise of Mao, defeat of Nationalists, and the creation of the People's Republic and its principal domestic and foreign policies to the present.

HIST 324 MODERN JAPAN
From the Tokugawa period to the present, this course traces Japan's transition from a feudal to an industrial society, the decline of the Samurai class and the rise of cities, merchants, and urban culture; the Meiji Restoration and political reform; imperialist expansion; war; American occupation; and postwar changes contributing to Japan's “miraculous” economic growth. Spring.

HIST 330 ANCIENT CIVILIZATION
The dawn of civilization: ancient Mesopotamia – life in the valley of the two rivers; ancient Egypt – civilization in the Nile Valley; the smaller kingdoms of the Hittites, Phoenicians, and Hebrews; the growth of the empire – Assyria and Persia. Selected cultural, economic, and political developments are studied. Fall.

HIST 332 GREECE IN THE CLASSICAL AGE
The evolution of Greek classical civilization from the Mycenaean origins through the Hellenistic age. The significance of the Polis is brought out by detailed examination of Athens and Sparta. Intellectual and cultural contributions of classical Greece. Fall.

HIST 336 THE MEDIEVAL WORLD: 400-1500
Europe and the Byzantine and Islamic worlds from the collapse of the western Roman Empire to the discovery of America by Columbus. Feudalism, manorialism, the role of the Church, the rise of the nation-state, the growth of cities, the revival of the economy, and the development of technology. Spring.
HIST 337 EUROPE: 1400-1600
The events of the 15th and 16th centuries laid the foundations of the modern western world, from the Renaissance and the print revolution to war with the Turks in the East and the conquest of American natives in the West and the Reformation and religious war.

HIST 338 EUROPEAN ENCOUNTERS IN THE NEW WORLD
This course will examine the interactions of Europeans with the climate, cultures, and peoples of the Americas from 1492 to 1800. Special attention will be given to questions about how discovery and conquest shaped Europeans’ images of themselves and their own cultures. Occasionally.

HIST 339 THE AGE OF ENLIGHTENMENT
This course will explore central themes of the period in European history known as the Enlightenment (1650-1800), such as race, gender, religious tolerance, materialism, and political engagement. Students will explore these themes in writing assignments and class presentations based on close readings of primary and secondary sources. Occasionally.

HIST 340 THE FRENCH REVOLUTION AND THE NAPOLEONIC EMPIRE
Covers in detail the causes, progress, and consequences of the French Revolution and the rise and fall of the Napoleonic Empire. Fall.

HIST 341 EUROPE FROM WATERLOO TO VERSAILLES
Examines the post-Napoleonic restoration; the forces of nationalism, liberalism, and imperialism; and the origins of World War I. Spring.

HIST 342 EUROPE 1918-1945
The history of Europe from the Versailles treaty to the end of World War II, with special attention given to the rise of Fascism in Germany and Italy and the political and diplomatic events of World War II. Spring.

HIST 343 EUROPE SINCE 1945
Political, diplomatic, and economic developments in Europe, notably in the major countries of Western Europe. Fall.

HIST 349 FRANCE SINCE 1815
History of post-Napoleonic France, including the Restoration and the beginnings of Republicanism and its evolution during the Third, Fourth, and Fifth Republics. Spring.

HIST 351 19TH-CENTURY GERMANY
After reviewing the collapse of the Holy Roman Empire, this course examines the impact on Germany of the French Revolution, the role of philosophy in Germany's development, the policies of Metternich, Bismarck's role in German unification, and the origins of WWI. Fall.

HIST 353 NAZI GERMANY AND THE HOLOCAUST
Examines the Nazi rise to power during the Weimar Republic, the consolidation of totalitarian rule, the transformation of racial ideology into policy, Hitler's foreign policy as prelude to war, World War II, and the Holocaust. Cross-listed as HGS 353. Spring.

HIST 356 READINGS IN THE HISTORY AND PHILOSOPHY OF SCIENCE
Examines selected topics in the development of scientific thought and philosophy of science. Fall.

HIST 360 THE AMERICAN COLONIES TO 1763
Examines the foundation of the American colonies and the economic, social, and political problems besetting them from their establishment to the close of the Great War for Empire, 1763. Fall.

HIST 361 THE AMERICAN REVOLUTION
Examines the causes of the conflicts of 1763 to 1783, the nature of the Revolution, the Confederation years, the establishment of the Constitution and changes to 1789. Spring.

HIST 362 THE EARLY AMERICAN REPUBLIC 1789-1850
Examines political, social, economic, and cultural developments as well as changes in material culture from the establishment of the federal government to the Compromise of 1850. Fall.

HIST 363 THE UNITED STATES IN THE CIVIL WAR PERIOD: 1850-1876
Examines the coming of the Civil War, the secession crisis, the war itself, and Reconstruction. Prerequisite: Not open to freshmen without permission of instructor. Fall.

HIST 364 19TH-CENTURY AMERICA
Examines selected aspects of the century's major developments; topics include, among others, immigration, the political economy of the Civil War, the rise of labor, elections and politics, and the Populist movement. Spring.
HIST 365 GILDED AGE AND PROGRESSIVE ERA AMERICA
Examines social, economic, and political aspects of U.S. history from 1877 to 1920. Topics include industrialization, immigration, politics, Populism, progressivism, and World War I. Prerequisite: Not open to freshmen without permission of instructor. Spring.

HIST 366 U.S. IN CRISIS: 1920-1950
Special attention is given to the turbulent ’20s and market crash, the anxieties of the ’30s and governmental response, the U.S. role in World War II and home front repercussions for women and Japanese Americans, and postwar traumas of bomb, cold war, and domestic readjustment. Prerequisite: HIST 162 or HIST 262, or permission of instructor. Fall.

HIST 367 MODERN AMERICA: 1950-PRESENT
Describes United States in the modern age of Cold War and fears of domestic subversion, domestic reform upheavals of blacks, students, women in 1960s and 1970s; major changes for economy and labor. Prerequisite: HIST 162 or HIST 262, or permission of the instructor. Spring.

HIST 390 STUDIES IN HISTORY
1-4 credits
Examines a selected subject or theme in history at an intermediate level. May be repeated as subjects or themes change. Fall, Spring.

HIST 393 TOPICS IN HISTORY OF IDEAS
Examines a selected topic in intellectual history, cultural history, or history of philosophy. Readings are drawn from primary sources. May be repeated as topics change. Prerequisite: One course in History or permission of instructor. Cross-listed as PHIL 393. Fall, Spring.

HIST 490 ADVANCED SPECIAL TOPICS
1-4 credits
Study of a selected topic in History at an advanced level. May be repeated as topics change. Fall, Spring.

HIST 495 SEMINAR
Discussion of problems and issues in History. May be repeated as seminar topics change. Fall, Spring.

HIST 497 HISTORY INTERNSHIP
1-4 credits
Students research, organize, and write about historical materials in cooperation with historical societies, archives, museums, historical restoration projects, and other groups or agencies. The History Internship Committee, in consultation with the dean for Arts and Humanities, determines the credit value. Prerequisite: Permission of instructor. Fall, Spring.

HIST 498 INDEPENDENT STUDY
1-8 credits
Intensive study of an issue, problem, or topic. Offered as independent study if proposed by the student or as directed study if designed by the faculty member. May be repeated for a total of 8 credits. Prerequisite: Permission of instructor. Fall, Spring.

Holocaust and Genocide Studies

IHHS 232 INTRODUCTION TO JUDAISM
An exploration of Jewish rituals and traditions, including in-depth examination of holidays and life-cycle events utilizing historical and contemporary religious and descriptive texts. Examined will be basic theological principles of Judaism, historical and contemporary diversity within Jewish religious practice, and belief and culture. Fall.

IHHS 233 A HISTORY OF THE JEWS
Survey of the social, political, and cultural experience of the Jewish people throughout the world, beginning with the Roman expulsion from their homeland in 70 C.E. and working forward to the events that led to the Holocaust and the formation of the State of Israel in the 20th century. Spring.

IHHS 251 LITERATURE OF THE HOLOCAUST
Examines the culture of European Jews before the Holocaust and literature that reflects the destruction of that culture in World War II. Includes texts by such authors as Ida Fink, Elie Wiesel, Primo Levi, Nelly Sachs, Imre Kertesz, and Jurek Becker. Prerequisite: ITW 101. Cross-listed as IHENG 251. Spring.
IHGS 252 THE HOLOCAUST
Examines the genocide and mass murder committed by the Nazi regime during 1939-45. Also surveys long- and short-term factors, including World War I and Germany's failed post-war democratic experiment, which help explain the consolidation of a racially based totalitarian regime. Cross-listed as IHHIST 252. Spring.

IHGS 254 WOMEN IN THE HOLOCAUST
How did women's Holocaust experiences differ from those of men? An interdisciplinary exploration of gender in Central European families, ghettos, camps, and resistance, this course examines connections between the Holocaust and present-day manifestations of anti-Semitism, sexism, homophobia, and nationalism. Readings are drawn from history, women's studies, and Holocaust memoirs. Cross-listed as IWS 254. Occasionally.

IHGS 255 GENOCIDE
This course identifies and studies deliberate measures aimed at the annihilation of an economic, ethnic, political, religious, or cultural group before and after the term "genocide" was coined in 1944 by Raphael Lemkin. Students will undertake an interdisciplinary examination of the historical and political development of the concept of genocide. Fall.

IHGS 355 RELIGION AND VIOLENCE
An in-depth study of the links between religion and violence, examining the Holocaust as a paradigmatic case while exploring other representative cases of religious violence. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Spring, even years.

HGS 289 TEACHING THE HOLOCAUST AND GENOCIDE
Examines the challenges of teaching the Holocaust and genocide in multiple settings, such as schools, homes, places of worship, community centers, or other public and private settings. Examines pedagogy, teaching methods, use of materials, curricula, as well as sensitivity to particular audience needs and questions, while exploring what's at stake. Prerequisite: IHGS 252/IHHIST 252 or IHGS 255, or permission of instructor. Spring.

HGS 290 SPECIAL TOPICS
Exploration of a specific issue or theme applying interdisciplinary methods to readings and analysis related to Holocaust and/or genocide studies. Builds on foundations acquired in IHGS 252/IHHIST 252 or IHGS 255, the two introductory courses. May be repeated once for credit as topics change. Prerequisite: IHGS 252/IHHIST 252 or IHGS 255, and permission of instructor. Occasionally.

HGS 313 PHILOSOPHY AND THE HOLOCAUST
This course examines ethical, philosophical, and theological issues relating to the experience of the Holocaust and the broader human concerns of evil and suffering. Topics include the uniqueness and universality of the Holocaust as well as questions of justice. Prerequisite: IHGS 252/IHHIST 252, or permission of instructor. Cross-listed as PHIL 313. Fall.

HGS 326 SOCIOLOGY OF THE HOLOCAUST
Analyzes the Holocaust from a comparative, sociological perspective, applying relevant theories and concepts. Emphasis is on social and cultural forces that led to the Holocaust, including stereotyping, discrimination, anti-Semitism, institutional changes, and social-political indifference. Prerequisite: IHGS 252/IHHIST 252 or SOC 201. Cross-listed as SOC 326. Fall, odd years.

HGS 327 SOCIOLOGY OF GENOCIDE
Focusing on genocide after the Holocaust, this course evaluates theoretical debates on what constitutes genocide and why genocide takes place. It also comparatively analyzes genocide that has occurred in different nation-states from a sociological perspective. Prerequisite: IHGS 255 or SOC 201. Cross-listed as SOC 327. Spring, even years.

HGS 340 FILM AND THE HOLOCAUST
Examines various filmic approaches taken to represent the attempt to destroy European Jewry in the first half of the 20th century. Documentary and narrative film are examined, together with the cultures and time periods within which the films were produced. Ethical issues will be considered alongside cultural and formal concerns. Prerequisites: IHHS252/IHHIST 252 or permission of instructor. Spring, even years.

HGS 353 NAZI GERMANY AND THE HOLOCAUST
Examines the Nazi rise to power during the Weimar Republic, the consolidation of totalitarian rule, the transformation of racial ideology into policy, Hitler's foreign policy as prelude to war, World War II, and the Holocaust. Cross-listed as HIST 353. Spring.

HGS 356 THE HOLOCAUST AND THE CHRISTIAN WORLD
Explores relationship between Christianity and Judaism with special attention to historic antipathies, their role in preparing European culture for the Holocaust, and mixed legacies of contempt and good will that distinguished Christian persecution, resistance, and rescue during the Third Reich. Analyzes responses to this difficult history and its ongoing impact. Prerequisite: IHHS 252/IHHIST 252 or permission of instructor. Spring, odd years.

HGS 373 RACE, DISABILITY, AND EUGENICS
An examination of the history of the 19th- and 20th-century eugenics movement in the United States and Europe. Efforts to “improve” humanity by selectively controlling or eliminating individuals deemed socially undesirable because of race or disability will be investigated by exploring science, legislation, and popular culture. Cross-listed as HIST 373. Fall, odd years.
HGS 374 COMPARATIVE GENOCIDE
An investigation of two or more genocides by comparative method. Focus is on the situation and actions of the perpetrators, victims, resistance fighters, bystanders, and rescuers – all examined in order to find essential similarities as well as differences, and to derive explanations for specific cases of genocide. Prerequisite: IIHGS 255, or permission of instructor. Spring.

HGS 427 SOCIOLOGICAL TOPICS IN GENOCIDE
This course involves intensive, sociological study of a particular genocide. The genocide to be studied can change in any given semester. Topics include application of the term genocide, historical, social, and cultural background, theoretical explanations for the genocide, and the extent of intervention to stop it. Prerequisite: IIHGS 255 or SOC 305, or permission of instructor. Cross-listed as SOC 427. Occasionally.

HGS 490 ADVANCED SPECIAL TOPICS
Advanced interdisciplinary exploration of a specific issue or theme not covered in depth by the regular curriculum. Content will vary, but builds on foundations acquired in prior study. Prerequisite: Either IIHGS 252/IHHIST 252 or IIHGS 255, and permission of instructor. Occasionally.

HGS 495 SEMINAR
Capstone course, taught by various instructors in the Holocaust and Genocide Studies program. Students will investigate both secondary and primary source material to provide an in-depth analysis of one or more key issues related to the Holocaust and select cases of genocide. Prerequisites: Junior or senior standing, IIHGS 252/IHHIST 252 and IIHGS 255, and permission of instructor. Fall.

HGS 497 INTERNSHIP
1-8 credits
Focus is on a student researching, organizing, and writing about a Holocaust or genocide-based topic in cooperation with the Cohen Center for Holocaust and Genocide Studies or some other society, resource center, museum, or foundation dedicated to Holocaust and/or genocide studies. May be repeated for a total of 8 credits. Prerequisites: IIHGS 252/IHHIST 252 or IIHGS 255, and permission of instructor. Occasionally.

HGS 498 INDEPENDENT STUDY
4 credits
In-depth study of a topic or problem selected and pursued in consultation with a faculty member. Design will be at the faculty member's discretion. May be repeated for a total of 8 credits. Prerequisites: IIHGS 252/IHHIST 252 or IIHGS 255 and one 300-level or higher HGS course, and permission of instructor. Occasionally.

HGS 499 SENIOR HONORS PROJECT
May be substituted for HGS 495 as a culminating course aimed at an original research or creative project in Holocaust and/or genocide studies. Under the guidance of a faculty sponsor, the student will develop, research, and publicly present an individualized project on a topic jointly selected with the sponsor. Prerequisites: Senior standing, IIHGS 252/IHHIST 252 and IIHGS 255, an overall 3.50 GPA, and approval of the Holocaust and Genocide Studies Council.

Honors, College

HNRSTW 101 HONORS THINKING AND WRITING
This Honors course introduces students to skills and ways of thinking essential to intellectual inquiry. Students will pose a creative and complex question; investigate it with critical analyses of reading, research, and data; and use appropriate research techniques and documentation to produce a substantial writing project. Prerequisite: Admission to the College Honors Program.

HNRSA 290 HONORS ARTS
Honors courses in the arts will present content-specific titles and descriptions when they are approved by the Honors Program Advisory Council. They will meet Integrative Studies Program outcomes and Honors Program outcomes appropriate to the course. Prerequisite: Admission to the College Honors Program and ITW or HNRSTW.

HNRSH 290 HONORS HUMANITIES
Honors courses in the humanities will present content-specific titles and descriptions when they are approved by the Honors Program Advisory Council. They will meet Integrative Studies Program outcomes and Honors Program outcomes appropriate to the course. Prerequisite: Admission to the College Honors Program and ITW or HNRSTW.

HNRSN 290 HONORS NATURAL SCIENCES
Honors courses in the natural sciences will present content-specific titles and descriptions when they are approved by the Honors Program Advisory Council. They will meet Integrative Studies Program outcomes and Honors Program outcomes appropriate to the course. Prerequisite: Admission to the College Honors Program and ITW or HNRSTW.
**HNRSS 290 Honors Social Sciences**
Honors courses in the social sciences will present content-specific titles and descriptions when they are approved by the Honors Program Advisory Council. They will meet Integrative Studies Program outcomes and Honors Program outcomes appropriate to the course. Prerequisite: Admission to the College Honors Program and ITW or HNRSTW.

**HNRSS 301 Global Engagement**
Intensive interdisciplinary immersion in a cultural experience outside the United States. Through cohort-based research and learning, students reflect on their roles and responsibilities as global citizens. Readings, discussions, and on-site projects analyze artistic, social, political, and/or environmental issues facing their host country. Must be completed before fall of senior year. Enrollment limited to 12. Prerequisite: Admission to College Honors Program or permission of instructor.

**HNRSI 401 Interdisciplinary Senior Seminar**
This course selects a specific cultural, aesthetic, scientific, historic, social, or political problem, issue, or question. Students bring together the resources of multiple disciplines, augmented by appropriate materials, methods, or theories, to address the course topic. Discussion-based seminar or small-group format; requires significant scholarly research project or other appropriate artifact. Prerequisites: 24 credits in ISP, including ITW or HNRSTW 101 and IQL 101 and admission to College Honors Program. Fall.

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### Integrative Studies

**Foundation Courses**

**IQL 101 Quantitative Literacy**
Introduces students to quantitative reasoning skills and habits of mind to understand and apply quantitative information to their lives. Students will investigate questions or problems and analyze data using descriptive statistics. Students will create written reports and orally present the results of their investigations. Fall, Spring.

**ITW 101 Thinking and Writing**
Introduces students to skills and ways of thinking essential to intellectual inquiry. Students will pose a creative and complex question; investigate it with critical analyses of reading, research, and data; and use appropriate research techniques and documentation to produce a substantial writing project.

**Perspective Courses**

**Arts**

**IAART 100 Foundations of Design**
Study of primary visual design concepts through series of lectures and projects that explore two and three dimensional design, and the language of color. Emphasis on the interaction of these elements in relation to composition and the development of visual literacy. Not open to students who have completed ART 101. Fall, Spring.

**IAART 103 Three-Dimensional Design**
A comprehensive exploration of the properties of natural and human-made volumes and spaces. Projects involve sculptural objects and architectural and environmental design. Studio projects are completed outside of class. Fall, Spring.

**IAART 110 Introduction to Art History**
A study of the unique features of art and aesthetic experience designed to promote an understanding of artists and their works. Includes materials and techniques of artists as well as the psychological and cultural aspects of artists in society. Fall, Spring.

**IAART 120 Drawing I**
The practice of representational drawing emphasizing linear and form description with drawing media. Develops skills for all students, including Art majors. Not open to students who have completed IAART 125. May be repeated for credit with approval of instructor. Fall, Spring.

**IAART 207 Ceramics and Culture**
Through projects, demonstrations, and visual media (slides, videos, etc.), students will investigate differing methods of working with clay such as hand-building, wheel-throwing, and surface techniques. Students will research ceramic art in its global socio-historical contexts. For non-Art majors only. Annually.

**IAART 300 Color Design and Site-Specific Painting**
Explores the language of color and two-dimensional design and surveys the history of painted murals and other wall ornamentation. Students complete a site-specific mural on campus. For non-art majors only. Prerequisites: 24 credits in ISP, including ITW 101 and IQL 101. Annually.
IAENG 204 CREATIVE WRITING
Introduction to the basic strategies and techniques of writing fiction and verse. Assigned exercises, accompanied by readings, are discussed in class. Opportunity to develop creative and critical skills through assignments and independent work. Prerequisite: ITW 101. Fall, Spring.

IAFILM 150 INTRODUCTION TO DIGITALVIDEO PRODUCTION
This course provides an introduction to basic filmmaking technique, aesthetics, and skills in digital media management through production of digital video projects. Students gain an understanding of the art of narrative filmmaking through emphasis on story development, cinematography, editing, directing, and sound design. Course participation demands outside-class production time.

IAFILM 330 SCREENWRITING
This course introduces students to the fundamentals of writing a feature-length film narrative in a proper screenplay form. Class is conducted as a series of workshops in which students study several different types of screenplays, and then do a series of projects that prepares students to write original scripts. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Fall, Spring

IAMU 104 LISTENING TO MUSIC
Analytical and critical listening to music of various historical periods. Primary attention is given to music of the European-American classical tradition as well as popular music styles. Nor available for credit toward a Music major or minor. Fall, Spring.

IAMU 112 LATIN AMERICAN MUSIC SURVEY
A cultural, social, and historical survey of Latin American folk and art music that emphasizes African, European, and Amerindian roots of representative regional and national styles. Students learn through readings, lectures, films, listening, and performance on indigenous instruments. Fall.

IAMU 114 MUSIC CULTURES OF THE WORLD
A study of selected folkloric, popular, and non-Western art music traditions and their historical, social, and cultural contexts. Fall, Spring.

IAMU 115 WOMEN IN MUSIC
The study of recurring issues concerning women composers, teachers, performers, and patrons, in both historical and contemporary cultures. Spring.

IAMU 216 HISTORY OF ROCK AND ROLL
Study of the growth and diffusion of popular music and its surrounding culture in the ‘50s and ‘60s, including concurrent historical events and movements as well as trends in other arts. Fall, Spring.

IAMU 218 THE HISTORY OF JAZZ
Jazz from its origins through modern developments. Ethnic backgrounds, contributing factors, style characteristics, and interrelationships, literature, and performers. Fall, Spring.

IAMU 242 LISTENING TO AMERICA
This course examines the history of music in the United States, with an emphasis on 20th-century music. Students will study traditional, popular, and classical music from historical and social perspectives. Prerequisite: ITW 101. Fall, even years.

IAMU 312 LATIN AMERICAN MUSIC, SOCIETY, AND CULTURE
Students will explore cultural origins, diversity, and the role of music by using examples from various representative regions of Latin America. Prerequisite: 24 ISP credits, including ITW 101 and IQL 101. Spring.

IAMU 417 AVANT ROCK
Presented in a seminar format, this course involves a study of how experimentalism and avant-garde developed in the context of rock music. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101.

IATAD 100 THEATRE: THE ART OF IMAGINATION
We humans have an elemental need for make-believe. This course explores the use of imagination in the creation of theatrical events using hands-on creative projects and traditional lecture/discussion. Topics include historical and global perspectives, acting, designing, directing, and playwriting. Attendance at specific Redfern Arts Center productions is mandatory. Fall, Spring.

IATAD 102 ACTING: IDENTITY IN A DIVERSE SOCIETY
This experiential course explores how acting helps identify and understand the issues and perceptions that formulate personal identity and cultural diversity. Includes play/text analysis, exploration of identity and diversity through acting, and research into the issues and ideas that inform the dramatic point of view. Fall, Spring.
IATAD 113 DANCE AS A WAY OF KNOWING
This experiential dance course addresses issues of identity, culture, and ethics through personal movement exploration and analysis of master works from turning points in modern dance history. Includes dance technique, composition, and research methods from the field of performance studies. Fall, Spring.

IATAD 370 PLAYWRITING
The art and craft of the playwright. Students will be involved in the creation of a dialogue text using Dramatic Imagination. Students will study structure and techniques of writing for dramatic forms, primarily theatrical forms. Students will complete writing exercises as well as preliminary drafts and a completed script. Prerequisite: 24 ISP credits, including ITW 101 and IQL 101. Spring.

HUMANITIES
IHAMST 140 WHAT IS AMERICAN STUDIES?
Explores historical and contemporary issues from American culture(s). Topics may include nationhood, identity, and cultural production. Annually.

IHAMST 248 CULTURES OF NORTHERN PLAINS INDIANS
An introduction to American Indian studies through the perspectives of Northern Plains Indians, focusing on Plains Indians’ literature, music, art, Indian law, history, and philosophy. Prerequisite: ITW 101. Annually.

IHAMST 291 SPECIAL TOPICS
Course examines topics through perspectives and approaches drawn from the field of American Studies. May be repeated as topics change. Fall, Spring.

IHAMST 372 READINGS IN AMERICAN STUDIES
Examines primary, theoretical, and critical materials related to American Studies. May engage historical, philosophical, artistic, and literary issues in American culture(s). Prerequisites: 24 credits in ISP, including ITW 101 and IQL 101. Annually.

IHCOMM 171 PUBLIC SPEAKING
Through experience in a variety of speaking situations, students gain self-confidence in organization of thought and self-expression. Fall, Spring.

IHCOMM 270 HOW TO WIN AN ARGUEMENT
Through reading and writing students explore arguments presented in a variety of texts. Arguments from credibility, reason, emotion, and values will be understood prior to analysis of them in both print and electronic media. Fall, Spring.

IHENG 220 READINGS IN BRITISH LITERATURE
Examines a particular period or literary movement, the works of a particular author or group of authors from the British Isles, or a recurring theme in fiction or other literary forms. Prerequisite: ITW 101. Fall, Spring.

IHENG 240 READINGS IN AMERICAN LITERATURE
An introduction to significant writers of the United States and their work, which may include fiction, drama, poetry, and nonfiction prose. May explore a particular theme, period, genre, or group of writers. Prerequisite: ITW 101. Fall, Spring.

IHENG 250 READINGS IN CONTINENTAL LITERATURE
Examines 18th- to 21st-century European literature in historical and cultural contexts. Prerequisite: ITW 101. Annually.

IHENG 251 LITERATURE OF THE HOLOCAUST
Examines the culture of European Jews before the Holocaust and literature that reflects the destruction of that culture in World War II. Includes texts by such authors as Ida Fink, Elie Wiesel, Primo Levi, Nelly Sachs, Imre Kertesz, and Jurek Becker. Prerequisite: ITW 101. Cross-listed as IHHGS 251. Spring.

IHENG 252 LITERATURE OF THE HOLOCAUST
Examines the culture of European Jews before the Holocaust and the literature that explores the destruction of that culture in World War II. Uses texts by such authors as Ida Fink, Elie Wiesel, Primo Levi, Nelly Sachs, and Jurek Becker. Prerequisite: ITW 101. Spring.

IHENG 260 READINGS IN WORLD LITERATURE
Reading and discussion of selected literary texts from the ancient to the modern world. Course will investigate literary production and reception in relation to historical, social, religious, economic, biographical or textual contexts. May be repeated once as topics change. Prerequisite: ITW 101.

IHENG 286 CHILDREN’S LITERATURE
Reading and discussion of representative texts and illustrations from the genres of children’s literature, such as folklore, fantasy, contemporary realistic fiction, historical fiction, biography, poetry, and information books. Prerequisite: ITW 101. Fall, Spring.
IHENG 391 STUDIES IN LITERATURE
A course in literary genre and theme for nonmajors. This course will explore the distinctive features of one or more literary genres and themes. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. (Not open for credit toward the English major.) Annually.

IHENG 392 THE WRITER AND THE WORLD
An in-depth study of a particular author's work. Emphasis is placed on the importance of context (social, historical, economic, cultural). Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. (Not open for credit toward the English major.) Annually.

IHENG 260 INTRODUCTION TO FILM ANALYSIS
This course is designed to equip students with the tools necessary to become critically aware and capable film viewers by introducing elements of film form, processes of textual analysis, a variety of cinematic techniques used in narrative and non-narrative cinema, and other models of critical analysis used in film criticism. Not open to students who have completed FILM 270. Fall, Spring.

IHENG 261 INTRODUCTION TO FILM HISTORY
This course examines the history of narrative film's technical, aesthetic, industrial, and social development within an international context, particularly in relation to wider cultural and political movements. Film screenings and frequent writing assignments are employed to encourage critical skills in terms of cinema aesthetics and cultural criticism. Not open to students who have completed FILM 271. Fall, Spring.

IHFR 100 BASIC FRENCH LANGUAGE AND CULTURE
Introduction to basic skills to communicate about personal and everyday topics and exploration of cultural diversity within the contemporary French-speaking world. For students with no prior knowledge of French. Does satisfy the Arts and Humanities language requirement. Fall, Spring, Summer.

IHFR 101 ELEMENTARY FRENCH I
Introduction to basic skills to communicate about personal and everyday topics, including informal conversations with native speakers, finding information in newspapers and Internet sites, and exploring the contemporary French-speaking world. For students with little or no prior knowledge of French. Fall, Spring.

IHFR 102 ELEMENTARY FRENCH II
Development of skills to communicate about personal and everyday topics, including informal conversations with native speakers, finding and reading information in newspapers and Internet sites, and exploring contemporary issues in the French-speaking world. Students should have prior knowledge of basic French. Fall, Spring.

IHFR 200 INTERMEDIATE READINGS IN FRENCH
Selected readings in French from literary texts, scholarly journals, magazines, newspapers, and web sites. Class discussions are mainly in English. This course meets the arts and humanities language requirement and does not count for the French major. Students should have an elementary knowledge of French. Fall, Spring.

IHFR 201 INTERMEDIATE FRENCH I
Development of skills to converse with native speakers, explore contemporary issues in the French-speaking world, narrate events in present and past tenses, and to read newspapers, websites, and short fiction with a dictionary. Students should have prior knowledge of elementary French. Fall, Spring.

IHFR 202 INTERMEDIATE FRENCH II
Development of skills to communicate about personal and everyday topics, including informal conversations with native speakers, finding and reading information in newspapers and Internet sites, and exploring contemporary issues in the French-speaking Europe. Students should have prior knowledge of elementary French. Fall, Spring.

IHGER 101 ELEMENTARY GERMAN I
Introduction to basic skills to communicate about personal and everyday topics, including informal conversations with native speakers, finding information in newspapers and Internet sites, and exploring contemporary German-speaking Europe. For students with no prior knowledge of German. Fall, Spring.

IHGER 102 ELEMENTARY GERMAN II
Development of skills to communicate about personal and everyday topics, including informal conversations with native speakers, finding and reading information in newspapers and Internet sites, and exploring contemporary issues in German-speaking Europe. Students should have prior knowledge of basic German. Fall, Spring.
IHGER 201 INTERMEDIATE GERMAN I
Development of skills to converse with native speakers, explore contemporary issues in German-speaking Europe, narrate events in present and past tenses, and to read newspapers, websites, and short fiction with a dictionary. Students should have prior knowledge of elementary German. Fall, Spring.

IHGER 202 INTERMEDIATE GERMAN II
Advanced development of writing and speaking skills to discuss contemporary issues in German-speaking Europe, to read newspapers, websites, and short fiction, and to understand German films. Students should have intermediate-level knowledge of German. Spring.

IHHGS 232 INTRODUCTION TO JUDAISM
An exploration of Jewish rituals and traditions, including in-depth examination of holidays and life-cycle events utilizing historical and contemporary religious and descriptive texts. Examined will be basic theological principles of Judaism, historical and contemporary diversity within Jewish religious practice, and belief and culture. Fall.

IHHGS 233 A HISTORY OF THE JEWS
Survey of the social, political, and cultural experience of the Jewish people throughout the world, beginning with the Roman expulsion from their homeland in 70 C.E. and working forward to the events that led to the Holocaust and the formation of the State of Israel in the 20th century. Spring.

IHHGS 251 LITERATURE OF THE HOLOCAUST
Examines the culture of European Jews before the Holocaust and literature that reflects the destruction of that culture in World War II. Includes texts by such authors as Ida Fink, Elie Wiesel, Primo Levi, Nelly Sachs, Imre Kertesz, and Jurek Becker. Prerequisite: ITW 101. Cross-listed as IHENG 251. Spring.

IHHGS 252 THE HOLOCAUST
Examines the genocide and mass murder committed by the Nazi regime during 1939 to 1945. Also surveys long- and short-term factors, including World War I and Germany's failed post-war democratic experiment, that help explain the consolidation of a racially based totalitarian regime. Cross-listed as IHHIST 252. Spring.

IHHGS 355 RELIGION AND VIOLENCE
An in-depth study of the links between religion and violence, examining the Holocaust as a paradigmatic case while exploring other representative cases of religious violence. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Spring, even years.

IHHIST 111 THE ANCIENT AND MEDIEVAL WORLD
Examines the development of first civilizations of the Near East, South Asia, East Asia, and the Americas; ancient Greece and Rome; the growth of the Byzantine, Islamic, and Western civilizations; European imperialism in Africa, the Americas, and Asia; and religious, political, and cultural change in Europe in the early-modern era. Annually.

IHHIST 112 THE MODERN WORLD
Examines the evolution of the major civilizations of the world (Western, Middle Eastern, South Asian, East Asian, sub-Saharan African, and Latin American) from the early-modern era to the present. It focuses upon the revolutionary intellectual, political, and economic changes that occurred during this period and their effects upon the world. Annually.

IHHIST 141 THE WEST IN THE WORLD
This course will follow the rise and spread of early civilizations from Mesopotamia, Egypt, India and China to the political, economic, and cultural foundations of the West in ancient Greece and Rome. Course concludes with an examination of the classical age of Muslim culture during the European Middle Ages. Fall.

IHHIST 161 AMERICAN PERSPECTIVES TO 1877
In this course, students will be exposed to a variety of American perspectives through time. Emphasis will be placed on the voices of the traditionally unheard such as the poor, women, African Americans, and Native Americans. Issues of class, race, and gender will be explored from a comparative approach.

IHHIST 162 AMERICAN PERSPECTIVES FROM 1877
In this course, students will be exposed to a variety of American perspectives through time. Emphasis will be placed on the voices of the traditionally unheard such as the working poor, women, African Americans, and Native Americans. Issues of class, race, and gender will be explored from a comparative approach. Fall, Spring.

IHHIST 210 WHO WAS BEN FRANKLIN?
Explores identity and power in the British Empire and American Revolution through an examination of Benjamin Franklin's presentation of self in his autobiography. Additionally, through various biographies, we will consider Franklin as a "self-made man," as the embodiment of empire, Enlightenment scientist, Revolutionary diplomat, runaway servant, and slave owner. Fall.
**IHHIST 211 THE WORLDS OF EARLY AMERICA**
The years between 1500 and 1750 witnessed numerous encounters and conflicts as American Indians, Africans, and Europeans came into contact with one another for the first time. This course examines the new worlds in early America that resulted from these exchanges. The use of primary sources is emphasized.

**IHHIST 212 BECOMING HELEN KELLER**
An examination of the life and career of Helen Keller as a path to understanding the meanings of disability in American life. We will read Keller's autobiography as a starting point for an exploration of what her life has meant in various historical contexts.

**IHHIST 220 THE CRUSADES: IDENTITY AND RELIGIOUS WAR IN THE MIDDLE AGES**
Course examines the Crusades with the aim of understanding how markers of identity and religious differentiation were used to support and perpetuate the ideology of crusade and holy war, and how cross-cultural contact eventually altered the European Christian constructs of identity that had motivated the initial 11th-century call for Crusade. Fall.

**IHHIST 221 THE AXIAL AGE**
This course will follow the emergence of world, historical, philosophical, and religious systems in India, China, Greece, and the Near East between 800 to 300 BCE. Through primary and secondary sources, students will explore the origins and development of classical Hinduism, Buddhism, Confucianism, Taoism, Platonic thought, and messianic Judaism. Occasionally.

**IHHIST 222 MARRIAGE AND FAMILY IN WESTERN CIVILIZATION: THE ANCIENT WEST**
The class examines the institutions of marriage and family in the ancient civilizations of Mesopotamia, Egypt, the Israelites, Greece, and Rome. By studying the development of the family, this course offers an examination of the roles of both men and women in the development of the western culture and civilization. Fall.

**IHHIST 252 THE HOLOCAUST**
Examines the genocide and mass murder committed by the Nazi regime during 1939 to 1945. Also surveys long- and short-term factors, including World War I and Germany's failed post-war democratic experiment, that help explain the consolidation of a racially based totalitarian regime. Cross-listed as IHHGS 252. Spring.

**IHHIST 253 THE SECOND WORLD WAR**
Examines the origins and outbreak of WWII, the course of the war in Europe and the Pacific, the complexity of military priorities and operations, the evolution of mass murder in Nazi-occupied Europe, and the war's social and political impact. Fall, even years.

**IHJRN 101 MEDIA AND SOCIETY**
This course will examine the ways that the media participates in shaping social reality. Students will analyze and interpret the roles of the media in a democratic society in regard to a variety of cultural, political and economic problems. Fall, Spring.

**IHJRN 267 ISSUES IN THE MEDIA**
This course will examine the way the mass media shapes public perception of a contemporary societal issue. Students will analyze and interpret the roles of the media in a democratic society and how media can sometimes change human understanding and behavior in regard to this issue. May be repeated for credit as "issues" change. Prerequisite: ITW. Spring.

**IHPHIL 100 LOGICAL ARGUMENTATION**
The art of correct reasoning, advanced by studying forms of argument. Emphasizes deductive arguments, both categorical and sentential, and informal fallacies. Fall, Spring.

**IHPHIL 220 ETHICS**
Are abortion, euthanasia, and capital punishment morally acceptable? This course will examine the most influential philosophical approaches to resolving ethical questions such as these. We will apply philosophical theories and principles to a variety of moral dilemmas, with the aim of developing the skills necessary to successfully analyze ethical arguments. Fall, Spring.

**IHSP 100 BASIC SPANISH LANGUAGE AND CULTURE**
Introduction to basic skills to communicate about personal and everyday topics and exploration of cultural diversity within the contemporary Spanish-speaking world. For students with no prior knowledge of Spanish. Does satisfy the Arts and Humanities language requirement. Fall, Spring, Summer.

**IHSP 101 ELEMENTARY SPANISH I**
Introduction to basic skills to communicate about personal and everyday topics, including informal conversations with native speakers, finding and reading information in newspapers and Internet sites, and exploring the contemporary Spanish-speaking world. For students with little or no prior knowledge of Spanish. Fall, Spring.
IHSP 102 ELEMENTARY SPANISH II
Development of skills to communicate about personal and everyday topics, including informal conversations with native speakers, finding and reading information in newspapers and Internet sites, and exploring contemporary issues in the Spanish-speaking world. Students should have prior knowledge of basic Spanish. Fall, Spring.

IHSP 200 INTERMEDIATE READINGS IN SPANISH
Selected readings in Spanish from literary texts, scholarly journals, magazines, newspapers, and websites. Class discussions are mainly in English. This course meets the Arts and Humanities language requirement and does not count for the Spanish major. Students should have an elementary knowledge of Spanish. Fall, Spring.

IHSP 201 INTERMEDIATE SPANISH I
Development of skills to converse with native speakers, explore contemporary issues in the Spanish-speaking world, narrate events in present and past tenses, and to read newspapers, websites, and short fiction with a dictionary. Students should have prior knowledge of elementary Spanish. Fall, Spring.

NATURAL SCIENCES

INASTR 101 INTRODUCTION TO ASTRONOMY
Quantitative and descriptive view of current knowledge/developments in the field and methods used to acquire/analyze data and draw conclusions. Historical and cultural perspective, modeling, tools of the astronomer, underlying physical principles. Some lab exercises. Topics include stellar astronomy, origin, structure, and evolution of the universe, Earth-Sun system, and planetary origins. Fall, Spring.

INASTR 313 VISIONS OF THE UNIVERSE
An in-depth study of the solar system, stellar evolution, exoplanets, binary and variable stars, black holes, and the effects of dark matter and dark energy on the evolution of the universe. Emphasis will be given to historical and cultural influences leading to present-day understanding. Prerequisite: 24 credits in ISP, including IQL 101 and ITW 101. Fall, Spring.

INBIO 101 TOPICS IN BIOLOGY
An exploration of biological issues and methods for nonmajors. Applying basic principles to modern problems, the course may focus on a theme such as evolution and conservation of biodiversity, plants and society, or ecology and environmental issues. Can be repeated for elective credit but not ISP credit as topics change. Fall, Spring.

INBIO 104 LAB BIOLOGY TOPICS
An integrated lecture-lab course for nonmajors that explores biological topics through hands-on investigative activities. Will focus on a theme, such as marine biology or ecology. Can be repeated for elective credit but not ISP credit as topics change. Will satisfy the lab science requirement for education majors. Fall, Spring.

INBIO 300 ADVANCED TOPICS IN BIOLOGY
Topics in the biological sciences such as genetics, health, ecology, and others will be explored at an in-depth level. Socially relevant and ethical issues such as AIDs, genetic engineering, embryo research, environmental crises, and other issues will be emphasized. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Fall, Spring.

INCHEM 100 INTRODUCTION TO CHEMISTRY
An introductory course providing a survey of general chemical principles and their application to current environmental and social issues. Topics include atomic and molecular structure, chemical bonding, energy, reaction chemistry, solutions and nuclear power. (Not open toward a major program in Biology, Chemistry, Geology, or Chemistry/Physics.) Fall, Spring.

INCHEM 103 FUNDAMENTALS OF CHEMISTRY
Lecture and laboratory course providing a survey of general chemical principles. Topics include matter, energy, atomic and molecular structure, bonding, reaction chemistry and radioactivity. Knowledge of algebra, exponentials, and logarithms expected. Three-hour lecture, two-hour lab. (Not open toward a major program in Biology, Chemistry, Geology, or Chemistry/Physics.) Fall, Spring.

INCHEM 111 GENERAL CHEMISTRY I
The first course in a one-year sequence covering fundamental principles and concepts, including stoichiometry, atomic and molecular structure, bonding, periodicity, gases and thermochemistry. Previous chemistry recommended. For students who plan to take further chemistry courses. Knowledge of algebra, exponentials and logarithms expected. Three-hour lecture, two-hour lab. Fall.

INCHEM 201 FORENSIC SCIENCE
Forensic Science is the interdisciplinary application of science to law. The course will explore the forensic aspects of famous trials, scientific advances and media coverage. Using a case study approach, students will learn forensic techniques which will ultimately be applied to the production or analysis of mystery fiction. Prerequisites: ITW 101 and IQL 101. Fall, spring.
INGEOL 110 EARTH SYSTEMS SCIENCE
An overview of Earth’s systems (geosphere, atmosphere, hydrosphere and biosphere) and their interactions. Includes a survey of Earth materials, internal and external processes, global cycles (carbon, water), and feedback loops between humans and Earth’s systems. Environmental and resource issues are addressed. Includes an integrated laboratory component. Fall, Spring, Summer.

INGEOL 151 PHYSICAL GEOLOGY
An overview of the Earth. Includes description and origin of minerals and rocks, internal and external processes and recognition of landforms they produce, global cycles (carbon, water), and feedback loops between humans and Earth’s systems. Environmental and resource issues are addressed. Three-hour lecture, two-hour lab. Required field trips. Fall, Spring.

INGEOL 300 GEOSCIENCE ISSUES AND SOCIETY
A course focusing on the cause and effect of geologic processes that impact society. Content may vary, but includes earthquakes, tsunamis, floods, volcanic activity, resource issues, and the geologic record of climate change. Students are expected to closely monitor popular media to document current geologic events and their effects. Prerequisite: 24 credits in ISP, including ITW 101, IQL 101, and one course from the IS category. Occasionally.

INGEOL 320 EARTH’S CLIMATE: PAST AND FUTURE
The tools of climatic science are used to investigate the evidence and mechanisms for Earth’s climatic change throughout geologic time. Includes climate classification and reasons for climate, climate forcing mechanisms, anthropogenic forcing, the global-warming crisis, and potential remedies. Combined lecture/lab. Prerequisites: 24 credits in ISP, including ITW 101 and IQL 101. Occasionally.

INMET 225 METEOROLOGY
A survey of the atmosphere followed by discussion of solar influence, temperature, humidity, pressure, wind and forces. Weather patterns, severe weather and hurricanes are emphasized. World climates and classifications are treated, ending with past and future climates. Exercises such as map reading are conducted throughout the course. Fall, Spring.

INPHYS 201 PHENOMENAL SCIENCE
4 credits
A hands-on, minds-on inquiry-based exploration of the basic physical principles that underlie our observations and experiences in the everyday world. Topics include motion, forces, energy, fluids, sound, heat, light, electricity, magnetism, and the atom. Ideal for preservice teachers. Prerequisite: IQL 101 or by permission of the instructor. Fall, Spring.

INPHYS 141 COLLEGE PHYSICS I
Algebra-based introduction to Newtonian mechanics. Emphasis on conceptual understanding and problem-solving: motion, forces, Newton’s laws applied to both linear and rotational situations, momentum, energy, and conservation laws. Knowledge of algebra and trigonometry are expected. A math competency assessment is administered. Includes two-hour laboratory. Fall, Spring.

INPHYS 241 UNIVERSITY PHYSICS I
The first semester of a two-semester calculus-based sequence for science and technology majors. Emphasized are kinematics, forces, both static and dynamic, energy and momentum, gravitation and fluids, thermal physics, and thermodynamics. Includes a two-hour laboratory. Spring.

SOCIAL SCIENCES

ISANTH 110 CULTURAL ANTHROPOLOGY
Introduction to anthropological knowledge and understanding of human cultures and societies. Cross-cultural comparison and review of tribal and industrialized societies. Application of anthropological concepts to provide understanding of other cultures and one’s own culture. Fall, Spring.

ISANTH 111 ARCHEOLOGY AND PHYSICAL ANTHROPOLOGY
An introduction to the biological and cultural evolution of human beings. In addition to the prehistoric record, the course will cover primatology, human variation, and problems of theory and practice in archeology. Fall, Spring.

ISECON 104 INTRODUCTION TO MACROECONOMICS
Introduction to macroeconomic terminology, concepts, and theories using historical context, quantitative tools, graphical analysis, and macroeconomic models. Course concepts are examined in a social and/or political context as appropriate. Fall, Spring.

ISECON 360 HISTORY OF ECONOMIC THOUGHT
Examines the philosophical debates that underlie modern economic models through texts by Adam Smith, Karl Marx, and John Maynard Keynes. Topics such as the relationship between competition and justice, prices and ethics, free markets vs. government regulation will be explored. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101, and one course from the IS category. Spring.
ISGEOG 100 INTRODUCTION TO GEOGRAPHY
A systematic introduction to the discipline, designed to give the beginning student exposure to major topics associated with the subfields of geography. Geographic concepts and theories using real-world examples will be presented in order to examine spatial information and patterns that exist on the earth. Fall, Spring.

ISGEOG 101 WORLD REGIONAL GEOGRAPHY
Introduction to the geography of the world’s peoples and places. Adopting a regional perspective, the course examines the homogenizing and diversifying forces inherent among the world’s countries, peoples, and physical environments. Includes resource materials for teaching geography. Students may not receive credit for both ISGEOG 101 and GEOG 105. Fall, Spring.

ISGEOG 203 THE HUMAN CULTURAL MOSAIC
Focuses on a global analysis of cultural systems, spatial patterns and processes underlying cultural evolution, resource systems, and the impact of humans on the environment. Fall, Spring.

ISGEOG 204 PHYSICAL GEOGRAPHY
This course examines the dynamic processes that shape the Earth’s landscapes. Special attention is given to weather, climate, maps, and landforms. Fall, Spring.

ISGEOG 205 ENVIRONMENTAL GEOGRAPHY
Explores complex relationships between nature, culture, and place. Emphasis is placed on spatial aspects of human interactions with the environment resulting in serious issues, including pollution, global climate change, and resource depletion. Environmentally sustainable actions will be examined and assessed. Prerequisite: IQL 101 or ITW 101. Fall, even years.

ISPOSC 101 WHAT IS POLITICS?
An introduction to the study of politics and an overview of the content areas of political science. The course will include a variety of developmental skills, including writing, oral presentation, and the use of scholarly sources and information technology. Junior- and senior-status students require permission of instructor. Fall, Spring.

ISPOSC 210 UNITED STATES POLITICS
Survey of U.S. politics at the federal level. Emphasis is on the context and development of the Constitution and the evolution of political institutions, such as Congress, the presidency, and the courts. Other topics include political economy, media, public opinion, parties, elections, interest groups, and social movements. Spring.

ISPOSC 211 STATE AND LOCAL POLITICS
The role of power and institutions in the states and their government subdivisions. Comparative state and local cultures, federalism, revenues and expenditures, and contemporary problems. Spring.

ISPOSC 220 GLOBAL POLITICS
International politics in the era of globalization. International security frameworks, the global political economy, and critical agendas. Fall, Spring.

ISPOSC 223 COMPARATIVE GOVERNMENT: CANADA AND UNITED STATES
An introduction to comparative analysis, focusing on Canada and the United States – countries with similar histories and societies, but different governments and policy outcomes. Primary emphasis is placed on the context and evolution of political traditions, institutions, and behavior. Secondary emphasis is placed on the methods of comparative analysis. Spring.

ISPOSC 228 UNDERSTANDING GLOBAL POLITICS THROUGH LITERATURE AND FILM
Survey of important concepts in global politics that can be studied through such media as documentaries, films, and novels. The course treats important political questions and provocative theories about the international environment, hegemony, the international monetary regime, and the use of war. Occasionally.

ISPOSC 230 FOUNDATIONS OF POLITICAL THOUGHT
Introduction to the political philosophies that framed political action and governance in the West between the Classical Era and the end of the 17th century. Students learn the political contributions of Greek, Roman, Church, Reformation, and Enlightenment thinkers. Students also learn how to ask, answer, and assess philosophical questions about political power. Fall, Spring.

ISPSYC 100 TOPICS IN PSYCHOLOGY
An exploration of topical psychological issues for nonmajors. Topics vary in sub-areas of psychology such as biological, social, cognitive, developmental, and clinical psychology. May be repeated for credit as topics change. Fall, Spring.

ISPSYC 312 LIFESPAN PSYCHOLOGY
This course investigates the major psychological theories of lifespan development and provides a multifaceted introduction to the dynamics of intrapsychic development that occurs across the human lifespan. Major developmental milestones, effects of diversity and multiculturalism, socioeconomic status, family constellation, and socio-cultural variables are essential components of this analysis. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Fall, Spring.
ISSOC 125 SOCIOLOGY NOW
Course covers current events, applying a sociological perspective. Intended for students completing the ISP or those interested in a major in Sociology or social sciences. Students will learn how sociologists apply the scientific method to study current events. **Fall, Spring.**

ISSOC 260 POPULAR CULTURE
This course focuses on dominant ideas or ideologies of inequality and how they are perpetuated (or not) in mass media and popular culture products such as TV shows, movies, songs, websites, games, and the like. **Spring.**

ISSOC 310 SOCIAL PROBLEMS
A study of selected social problems using a sociological lens. Problems may include alcoholism and drug addiction, crime, divorce, poverty, gender inequality, race relations, and others. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101, and one course from the IS category. **Fall, Spring.**

**CONNECTIONS COURSES**

II 185 PERSPECTIVES AND PATHS: AN INTERDISCIPLINARY LOOK AT POVERTY
This course explores poverty from multiple perspectives. Drawing from disciplines like Biology, Sociology, Art, Film, and Literature, students will discover how different perspectives bring interdisciplinary meaning to the issue of poverty. At the end of the course, students will demonstrate an ability to discuss poverty from an interdisciplinary perspective. **Fall, Spring.**

II 302 MERCURY: POWER, POISON, AND PRIVILEGE
This course will explore the complex topic of mercury in our environment and its impact on society. Students will engage with faculty to understand the health and environmental consequences of emissions of this toxin and will be challenged to develop recommendations that limit adverse societal impacts working in multidisciplinary teams. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. **Spring.**

II 310 LOVE AND EXISTENTIALISM
In this interdisciplinary study of the writings of Beauvoir and Sartre, we will consider feminist, philosophical, literary, historical, and ethical analyses that examine whether genuine love is possible in existentialist thought. This course will be team-taught by Philosophy and Women's Studies faculty members. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. **Spring.**

II 320 WATER, WATER, EVERYWHERE?
What water issues are facing our world? In this interdisciplinary course, students will critically examine current water issues that impact humankind using both quantitative and qualitative research methods. Students will incorporate two or more academic disciplines to evaluate and educate others about their findings in a technical report. Prerequisites: 24 credits in ISP, including ITW 101 and IQL 101. **Spring.**

II 321 OPENING TO OTHER WAYS OF KNOWING
Learn what it means that knowledge is constructed, not received: explore non-Western ways of knowing and being. Using psychology, philosophy, history, and anthropology to understand different concepts of reality, our examination of knowledge construction will include readings, movies, songs, poetry, meditation, guest speakers, and personal experiences in different ways of knowing. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. **Spring.**

II 330 TOWARD A JUST AND EQUITABLE WORLD
We live in an unjust world. What can citizens do? What is the role of the media and formal/nonformal education? Is change possible? This interdisciplinary course uses tools from sociology and education in analyzing the systemic nature of social justice and equity issues. Includes involvement in a social change project. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. **Fall, Spring.**

II 375 GLOBALIZATION: DISSENTING VOICES
An interdisciplinary examination of globalization, drawing from the fields of sociology, history, economics, and politics. Students will critically examine the current forms of globalization by studying underlying theories and practices found in international organizations and corporate entities and assess how cultural activities may solidify or resist the directions of globalization. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. **Fall, Spring.**

IIAMST 210 INTRODUCTION TO AMERICAN STUDIES
An introduction to the cultural complexities of the American experience with an emphasis on formulating interdisciplinary questions. Usually focuses on a particular decade, region, or theme. Prerequisite: ITW 101 or its equivalent. **Fall, Spring.**

IIAMST 250 INTERPRETING AMERICAN CULTURES
An examination of a particular aspect of American cultures with an emphasis on developing a critical method appropriate to the interdisciplinary use of texts and other cultural artifacts. Prerequisite: ITW 101 or its equivalent. **Annually.**
IIAMST 370 AMERICAN BIOGRAPHY
Interdisciplinary course examines selected biographies of Americans and American-identified figures from historical and literary perspectives. Readings contextualize developments in American culture and society (writ large) from 1492 to the present. Intended for nonmajors. Includes autobiographies. Prerequisite: 24 ISP credits, including ITW and IQL. Annually.

IIAMST 375 AMERICAN CULTURAL STUDIES
Interdisciplinary exploration of a specific aspect or area of American culture employing methods drawn from the field of American Studies. Course moves toward the question: "What is American?" Readings consider phenomena defining American culture(s) and social structure(s), engaging theoretical, historical, and aesthetic materials. Intended for nonmajors. Prerequisite: 24 ISP credits, including ITW and IQL. Annually.

IIAMST 380 THE NEW ENGLAND EXPERIENCE
Interdisciplinary course examines selected readings and discussions of New England culture and society from the 17th century to the present. Examination draws upon literary, historical, and theoretical materials. Questions of region, image, imagination, and identity are addressed. Prerequisite: 24 ISP credits, including ITW and IQL. Annually.

IIECON 310 GAMES AND STRATEGIES
An introduction to game theory and strategic interactions with cases drawn from economics, business, politics, sociology, psychology, international studies, and sports. Topics include prisoner's dilemma, Nash equilibrium, backward induction, signaling, mixed strategies, cooperative and noncooperative games, bargaining, conventions, "the tragedy of commons," evolutionary game theory, and behavioral critiques of rationality. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Fall.

IIECON 380 MODERN MIDDLE EAST
This interdisciplinary course provides a broad but detailed overview of the Middle East region with a focus on patterns of economic and social transformation during the last century. The course material draws from the fields of Political Science, Sociology, History, Economics, and Women's Studies. Prerequisites: 24 credits in ISP, including ITW 101 and IQL 101. Spring.

IIEDUC 306 WOMEN AND EDUCATION
An exploration of schooling and its relationship to culture and society, focusing on women's role in education as both students and educators. Uses a historical, sociological, and feminist lens in examination of women's struggle for equality in education with parallels drawn to struggles of other subjects of marginalization. Prerequisites: 24 credits in ISP, including ITW and IQL. Spring.

IIEDUC 310 STUDENT EMPOWERMENT AND ACTIVISM
This interdisciplinary course traces the roots and growth of student activism on local and national levels. It examines youth empowerment within the United States since 1960 using the disciplines of History and Political Science. Emphasis is given to addressing how student activism in previous decades compares to 21st-century American student activism. Prerequisites: 24 credits in ISP, including ITW 101 and IQL 101. Fall, Spring.

IIENG 245 READINGS IN AFRICAN AMERICAN LITERATURE AND CULTURE
An interdisciplinary introduction to African American literature and culture, which considers oral, written, and performed texts by African American cultural practitioners. Literary texts from 18th-, 19th- and 20th-century African American writers will be read in conversation with critical musical, political, and theoretical works. Prerequisite: ITW 101. Fall, Spring.

IIENG 270 LITERATURE AND THE ENVIRONMENT
This interdisciplinary course introduces students to the traditions of environmental literature. Students will learn to think across the humanities, arts, and sciences. May explore a particular group of writers, genre, historical period, or bioregion. May be repeated once as topics change. Prerequisite: ITW 101. Annually.

IIENST 110 FOOD, HEALTH, AND THE ENVIRONMENT
This interdisciplinary course explores the connection between food choices and food production systems and their impact on public health and the environment. Considering social, political, economic, and ethical factors, students will compare different agricultural systems and assess the ecological footprint and sustainability of our daily decisions of what to eat. Fall, Spring.

IIENST 151 THE ENVIRONMENT OF CENTRAL NEW ENGLAND
Introduces the geology and ecology, the natural and human history, and the social systems and governance structures that shape our regional environment. Explores the concept of place using interdisciplinary approaches, including hands-on field work, preparing students to become responsible environmental stewards of the places where they live. Fall.

IIENST 152 PRINCIPLES OF SUSTAINABILITY
Students evaluate the world views and assumptions that brought us to the current crisis in worldwide environmental degradation and social injustice, and examine scientific laws needed to increase the prospects for a sustainable future. Students reflect on solutions that lead to a more harmonious and sustainable relationship between humans and nature. Spring.
IIFR 240 FRANCO-AMERICAN WOMEN’S VOICES
An exploration of Franco-American culture through the lens of gender. Topics will include family structure, employment, migration patterns, Franco-American contributions to literature and music, and the factors contributing to making this ethnic minority an “invisible” population. Readings and discussion in English. Counts toward the French major, the American Studies major and the Women's Studies minor. 4 credits. Does not satisfy the Arts and Humanities language requirement. Fall, alternate years.

IIHGS 254 WOMEN IN THE HOLOCAUST
How did women's Holocaust experiences differ from those of men? An interdisciplinary exploration of gender in Central European families, in ghettos, camps, and resistance, this course examines connections between the Holocaust and present-day manifestations of anti-Semitism, sexism, homophobia, and nationalism. Readings are drawn from history, women's studies, and Holocaust memoirs. Cross-listed as IHWGS 254. Occasionally.

IIHGS 255 GENOCIDE
This course identifies and studies deliberate measures aimed at the annihilation of an economic, ethnic, political, religious, or cultural group before and after the term “genocide” was coined in 1944 by Raphael Lemkin. Students will undertake an interdisciplinary examination of the historical and political development of the concept of genocide. Fall.

IIHLSC 350 WOMEN AND HEALTH: WITCHES, HARLOTS, AND HEALERS
A survey of women's health from the biological, social, economic, and political perspectives, drawing from the interdisciplinary field of health science. Prerequisite: 24 credits in ISP, including ITW101 and IQL101.

IIHLSC 445 HUMAN SEXUALITY
An interdisciplinary examination of human sexual development and behavior, including reproduction, sexual anatomy, psychosexual development, sexual socialization, values, and various forms of sexual expression. This course will explore human sexuality from biological, cultural, legal, and political perspectives. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Fall, Spring.

IIJRN 268 ENVIRONMENTAL ISSUES AND THE MEDIA
Media coverage of environmental issues is analyzed from scientific, economic, political and legal perspectives. For both science and non-science majors, a clearer understanding of how the media covers the environment and the various institutional interests involved in that coverage results through critical analysis and research projects. Spring, even years.

IIIMATH 310 THE EVOLUTION OF MATHEMATICS
How have cultural, historical, and scientific factors influenced the development of mathematics? This question is addressed via an interdisciplinary study of selected mathematical ideas from different historical time periods and cultures both Western and non-Western. Includes research, writing, and oral presentation requirements. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Fall.

IIIMATH 315 MATHEMATICS AND SOCIAL INSTITUTIONS
An interdisciplinary introduction to the mathematical tools used in Political Science, Sociology, Economics, and Business Management. Topics include the analysis of fairness in voting systems and apportionment from a historical point of view, scheduling, and networking problems using Euler and Hamilton circuits and elementary cryptographic methods. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Spring.

IIIMU 241 LISTENING TO BRAZIL
This course offers an interdisciplinary examination of Brazilian arts and culture, with an emphasis on music, literature, and film. Fall, Spring.

IIIMU 243 FILM MUSIC HISTORY AND TECHNIQUE
The course will enrich anyone’s appreciation for this art form and provide an introduction to the music of the film industry. The development of film music will be traced from the early Silent Film era through the advent of the “Talkies” and on to the grand Romantic scores of modern times. Fall, Spring.

IIPE 310 THE PSYCHO-SOCIAL ASPECTS OF SPORT
The purpose of this course is to present an interdisciplinary approach to sport that will challenge students to critically reflect and discuss sport from psychological and sociological perspectives. The central focus of the course is to understand how these perspectives and experiences interconnect our personal and societal viewpoints of sport today. Prerequisites: 24 credits in ISP, including ITW 101 and IQL 101.

IIPE 311 OUTDOOR RECREATIONAL LEADERSHIP
This interdisciplinary course will explore outdoor recreational leadership qualities, styles, and group dynamics from multiple perspectives (physical education/communication). Additional focus is placed on experiential learning and examinations of selected program activities. Students develop, lead, and evaluate activities based on varying participant requirements, and earn a Leave No Trace certification. Prerequisites: 24 credits in ISP, including ITW 101, and IQL 101. Summer.
II PHYS 210 HISTORY OF SCIENCE
The history and philosophy of science (astronomy, chemistry, geology, physics, and evolution) from its origins in Ancient Greece through Rome, the Middle Ages, the Islamic period, and the Renaissance to the Scientific Revolution of the 17th century to modern times, including plate tectonics, relativity, quantum physics and cosmology. Prerequisites: ITW 101 and IQL 101 or equivalent. Fall.

II PHYS 305 THE PHYSICS OF MUSIC
An interdisciplinary exploration of how analyses of the physics of sound aid our understanding of music. Students will learn how sound is created, sustained, amplified; how limits in human physiology shape approaches to music; and how physical properties of instruments relate to tone quality and give insight into different genres of music. Prerequisites: 24 credits in ISP, including ITW 101 and IQL 101. Fall, Spring.

II PSYC 350 WHEN HARM IS DONE
An interdisciplinary exploration of restorative justice, difficult dialogue, nonviolent resistance, and other models that differ from revenge and punishment as responses to crime and injustice. We will examine applications at the national and international level, in community criminal justice systems, in schools, in groups, and in personal relationships. Prerequisites: 24 credits in the ISP, including ITW and IQL. Fall.

II SOC 305 TRAVEL: CRITICAL PERSPECTIVES
This is an interdisciplinary course examining travel as a dynamic blend of the social sciences. How can travelers apply social science principles to develop global understanding? Travel critically engages the multiple perspectives of political science, economics, geography, archeology, anthropology, history, and sociology. The course will utilize lectures, discussions, and projects. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Fall. Spring, Summer.

II SOC 310 WAR: WHY WE FIGHT
Interdisciplinary examination of war as a social phenomenon. Central to the course are questions regarding the nature and necessity of war. Emphasis is placed on class discussion and readings from the fields of Geography, Psychology, Economics, Political Science, History, and Sociology. Prerequisite: 24 credits in the ISP, including ITW and IQL. Occasionally.

II SOC 360 NICARAGUA IN CHANGE
Experiential service-learning course examines the effects of revolution and social change in Nicaraguan society. Faculty and students travel during spring break to the city of Managua and a rural farming cooperative in Nicaragua. Students conduct interdisciplinary research on public health and social conditions and share results in a public forum. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Occasionally.

II TDS 140 MEDIA LITERACY: SEEING AND SELLING
Explore the promotion of world views through the power of visual communications. Apply the tools of many different academic fields to “see more” and become more visually and media literate. Develop interdisciplinary creative problem-solving skills, build your academic portfolio, and contribute to a collaborative service-learning project. Four-hour seminar. Fall.

II TDS 150 TECHNOLOGY AND CIVILIZATION
This course is a multidisciplinary exploration of technology that encourages students to assess the intended and unintended consequences of technical solutions through cultural, scientific, technological, economic, social, and political lenses. Students will research self-selected topics to understand current issues and to select socially responsible solutions. Four-hour seminar. Spring.

II TDS 160 PEAK OIL AND SUSTAINABLE SOLUTIONS
Apply tools of many different disciplines to explore national and international issues surrounding “Peak Oil” — impacts of dwindling supplies of fossil fuels, environmental and social costs of energy conversion processes, national energy polices, and grassroots activism. Develop interdisciplinary problem-solving skills by promoting sustainable solutions in a service-learning project. Four-hour seminar. Spring.

II WSG 101 INTRODUCTION TO WOMEN’S AND GENDER STUDIES
This course is designed to introduce students to the key issues, questions, and debates in the interdisciplinary field of Women’s and Gender Studies. Central to the course will be a focus on the social construction of identity and the myriad ways in which gender, race, class, sexuality, and nationality work to constitute people’s experiences. Fall, Spring.

II WSG 210 ABORTION
An interdisciplinary examination of the issue of abortion in the United States. Can one be a feminist and oppose legal access to abortion? Students will explore the legal, theological, and social history informing the abortion debate, with an aim to appreciate why resistance to reproductive choice exists and persists. Prerequisites: ITW 101 and IQL 101. Spring, alternate years.
IIWGS 220 STARVED OR STUFFED
When the body is read as text, eating disorders are manifestations of cultural ideas that communicate to the self and the masses. This interdisciplinary course examines eating disorders through the optic of feminism, taking into consideration feminist discourse, theories of consumption and subjectivity formation, psychology, sociology, and literary analyses. Prerequisite: ITW 101 and IQL 101. Fall.

IIWGS 230 SPIRITUALITY AND SEXUALITY
An interdisciplinary exploration of spirituality and sexuality, drawing from history, religion, as well as women's and gender studies. Key questions: How are institutions of religion socially constructed? How do they affect women’s ways of knowing, women’s spirituality, and women’s sexuality? What are new ways of representing spirituality as social inquiry? Prerequisites: ITW 101 and IQL 101. Fall, alternate years.

IIWGS 240 GENDER AND MEDIA
This course will employ an interdisciplinary approach to studying representations of gender (as well as class, race, and sexuality) in the mass media and popular culture. Using scholarship from cultural studies, communication, sociology, and other disciplines, we explore dominant ideologies and how they are perpetuated (or not) in media products. Prerequisites: ITW 101 and IQL 101. Spring.

IIWGS 254 WOMEN IN THE HOLOCAUST
How did women’s Holocaust experiences differ from those of men? An interdisciplinary exploration of gender in Central European families, in ghettos, camps, and resistance, this course examines connections between the Holocaust and present day manifestations of anti-Semitism, sexism, homophobia, and nationalism. Readings are drawn from history, women’s studies, and Holocaust memoirs. Cross-listed as IIHGS 254. Occasionally.

IIWGS 290 TOPICS IN WOMEN’S AND GENDER STUDIES
Interdisciplinary study of a specific issue or topic within the field of Women’s and Gender Studies. Students will develop skills in critical reading and critical thinking. May be repeated for credit as topics change. Prerequisites: ITW 101 and IQL 101. Offered occasionally.

IIWGS 300 WOMEN OF COLOR
This interdisciplinary course explores the experiences of women of color using feminist scholarship from literature, sociology, history, and women's studies. Analyzes the history of social movements that have influenced the construction of the category “women of color” and articulates a critique of the category of “whiteness.” Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Occasionally.

Journalism

IHJRN 101 MEDIA AND SOCIETY
This course will examine the ways that the media participates in shaping social reality. Students will analyze and interpret the roles of the media in a democratic society in regard to a variety of cultural, political, and economic problems. Spring.

IHJRN 267 ISSUES IN THE MEDIA
This course will examine the way the mass media shapes public perception of a contemporary societal issue. Students will analyze and interpret the roles of the media in a democratic society and how media can sometimes change human understanding and behavior in regard to this issue. May be repeated for credit as “issues” change. Prerequisite: ITW. Spring.

IHJRN 268 ENVIRONMENTAL ISSUES AND THE MEDIA
Media coverage of environmental issues is analyzed from scientific, economic, political, and legal perspectives. For both Science and non-Science majors, a clearer understanding of how the media covers the environment and the various institutional interests involved in that coverage results through critical analysis and research projects. Offered every third semester.

JRN 100 INTRODUCTION TO MASS COMMUNICATION
A study of the techniques and effects of mass media in modern society; an interdisciplinary approach to understanding the relationship between the citizen and information sources. Press, radio, TV, film, and other sources analyzed from historical, technical, ethical, and potential viewpoints. Required as a first course for Journalism majors and open to all students as space is available. Fall, Spring.

JRN 130 WRITING FOR THE MEDIA
Introduction to copy writing for print and electronic media, with special emphasis on the development of news judgment, writing leads, and adapting messages to specific audiences. Prerequisite: ITW. Fall, Spring.
JRN 230 PRINT JOURNALISM
Introduction to reporting techniques, including interviewing, fact checking, obtaining documents, and reporting on speeches, public meetings, and events. Prerequisite: JRN 130. Fall, Spring.

JRN 235 BROADCAST JOURNALISM
Basic principles of journalism for radio and television news. Introduction to interview techniques, electronic news gathering, researching, writing, producing, and reporting news for radio and television. Lecture, practice, and fieldwork. Prerequisite: JRN 130 or permission of instructor. Fall, Spring.

JRN 255 DIGITAL JOURNALISM
Introduction to the vocabulary, principles, tools, and techniques of visual communication for print and electronic media. Assignments focus on message communication using typography, image, visual design, and writing for the Internet. Prerequisite: JRN 130. Fall, Spring.

JRN 280 MEDIA PRODUCTION
2 credits
Training in the production of news writing, photojournalism, video journalism, podcasting, and graphic design for publication within the Equinox's print and online venues. May be repeated for a total of 8 credits. Only 4 credits may be counted toward the major. Prerequisite: ITW 101. Fall, Spring.

JRN 282 EQUINOX EDITOR
Training in page design, story assignment, journalism law and ethics, and newsroom management for the editors of the student newspaper. May be repeated for a total of 12 credits. Prerequisite: Permission of instructor.

JRN 294 COOPERATIVE EDUCATION
1-6 credits
Introductory work-learning experience related to career interests for which compensation may be received. Positions arranged by students with sponsorship, approval, and evaluation by full-time faculty. Elective credit only (normally 120 hours for 3 credits) for a total of 12 credits per degree program. Prerequisites: 24 total credits earned, 2.0 cumulative GPA, and permission of instructor. Graded Pass/Fail.

JRN 311 MASS MEDIA HISTORY AND THEORY
Readings on the history of mass communication and mass communication theory. Students will examine survey, interview, and historical research methods. This course is writing intensive. Prerequisite: JRN 100 or permission of instructor. Fall, odd years.

JRN 323 JOURNALISM LAW AND ETHICS
Teaching and practice in journalism law and ethics by use of case studies and legal precedents. Students will examine the role of journalism in a democratic society and the laws and ethical considerations that affect this role. Prerequisite: JRN 235 or JRN 230 or permission of instructor. Spring.

JRN 330 PUBLIC AFFAIRS REPORTING
Instruction in the process of gathering information from public meetings and public officials. Students will write about school board meetings, city council meetings, court cases, public hearings, and other kinds of public events. Prerequisite: JRN 230 and JRN 255.

JRN 335 TELEVISION JOURNALISM
An advanced course in television news, public affairs programs, and documentaries. Introduction to public affairs and documentary research, scriptwriting, and production. News for closed-circuit television at Keene State College. Lecture, practice, and fieldwork. Prerequisites: JRN 235 and JRN 255, or permission of instructor. Spring, odd years.

JRN 365 PHOTOJOURNALISM
An introduction to the theories and practices of photojournalism, digital photo editing, and visual storytelling. The medium will be explored from historical, ethical, social, and legal perspectives. Skills will be developed through weekly and in-class assignments as well as through critique. Requirement: Students must provide and keep in good working order, a 35mm digital camera, 6-megapixel, or higher. Prerequisite: JRN 255 or permission of instructor. Fall.

JRN 367 PUBLIC RELATIONS PRACTICE
Hands on practice in PR strategies and tactics, including communication goal-setting, audience research, and message and campaign creation. Some lecture/discussion, with individual student participation as an important component. Prerequisite: JRN 230. Occasionally.

JRN 380 INTERNSHIP
3-12 credits
A supervised, contracted internship arranged by the student with an approved publication or, in certain cases, with campus offices, either for a semester’s work or summer employment. Contract must be approved by the Journalism faculty. Responsible faculty supervision and review are required. Only four credits may be counted toward elective credit for the major.
JRN 430 FEATURE WRITING
Instruction and practice in feature writing for newspapers and magazines. Advanced practice in research and writing techniques as well as the creation of story ideas. Freelance feature writing will also be discussed. Prerequisite: JRN 330. Fall, occasionally.

JRN 435 COMMUNITY TELEVISION NEWS
A performance course in television news, with special attention to developing a regularly cablecast community television newscast for the Keene area. Introduction to formatting the news and presenting it under deadline. Lecture, practice, and fieldwork. Prerequisites: JRN 235 and JRN 255. Spring, even years.

JRN 450 NEWS EDITING AND MANAGEMENT
Practice in copy editing, page design, photo editing, headline writing, story assignments, law, ethics and management of a newspaper. Prerequisites: JRN 255 and JRN 330.

JRN 467 SPECIALIZED JOURNALISM
Advanced study and practice in specialized news gathering or reporting. Topics include column writing, editorial writing, reviewing, or environmental reporting, among others. Prerequisite: JRN 330 or JRN 335 or JRN 435. Occasionally.

JRN 498 INDEPENDENT STUDY
1-6 credits
Under faculty supervision, the student develops and completes a program of research or development in a worthwhile aspect of journalism or mass communications. May be repeated for a total of 6 credits. Only 4 credits may be counted toward elective credit for the major. Prerequisite: Written permission of instructor.

KSC Courses

KSC 270 LEARNING ASSISTANT
1-4 credits
Under faculty supervision, learning assistants develop and practice instruction and interaction skills for working effectively with students in a specific discipline. Supplemental instructors and undergraduate teaching assistants are examples. May be repeated for a total of 8 credits. Fall, Spring.

KSC 690 GRADUATE SPECIAL TOPICS
1-4 credits
Study of selected topics in academic disciplines based on the needs and interests of the student. Intended for professionals seeking continuing study and middle school and high school educators seeking advanced study in content areas. May be repeated for credit. Prerequisite: Permission of instructor. Fall, Spring, Summer.

Management

MGT 101 INTRODUCTION TO MANAGEMENT
An examination of the principles underlying the management of organizational activities. Management theory and practice including: planning, organizing, leading, and controlling; decision making, motivation, leadership and communication will be covered. Topics also include: globalization, technology, corporate social responsibility, ethics, conflict management and organizational change. Fall, Spring.

MGT 202 QUANTITATIVE DECISION MAKING
An introduction to quantitative analysis for management to provide students with an opportunity to learn the basic concepts and the quantitative/analytical tools used in the process of decision-making and problem-solving. Prerequisite: MATH 102 or passing grade on the Math Assessment Exam. Fall, Spring.

MGT 213 FINANCIAL ACCOUNTING
Introduces accounting information with an emphasis on its use in decision making by owners, creditors, managers, and government for both profit and non-profit organization. Topics include the accounting profession, double-entry accounting system, information systems, ethics, taxation, and internal control systems. Prerequisites: Grade of C or higher in MGT 202 and sophomore standing, or permission of instructor. Fall, Spring.

MGT 214 MANAGERIAL ACCOUNTING
This course focuses on accounting information used by managers in planning, controlling operations and decision making within organizations. Topics include cost concepts and classifications, cost volume profit analysis, costing systems, and budgeting. Prerequisite: Management majors and minors only, grade C or higher in MGT 213, or permission of instructor. Fall, Spring.
MGT 215 ACCOUNTING FOR SUSTAINABLE MANAGEMENT
This course introduces the analysis and reporting of accounting information, primarily for internal use by managers for decision-making. Topics include financial statements, the accounting cycle, cost behavior, cost allocation, and financial planning and control. Sustainability concepts and emerging measurement systems are introduced. Prerequisites: MGT 101 and MGT 202 or permission of instructor. Fall.

MGT 260 INTRODUCTION TO SPORTS MANAGEMENT
The course will include, but is not limited to, the following topics in sport management: organizational theory, facility management, current issues, human resource management, labor relations, legal and ethical issues, marketing, communications, and financing. Spring.

MGT 290 SPECIAL TOPICS
1-4 credits
Study of a selected topic in management. May be repeated as topics change. Occasionally.

MGT 292 TRANSITION TO THE WORKPLACE
1 credit
Topical seminar focusing on the transition from college life to the workplace. Seminar topics include preparation of an effective resume, successful interviewing, business etiquette, locating and contacting prospective employers, building and maintaining job search momentum, development of an overall employment search strategy, and employer/employee expectations in the workplace. Graded Pass/Fail. Spring.

MGT 298 INDEPENDENT STUDY
1-4 credits
Opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Consent required of the instructor who will supervise the independent study. May be repeated for a total of 8 credits. Fall, Spring.

MGT 301 ORGANIZATIONAL THEORY AND BEHAVIOR
Analyzes approaches to managing modern organizations, using organizational theory to assess problems of administration in public and private organizations. Emphasizes internal structure, leadership, planning and personnel utilization problems, and external influences, bargaining and coalition formation relationships, and the nature of authority and organizational behavior. Prerequisites: Management majors and minors only, grade C or higher in MGT 101 and junior standing, or permission of instructor. Fall, Spring.

MGT 306 PERSONAL FINANCIAL PLANNING
Introduces students to a comprehensive examination of the concepts and practical applications in financial planning. Topics include money management, tax planning, risk management and insurance, investment planning, retirement planning and estate planning. Prerequisites: MGT 213 and junior standing, or permission of instructor. Alternate years.

MGT 319 FINANCIAL MANAGEMENT
Study of financial decision making based in contemporary financial theory and world economic conditions. The course will focus on financial theory and tools applicable to investing, capital budgeting, and capital structure decisions. Students are introduced to a variety of valuation techniques and to the capital markets and their influence on corporate financial decisions. Prerequisites: MGT 202, MGT 214, and junior standing, or permission of instructor. Fall, Spring.

MGT 324 HUMAN RESOURCE MANAGEMENT
Overview of human resource management, including human resource planning, recruitment, selection, training and development, performance appraisals, compensation, health and safety, employee and labor relations, employment law, job design and analysis, and human resource research. Prerequisites: MGT 101 and junior standing, or permission of instructor. Fall, Spring.

MGT 331 PRINCIPLES OF MARKETING
Study of marketing behavior of the firm as it supplies goods and services to consumers and industrial users. Optimal “marketing mix,” product design, product line policies, branding, pricing, promotion, consumer behavior, and channels of distribution. Prerequisites: MGT 202, and either MGT 213 or MGT 251, and junior standing, or permission of instructor. Fall, Spring.

MGT 333 ADVERTISING AND PROMOTION
The role of advertising and promotion in society and in the marketing mix of the firm. Tools of promotion, budgeting, media, campaign evaluation and research, and criteria for selection of most effective media for the target market and products. Prerequisites: MGT 331 and junior standing, or permission of instructor. Fall, Spring.

MGT 345 OPERATIONS MANAGEMENT
Gives students the opportunity to learn basic operations management techniques to improve the efficiency with which work is accomplished in any type of organization. Inventory control models, queuing theory, simulation, and decision theory are among the topics covered. Prerequisites: MGT 202 and 213 and junior standing, or permission of the instructor. Fall, Spring.
MGT 350 BUSINESS LAW
Presents law as an expanding social institution. Nature and sources of law, courts and court procedures, crimes and torts, contracts, agency and personal property, and types of business organizations. Prerequisites: MGT 101 and junior standing, or permission of instructor. Fall, Spring.

MGT 355 BUSINESS NEGOTIATIONS
This course is a highly interactive course designed to introduce the student to the fundamental concepts of negotiation and the negotiation styles, tactics, and strategies used by corporate and public service negotiators, collective bargainers and mediators. The course examines the practical application of negotiation theory and conflict management in both basic and increasingly complex settings. Prerequisites: MGT 201 and MGT 301, or permission of instructor. Occasionally.

MGT 381 MANAGEMENT INFORMATION SYSTEMS
Survey course based on the premise that information systems knowledge is essential for creating competitive firms, managing global corporations, adding business value, and producing useful products and services to customers. MIS themes may include: managing environmental systems, managing supply chains, managing human resource information systems, and managing globally dispersed teams. Prerequisites: CS 101, MGT 202, and MGT 213 or MGT 215, and junior standing, or permission of instructor. Fall, Spring.

MGT 408 HONORS SMALL BUSINESS INSTITUTE
Under faculty supervision, students will serve in teams as consultants for local small businesses or non-profit organizations. Student teams will write comprehensive case analyses and business plans. Students in this course participate in national competition. Prerequisite: permission of instructor. Spring.

MGT 410 PRINCIPLES OF INVESTMENT
Introduction to financial markets including the organization, regulation and ethics of national and international markets. Research, analysis, and valuation of financial instruments including equities, fixed income and leveraged securities, and derivatives are covered. Prerequisites: MGT 319 and senior standing, or permission of instructor. Spring.

MGT 434 MARKETING RESEARCH
Study of the marketing research process, including management uses of marketing research, the scientific method in marketing and research procedures. Examination of exploratory and secondary research, including data collection, tabulation, and analysis. Emphasis on market segment, product, advertising, and sales analysis research. Prerequisites: MGT 331 and senior standing, or permission of instructor.

MGT 446 COMPETITIVE MANUFACTURING MANAGEMENT
Processes utilized in today's agile and lean manufacturing organizations that create tangible products optimizing value to the end consumer. Emphasis is focused in design, implementation, and control of manufacturing processes that are efficient, safe, and environmentally sustainable in the new era of fierce global competition and increasingly scarce natural resources. Prerequisites: MGT 101 and MGT 202. Spring.

MGT 451 SOCIAL, LEGAL, AND POLITICAL ENVIRONMENT OF BUSINESS
Advanced study of management philosophy and practice. Focus is on the manager's role as influencing and influenced by organizational structures, organization goals, and social, legal, political, and ecological constraints. Students are encouraged to develop a personal management philosophy. Prerequisites: MGT 301 and senior standing, or permission of instructor. Fall, Spring.

MGT 490 ADVANCED SPECIAL TOPICS
1-4 credits
Exploration of an advanced major area of management, depending on student interest. May be repeated as topics change. Prerequisites: junior standing or permission of instructor. Occasionally.

MGT 491 BUSINESS POLICY AND STRATEGY
Capstone course requiring the application of all business disciplines to real-world problems. Focuses on the decision-making process for the manager as a strategist and organization builder. Prerequisites: Completion of all required MGT courses (except MGT 451 which can be taken concurrently), a grade C or higher in MGT 301 and senior standing, or permission of instructor. Fall, Spring.

MGT 493 MANAGEMENT INTERNSHIP
4-8 credits
An opportunity to compare management theory with practice through on-the-job experience in participating organizations. Regular meetings with the instructor ensure maximum learning. A research paper is required. May be repeated for a total of 8 credits. Cannot be used to fulfill required mgt elective. Prerequisites: 2.50 GPA overall and permission of instructor. Graded Pass/Fail. Fall, Spring.
MGT 494 ADVANCED COOPERATIVE EDUCATION
12 credits
Sequential work-learning experience for which compensation may be received. Placements arranged by Management faculty. Supervision and evaluation conducted by both work-site supervisor and faculty. Normally, 480 hours of work is expected for 12 credits. Cannot be used to fulfill required MGT elective. Prerequisites: 2.0 cumulative GPA, declaration of major, and permission of instructor. Graded Pass/Fail. Fall, Spring.

MGT 498 INDEPENDENT STUDY
1-8 credits
Advanced individualized study in an area of management not normally available in the curriculum. May be repeated for a total of 8 credits. Cannot be used to fulfill required MGT elective. Prerequisites: Junior standing and permission of instructor. Fall, Spring.

Mathematics

IIMATH 310 THE EVOLUTION OF MATHEMATICS
How have cultural, historical, and scientific factors influenced the development of mathematics? This question is addressed via an interdisciplinary study of selected mathematical ideas from different historical time periods and cultures both Western and non-Western. Includes research, writing, and oral presentation requirements. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Fall.

IIMATH 315 MATHEMATICS AND SOCIAL INSTITUTIONS
An interdisciplinary introduction to the mathematical tools used in Political Science, Sociology, Economics, and Business Management. Topics include the analysis of fairness in voting systems and apportionment from a historical point of view, scheduling, and networking problems using Euler and Hamilton circuits and elementary cryptographic methods. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Spring.

MATH 071 ELEMENTARY EDUCATION MATH PREPARATION
Intensive review of the basic mathematics needed for success in MATH 171 Structure of Number Systems. Topics: place value, whole number computation, fractions, decimals, percents, integers, basic algebra, and problem solving. Credits do not apply toward graduation. Graded Pass/Fail. Course may be repeated until passed. Fall, Spring.

MATH 102 MATHEMATICS FOR MANAGEMENT
1 credit
Intensive review of fractions, decimals, percents, order of operations, solving equations, evaluating formulas, ratios and proportions and linear functions. Open only to management majors and minors who do not pass the mathematics assessment exam for management. Graded Pass/Fail. Course may be repeated until passed. Fall, Spring.

MATH 120 APPLIED ALGEBRA AND TRIGONOMETRY
Algebra and trigonometry taught in context, using technology to enhance understanding of algebraic concepts. Topics include numeracy; data analysis; linear, quadratic, and exponential growth; formula use; laws of exponents; logarithms; and systems of equations. Not open to students who have completed MATH 130 or MATH 151. Fall, Spring.

MATH 130 PRECALCULUS
Functions explored from numerical, graphical, and analytic perspectives. Function notation, operations, and inverses. Includes study of polynomial, rational, exponential, logarithmic, and trigonometric functions. Intended as a preparation for calculus and not open to students who have taken calculus in college. Presumes competency in the content of MATH 120. Fall, Spring.

MATH 135 MATH FOUNDATIONS FOR CS
This course is an introduction to the formal mathematical concepts necessary for the study of computer science. Topics include elementary logic, set theory, relations, deduction, induction, algorithmic processes, graph theory, and data analysis. Spring.

MATH 141 INTRODUCTORY STATISTICS
Basic tools of descriptive statistics, discrete probability, binomial distribution, normal distribution, t-distribution, estimates and sample sizes, hypothesis testing, elementary correlation and regression, contingency tables. Use of graphing calculator and spreadsheet software. Fall, Spring.

MATH 151 CALCULUS I
Topics include limits, continuity and derivatives of functions of one and two variables, integrals of a function of one variable and the Fundamental Theorem of Calculus. Applications of differentiation and development of mathematical modeling skills will be emphasized. Presumes competency in content of MATH 130. Computer algebra system introduced. Fall, Spring.
MATH 152 CALCULUS II
Techniques of integration for functions of one and several variables; first and second order differential equations; applications such as area, volume, and arc length; apply Taylor series to find power series representations of functions. Continued use of a computer algebra system. Prerequisite: Grade C or higher in MATH 151. Fall, Spring.

MATH 171 STRUCTURE OF NUMBER SYSTEMS
Examines the structures and properties of mathematics while focusing on the development of problem-solving skills. Includes sets, functions, whole numbers, integers, fractions, decimals, and number theory. Intended for prospective elementary school teachers. Utilizes appropriate grade-level technology. Prerequisite: Passing grade on the proficiency examination. Fall, Spring.

MATH 172 APPLICATION OF NUMBER SYSTEMS
Considers applications of rational numbers, percent, probability and statistics, counting techniques, geometry, and measurement. Intended for prospective elementary school teachers. Utilizes appropriate grade-level technology. Prerequisite: Grade C or higher in MATH 171. Fall, Spring.

MATH 175 DATA ANALYSIS FOR TEACHERS
Techniques and applications of data analysis in school settings, including interpretation of standardized test scores. Addresses the use of technology to interpret data, sampling, descriptive, and inferential statistics. Use of SPSS. Fall.

MATH 225 INTRODUCTION TO ABSTRACT AND DISCRETE MATHEMATICS
Introduction to mathematical language and reasoning and to selected topics in discrete mathematics. Introduction to proof techniques. Mathematical induction, logic, set theory, functions, relations, elementary number theory, combinatorial enumeration, and graph theory. May not be taken for credit by students who have completed MATH 270. Prerequisite: Grade C or higher in MATH 151. Fall.

MATH 231 LINEAR ALGEBRA AND DIFFERENTIAL EQUATIONS
Develops the mathematical structures, algebraic properties, and applications of matrices, determinants, vectors, vector spaces, and linear transformations. Development and solution of mathematical models involving systems of linear algebraic equations and systems of linear differential equations. Incorporates graphing calculator and computer algebra system. Prerequisite: Grade C or higher in MATH 152. Spring.

MATH 241 PROBABILITY AND STATISTICS I
A calculus-based course introducing elementary probability theory; discrete and continuous distributions and random variables; and sampling distributions. Data analysis via descriptive and inferential statistics. Includes point and interval estimation; regression and correlation; and hypothesis testing. Prerequisite: Grade C or higher in MATH 152. Fall.

MATH 242 APPLIED STATISTICS
Hypothesis testing, single linear regression, and one-way analysis of variance using calculators and statistical software. Includes problems dealing with multiple linear regression, multi-way analysis of variance, nonparametric statistics, and computer applications. Prerequisite: MATH 141 or MATH 175 or PSYC 251 or MATH 241. Spring, odd years.

MATH 251 VECTOR CALCULUS
Extends multivariable calculus to vector fields and functions. Topics include vector algebra and geometry; line and surface integrals; gradient, divergence and curl; Lagrange multipliers; and Green's, Stokes's and Divergence theorems. Applications to physics, engineering, and other sciences. Computer algebra system used extensively. Prerequisite: Grade C or higher in MATH 152. Spring.

MATH 270 MATHEMATICAL THINKING
Designed to deepen students' mathematical problem-solving and reasoning skills in the areas of number and operation, algebra, and geometry. Includes reading, writing, and the development of proofs. May not be taken for credit by students who have completed MATH 225. Prerequisite: Grade C or higher in MATH 151. Fall.

MATH 275 GEOMETRY FOR K-8 TEACHERS
An introduction to geometry for the elementary/middle school curriculum. Emphasis on proof techniques and content areas of Euclidean and non-Euclidean topics. Prerequisite: MATH 172, MATH 225, or MATH 270. Spring.

MATH 320 GEOMETRY
Rigorous treatment of Euclidean and non-Euclidean geometries. Synthetic, analytic, and transformational approaches. Axiomatic systems, parallel postulates, congruence, similarity. Incorporates the historical development of geometry and the use of geometry software. Prerequisite: Grade C or higher in MATH 225 or MATH 270. Fall, Spring.
MATH 330 ABSTRACT ALGEBRA
An introduction to the basic concepts of abstract algebra. Topics include groups, rings, fields, and their homomorphisms. Prerequisite: Grade C or higher in MATH 225 or MATH 270. Fall.

MATH 337 NUMBER THEORY
Theory and applications of properties of the integers. Mathematical induction, divisibility, division algorithm, congruencies, greatest common divisor, least common multiple, primes, Fundamental Theorem of Arithmetic, and Pythagorean triples. Also considers historical background and famous number-theoretic conjectures. Prerequisite: MATH 225 or MATH 270. Fall.

MATH 341 PROBABILITY AND STATISTICS II
A second course in probability and mathematical statistics addressing in depth such topics as the Central Limit Theorem, Chebyshev's theorem, covariance, multiple regression, ANOVA, nonparametric methods, and applications of probability distributions. Prerequisite: MATH 225 or MATH 270. Spring, even years.

MATH 350 REAL ANALYSIS
A rigorous presentation of functions of one variable. Topics include limits, continuous functions, derivatives, Riemann integrals, the Fundamental Theorem of Calculus, and infinite series. Prerequisite: Grade C or higher in MATH 152 and MATH 225 or MATH 270. Spring.

MATH 361 DIFFERENTIAL EQUATIONS
A study of analytical and numerical solution methods for ordinary and partial differential equations. Includes series solutions and special functions for the solution of ODEs and the use of Fourier series to solve PDEs. Transform and numerical methods for solving ODEs and PDEs are introduced. Prerequisite: MATH 231. Fall.

MATH 362 MATH MODELING AND COMPUTING
Introduction to the modeling process and numerical analysis. Explores the development and solution of discrete and continuous mathematical models. Computing topics include error analysis, computational efficiency, and programming of algorithms. Methods include numerical integration, numerical solution of differential equations, interpolation, and curve fitting. Mathematical software is used throughout the course. Prerequisite: Grade C or higher in MATH 151. Spring.

MATH 375 ALGEBRAIC CONCEPTS FOR K-8 TEACHERS
The focus is on building algebraic thinking with an emphasis on modeling real-world phenomena and the meanings represented by algebraic expressions. Topics include linear relationships; slope; linear, quadratic, and exponential functions. Connections will be drawn between algebra and geometry through patterns and other areas of overlap. Prerequisite: MATH 172, MATH 225, or MATH 270. Spring.

MATH 378 TECHNOLOGY FOR TEACHERS
Students will examine and interpret the effective and appropriate use of instructional technologies available to K-12 mathematics teachers and learn to apply such technologies in conjunction with existing school mathematics curricula. Prerequisite: Grade C or higher in MATH 225 or MATH 270. Spring.

MATH 400 CAPSTONE IN MATHEMATICS
A senior-level course in mathematical reasoning, problem solving, and communication. Topics vary at instructor's discretion. Students will make connections and integrate previous learning, develop mathematical literacy through reading and interpreting mathematical literature, and prepare and present written and oral reports on mathematical topics. Prerequisite: MATH 330 or MATH 350. Fall.

MATH 475 ISSUES AND TRENDS IN MATH EDUCATION
Analyzes the development of historical, mathematical, and psychological factors influencing K-16 mathematics curricula. Emphasis is on the content of mathematics and its interface with current major issues in mathematics education. Prerequisite: MATH 350 or MATH 375. Fall.

MATH 490 TOPICS IN PURE MATHEMATICS
Topics from fields of pure mathematics. May be repeated with department’s permission. Prerequisite: Permission of instructor.

MATH 494 COOPERATIVE EDUCATION
1-8 credits
Sequential work-learning experience for which compensation may be received. Placements arranged, supervised, and evaluated by full-time faculty. Elective credit to maximum of 8 credits. Prerequisites: 2.5 cumulative GPA, declaration of Mathematics major, and permission of instructor. May be repeated for credit. Graded Pass/Fail.

MATH 498 INDEPENDENT STUDY
1-8 credits
Individual investigation of selected topics. May be repeated for a total of 8 credits. Prerequisite: Permission of instructor.
**Meteorology**

**INMET 225 METEOROLOGY**
A survey of the atmosphere followed by discussion of solar influence, temperature, humidity, pressure, wind, and forces. Weather patterns, severe weather, and hurricanes are emphasized. World climates and classifications are treated, ending with past and future climates. Exercises such as map reading are conducted throughout the course. *Fall, Spring.*

**MET 298 INDEPENDENT STUDY**
1-4 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Consent is required from the instructor who will supervise the independent study. May be repeated for a total of 8 credits.

**Modern Languages**

**ML 101 THE WORLD OF LANGUAGE**
An introduction to the concept of language. Topics include verbal and nonverbal communication, machine language, taboos, sexist language, language acquisition, and the specialized language of politicians, scientists, and the media. Students become familiar with current linguistic research. Does not satisfy the Arts and Humanities language requirement. *Fall.*

**ML 191 BEGINNING LANGUAGE I**
Introduction to communication in a foreign language other than French, German, or Spanish with emphasis on listening and speaking skills.

**ML 192 BEGINNING LANGUAGE II**
Continuation of the study of a foreign language other than French, German, or Spanish. Continuation of the development of oral communication skills. Prerequisite: ML 191 or the equivalent in prior study of this particular language.

**ML 290 SELECTED TOPICS**
Selected topics related to Modern Language study (e.g., Caribbean studies, the Franco-American experience). May be repeated as topics change. *Occasionally.*

**ML 298 INDEPENDENT STUDY**
1-4 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Consent is required from the instructor who will supervise the independent study. May be repeated for a total of 8 credits.

**ML 498 INDEPENDENT STUDY**
1-4 credits
Independent study under faculty supervision of a problem in an area of individual interest. Initiative and self-direction are required. May be repeated for a total of 8 credits. Prerequisite: Permission of instructor.

**Music**

**IAMU 104 LISTENING TO MUSIC**
Analytical and critical listening to music of various historical periods. Primary attention is given to music of the European-American classical tradition as well as popular music styles. Not available for credit toward a Music major or minor. *Fall, Spring.*

**IAMU 112 LATIN AMERICAN MUSIC SURVEY**
A cultural, social, and historical survey of Latin American folk and art music that emphasizes African, European, and Amerindian roots of representative regional and national styles. Students learn through readings, lectures, films, listening, and performance on indigenous instruments. *Fall.*

**IAMU 114 MUSIC CULTURES OF THE WORLD**
A study of selected folkloric, popular, and non-Western art music traditions and their historical, social, and cultural contexts. *Fall, Spring.*
IAMU 115 WOMEN IN MUSIC
The study of recurring issues concerning women composers, teachers, performers, and patrons, in both historical and contemporary cultures. Spring.

IAMU 216 HISTORY OF ROCK AND ROLL
Study of the growth and diffusion of popular music and its surrounding culture in the ’50s and ’60s, including concurrent historical events and movements as well as trends in other arts. Fall, Spring.

IAMU 218 THE HISTORY OF JAZZ
Jazz, from its origins through modern developments. Ethnic backgrounds, contributing factors, style characteristics, and inter-relationships, literature, and performers. Fall, Spring.

IAMU 242 LISTENING TO AMERICA
This course examines the history of music in the United States, with an emphasis on 20th-century music. Students will study traditional, popular, and classical music from historical and social perspectives. Prerequisite: ITW 101. Fall, even years.

IAMU 312 LATIN AMERICAN MUSIC, SOCIETY, AND CULTURE
Students will explore cultural origins, diversity, and the role of music by using examples from various representative regions of Latin America. Prerequisite: 24 ISP credits, including ITW 101 and IQL 101. Spring.

IAMU 417 AVANT ROCK
Presented in a seminar format, this course involves a study of how experimentalism and avant-garde developed in the context of rock music. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101.

IIMU 241 LISTENING TO BRAZIL
This course offers an interdisciplinary examination of Brazilian arts and culture, with an emphasis on music, literature, and film. Fall, Spring.

IIMU 243 FILM MUSIC HISTORY AND TECHNIQUE
The course will enrich anyone's appreciation for this art form and provide an introduction to the music of the film industry. The development of film music will be traced from the early silent film era through the advent of the “talkies” and on to the grand romantic scores of modern times. Fall, Spring.

MU 100 MUSIC WORKSHOP
No credit
Includes such musical activities as meetings, recitals, concerts, small ensemble performances, master classes, and guest lectures. Music Education and B.A. majors are required to complete six semesters, and Music Performance majors are required to complete eight semesters. Fall, Spring.

MUA 101-102 APPLIED MUSIC
1-2 credits each
Individual instruction consisting of twelve 50-minute lessons (for 2 credits) or twelve 25-minute lessons (for 1 credit) on an instrument or in voice. For Music Education or B.A. in Music majors only. Fall, Spring.

MUAP 101-102 APPLIED MUSIC: PERFORMANCE
4 credits
Individual instruction consisting of twelve 50-minute lessons on an instrument or voice. For Music Performance majors only. Fall, Spring.

MUAS 101-102 APPLIED MUSIC: SECONDARY
1-2 credits each
Individual instruction consisting of twelve 50-minute lessons (for 2 credits) or twelve 25-minute lessons (for 1 credit) on an instrument or in voice. For Music majors or minors only. Fall, Spring.

MU 103 FUNDAMENTAL MUSIC SKILLS
Study of concepts, skills, and techniques necessary to read and understand music. Not available for credit toward a Music major or minor. Fall, Spring.

MU 105 VOICE CLASS
1 credit
Emphasizes the development and improvement of proper vocal techniques for those with little or no vocal training. Helps non-Music majors with a variety of interests in singing. Fall, Spring.
MU 108 PIANO CLASS I
2 credits
For students with little or no previous study of a keyboard instrument. Instruction takes place in a digital piano lab and emphasizes the development of music reading and playing skills for lifetime enjoyment. Designed for non-Music majors or minors. Fall, Spring.

MU 109 PIANO CLASS II
2 credits
Continuation of MU 108. Development of previous experience at the keyboard. Emphasis on studying and playing easy, original keyboard music. Digital piano lab allows for individual level and pace. Designed for non-music majors/minors. Prerequisite: MU 108 with grade C or better, or by audition and permission of instructor. Spring.

MU 110 GUITAR CLASS
1 credit
Introductory study of the guitar. Emphasis on development of music reading skills, basic chording, plectrum and finger picking techniques, and single-line melodic playing in the first position. Fall, Spring.

MU 118 FUNCTIONAL PIANO I
1 credit
Introduction to keyboard fundamentals, keyboard harmony, improvisation at the piano, and reading the grand staff with two hands. Prepares students for the first half of the department piano proficiency exam. Meets two hours a week. Prerequisites: Music major or minor status and MU 151. Fall, Spring.

MU 119 FUNCTIONAL PIANO II
1 credit
Continuation of MU 118. More advanced study and development of keyboard technique and performance skills. Introduction to sight-reading and transposition at the keyboard, ensemble playing, and the accumulation of repertoire and skills necessary for successful completion of MU 283. Meets two hours a week. May be repeated once for credit. Prerequisite: MU 118. Fall, Spring.

MU 151 MUSIC THEORY I
2 credits
Fundamentals, including key signatures, scales, intervals, triads, and seventh chords. Roman numerals, basic part-writing using root-position chords, cadences, nonharmonic tones, basic figured bass analysis, and basic keyboard harmony. Prerequisite: Music major or minor. Fall, Spring.

MU 152 MUSIC THEORY II
2 credits
Counterpoint, part-writing using root position and first inversion chords, uses of six-four chords, harmonic tendencies, analysis and realization of figured bass, modes, secondary dominants and tonicization, and keyboard harmony. Prerequisite: MU 151, with a grade C or higher. Spring.

MU 161 AURAL SKILLS I
1 credit
Sight-singing and aural dictation skills, including major and minor scales; major, minor, and perfect intervals; diminished, minor, major, and augmented triads; basic rhythms in simple meter; major and minor diatonic melodies; and basic root position harmonic progressions. Meets two hours a week. Prerequisite: Music major or minor. Fall, Spring.

MU 162 AURAL SKILLS II
1 credit
Sight-singing and aural dictation skills, including major and minor scales; modes; consonant and dissonant intervals; triads in inversion; seventh chords in root position; rhythms in simple meter, with introduction to compound meter; and major, minor, and modal melodies. Harmonic dictation to include secondary dominants. Meets two hours a week. Prerequisite: MU 161, with a grade C or higher. Spring.

MU 171-178 MUSIC ENSEMBLES
0-1 credit each (may be repeated)

MU 171 CHAMBER ENSEMBLE
Open by audition to a limited number of students. Performance of traditional and/or contemporary chamber works in various ensembles. Fall, Spring.

MU 172 KSC CONCERT CHOIR
Open by audition to any student with adequate singing ability, within limits of balance of voices. Fall, Spring.
MU 173 KSC CHAMBER SINGERS
Open to a limited number of singers selected by audition. Fall, Spring.

MU 174 ORCHESTRA
Open to any student with adequate playing ability, within limits of balanced instrumentation. Fall, Spring.

MU 175 JAZZ ENSEMBLE
Open by audition to a limited number of players. A select group specializing in jazz of various periods. Fall, Spring.

MU 177 CONCERT BAND
Open by audition to any student with adequate playing ability, within limits of balanced instrumentation. Fall, Spring.

MU 178 GUITAR ORCHESTRA
A performing group composed of various sizes of classical guitars, specializing in the performance of works for multiple guitars. Audition required. Fall, Spring.

MU 181 ACCOMPANYING
1 credit
Pianists are guided through the characteristics of appropriate collaborative performance practices in both vocal and instrumental accompanying. Open by audition. Fall, Spring.

MUA 201-202 APPLIED MUSIC
1-2 credits each
Individual instruction consisting of twelve 50-minute lessons (for 2 credits) or twelve 25-minute lessons (for 1 credit) on an instrument or in voice. For Music Education or B.A. in Music majors only. Fall, Spring.

MUAP 201-202 APPLIED MUSIC: PERFORMANCE
4 credits
Individual instruction consisting of twelve 50-minute lessons on an instrument or voice. For Music Performance majors only. Fall, Spring.

MUAS 201-202 APPLIED MUSIC: SECONDARY
1-2 credits each
Individual instruction consisting of twelve 50-minute lessons (for 2 credits) or twelve 25-minute lessons (for 1 credit) on an instrument or in voice. For Music majors or minors only. Fall, Spring.

MU 207 TEACHING MUSIC TO CHILDREN
Music teaching techniques needed by teachers in the early childhood and elementary classroom. Develops skills in singing, listening, creating, and playing classroom instruments. Not available for credit toward a Music major or minor, except in the B.A. Music for the Elementary Teacher specialization. Must be able to read simple treble clef music. Fall, Spring.

MU 211 INTRO TO ELECTRONIC MUSIC
2 credits
An introduction to the techniques of electronic music through hands-on experience and historical survey. Includes studio/MIDI setup, synthesizer operation, sequencing, and audio file manipulation using the Macintosh operating system. Also includes listening to examples of electronic music. Prerequisites: Computer literacy. Fall, Spring.

MU 213 COMPOSITION CLASS I
2 credits
Preliminary study of the process of musical composition in a classroom setting. Includes the effective use of counterpoint; listening to examples from the standard literature; composing works for solo instrument or chamber groups. Prerequisite: MU 152 or permission of instructor. Fall.

MU 214 COMPOSITION CLASS II
2 credits
Continuation of MU 213. More advanced work with counterpoint techniques. Additional literature review. Composing for a wider variety of instruments or voice. Prerequisite: MU 213. Spring.

MU 218 FUNCTIONAL PIANO III
1 credit
Students will improve sight-reading and transposition skills through the study of choral, band, and orchestral scores. Figured bass, easy keyboard literature, and an introduction to vocal accompanying strategies. Meets two hours a week. Prerequisite: MU 119. Fall.

MU 219 FUNCTIONAL PIANO IV
1 credit
Students will lead the class, run a choir rehearsal, and practice teaching from the keyboard. Repertoire and ensemble playing will continue to reinforce sight-reading and performance skills. Meets two hours a week. Prerequisite: MU 218. Spring.
MU 220 TECHNOLOGY FOR MUSIC EDUCATORS
An introduction to music technology and its relationship to music education. Topics are based on the areas of competency in music technology for K-12 music teachers established by the Technology Institute for Music Educators and competency in music arranging. Prerequisites: Music Education major, sophomore standing. Fall.

MU 222 MUSICAL IMPROVISATION
1 credit
Within the elements of rhythm, melody, harmony, timbre and form, this course will provide a foundation for developing extemporaneous musical skills useful in performance and teaching. Students are expected to have completed one year of music theory prior to taking this course. Fall, Spring.

MU 223 STRING METHODS I
1 credit
Class instruction in string performance, pedagogy, methods, materials, and basic instrument maintenance. Two instruments are studied. Prerequisite: Music major or permission of instructor. Meets first half of semester only. Fall.

MU 224 STRING METHODS II
1 credit
Continuation of MU 223. Additional stringed instruments are studied. Prerequisite: MU 223. Meets second half of semester only. Fall.

MU 225 BRASS METHODS I
1 credit
Class instruction in brass performance, pedagogy, methods, materials, and basic maintenance. Two brass instruments are studied. Prerequisite: Music major or permission of instructor. Meets first half of the semester only. Fall.

MU 226 BRASS METHODS II
1 credit
Two additional brass instruments are studied. Prerequisites: MU 225 and major in Music. Meets second half of the semester only. Fall.

MU 227 WOODWIND METHODS I
1 credit
Class instruction in woodwind performance, pedagogy, methods, materials, and basic maintenance. One woodwind instrument will be studied. Prerequisite: Music major or permission of instructor. Meets first half of the semester only. Spring.

MU 228 WOODWIND METHODS II
1 credit
Continuation of MU 227. One additional woodwind instrument will be studied. Prerequisites: MU 227 and major in Music. Meets second half of the semester only. Spring.

MU 229 PERCUSSION METHODS I
1 credit
Class instruction in percussion performance, pedagogy, methods, materials, and basic instrument maintenance. Prerequisite: Music major or permission of instructor. Meets first half of semester only. Spring.

MU 230 PERCUSSION METHODS II
1 credit
Continuation of MU 229. Prerequisite: MU 229. Meets second half of semester only. Spring.

MU 231 GUITAR METHODS
2 credits
Class instruction in basic guitar skills, emphasizing application in classroom teaching situations at the elementary and junior high levels, methods and materials, and basic instrument maintenance. Full, Spring.

MU 235 PERFORMANCE LITERATURE
2 credits

MU 237 VOCAL PEDAGOGY
2 credits
Physiology of the vocal mechanism, methods and materials for teaching voice and Italian diction for singing using the International Phonetic Alphabet. Students are required to teach a beginning voice student in class with supervision by the instructor. Prerequisite: One year of applied vocal study. Fall.
MU 238 VOCAL DICTION
2 credits
German, French, and English diction for singers using the International Phonetic Alphabet. It applies this knowledge to
the study and performance of vocal literature from the various historical periods. Prerequisite: One year of applied vocal
study. Fall.

MU 251 MUSIC THEORY III
2 credits
Part-writing using all inversions, modulation to closely related keys, chromatic harmonies. Keyboard harmony. Major forms,
including binary, ternary, rondo, and sonata-allegro. Analysis of Bach chorales, mid- to late-classical and early-Romantic
music. Prerequisite: MU 152, with a grade C or higher. Fall.

MU 252 MUSIC THEORY IV
2 credits
Modulation to distant keys, chromatic modulation, and chromatic mediant relationships. Continued part-writing and
analysis of late-classical and Romantic music. Twentieth-century rhythmic, tonal, and post-tonal concepts, and analysis of
contemporary repertoire. Keyboard harmony and score reading. Prerequisite: MU 251, with a grade C or higher. Spring.

MU 261 AURAL SKILLS III
1 credit
Sight-singing and aural dictation skills, including scales, modes, consonant and dissonant intervals, all triads and dominant
seventh chords in root position and inversions, Neapolitan and augmented sixth chords, and compound rhythm. Advanced
diatonic melodies and harmonies, including secondary dominants, chromatic chords, and modulation to closely related
keys. Meets two hours a week. Prerequisite: MU 162, with a grade C or higher. Fall.

MU 262 AURAL SKILLS IV
1 credit
Sight-singing and aural dictation skills, including major, minor, modal, and contemporary scales; compound intervals; triads
and seventh chords in root position and inversions; and chromatic chords. Rhythms in simple, compound, and changing
meters. Melodies and harmonies to include secondary dominants, chromatic chords, and modulation to close and distant
keys. Meets two hours a week. Prerequisite: MU 261, with a grade C or higher. Spring.

MU 270 OPERA WORKSHOP
1 credit
Opera excerpts are studied and performed. Complete operas are also studied: composers, plots, and characters. May be
repeated for credit. Spring.

MU 281 AURAL SKILLS PROFICIENCY ASSESSMENT EXAM
0 credits
Required of all music majors. One of three mid-level assessment exams required by the Department of Music necessary for
continuation in the program. Taken concurrently with MU 261. May be repeated once. Graded Pass/Fail. Fall, Spring.

MU 282 MID-LEVEL REVIEW ASSESSMENT EXAM
0 credits
Required of all music majors. One of three mid-level assessment exams required by the Department of Music necessary for
continuation in the program. May be repeated once. Graded Pass/Fail. Fall, Spring.

MU 283 PIANO PROFICIENCY ASSESSMENT EXAM
0 credits
Required of all music majors. One of three mid-level assessment exams required by the Department of Music necessary for
continuation in the program. May be repeated once prior to junior-level coursework (Music Education majors and B.A.
candidates), or junior recital jury (Music Performance majors). Graded Pass/Fail. Fall, Spring.

MU 290 SPECIAL TOPICS IN MUSIC
1-4 credits
Study of selected topics in music. May be repeated as topics change. Prerequisite: ITW 101 or permission of instructor.

MU 298 INDEPENDENT STUDY
1-6 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation
with a faculty member. Consent is required from the instructor who will supervise the independent study. May be repeated for
a total of 6 credits.
MUA 301-302 APPLIED MUSIC
1-2 credits each
Individual instruction consisting of twelve 50-minute lessons (for 2 credits) or twelve 25-minute lessons (for 1 credit) on an instrument or in voice. For Music Education or B.A. in Music majors only. Fall, Spring.

MUAP 301 APPLIED MUSIC: PERFORMANCE
4 credits
Individual instruction consisting of twelve 50-minute lessons on an instrument or voice. For Music Performance majors only. Fall, Spring.

MUAP 302 APPLIED MUSIC: PERFORMANCE
4 credits
Individual instruction consisting of twelve 50-minute lessons on an instrument or voice. Successful completion of junior recital requirements is necessary for passing grade in this course. For Music Performance majors only. Fall, Spring.

MUAS 301-302 APPLIED MUSIC: SECONDARY
1-2 credits each
Individual instruction consisting of twelve 50-minute lessons (for 2 credits) or twelve 25-minute lessons (for 1 credit) on an instrument or in voice. For Music majors or minors only. Fall, Spring.

MU 310 WESTERN MUSIC BEFORE 1700
2 credits
A survey of Western art music traditions from the Medieval era up to the 18th century. Emphasis on the development of musical style. Prerequisite: MU 251. Fall.

MU 312 WESTERN MUSIC AFTER 1700
A chronological survey of music from the 18th century to the present day. Emphasis on the development of musical style. Prerequisite: MU 251. Spring.

MU 315 CONDUCTING I
2 credits
Basic conducting techniques, experience in score reading, baton technique, and interpretation. Prerequisite: Successful completion of the departmental assessment exams (MU 281, MU 282, MU 283). Additionally, Music Education majors must have gained admission to Teacher Education. Fall.

MU 316 CONDUCTING II
2 credits
Sequel to MU 315. More advanced conducting techniques used in both instrumental and choral ensembles. Prerequisite: MU 315, with a grade C or higher. Spring.

MU 326 APPLIED PEDAGOGY
2 credits
Directed study of materials and approaches to studio teaching of one’s primary applied instrument to students of all ages and levels. Prerequisite: One year of applied music study on primary instrument and permission of instructor. Piano: Fall, odd years. Guitar: Spring, even years. Other instruments: As needed.

MU 356 GENERAL MUSIC K-12 PRACTICUM
1 credit
Supervised field experience in K-12 General Music classroom(s). Corequisite: MU 357 Fall.

MU 357 GENERAL MUSIC K-12
Planning, teaching, and assessing general music lessons (K-12) in accordance with the National Music Standards. Implementation of Orff, Kodály, and Dalcroze pedagogies including keyboard skills, singing, playing classroom instruments, solfège, and Curwin hand signs. Classroom observations and field teaching are required. Prerequisites: Admission to Teacher Education and successful completion of the departmental assessment exams (MU 281, MU 282, MU 283). Corequisites: MU 356 and MU 358. Fall.

MU 358 CHORAL MUSIC EDUCATION
2 credits
Principles, techniques, and materials for developing and administering a complete school choral program. Includes sources and criteria for selection of repertoire. Prerequisites: Admission to Teacher Education and successful completion of the departmental assessment exams (MU 281, MU 282, MU 283). Corequisites: MU 359 and MU 360. Spring.

MU 359 ENSEMBLE MUSIC PRACTICUM
1 credit
Supervised field experience in instrumental or choral music programs or both. Corequisites: MU 358 and MU 360. Spring.
MU 360 INSTRUMENTAL MUSIC EDUCATION
2 credits
Principles, techniques, organization, and materials for developing and administering a complete school instrumental program. Includes sources and criteria for selection of repertoire. Prerequisites: Admission to Teacher Education and successful completion of the departmental assessment exams (MU 281, MU 282, MU 283). Corequisites: MU 358 and MU 359. Spring.

MUA 401 APPLIED MUSIC
1-2 credits
Individual instruction consisting of twelve 50-minute lessons (for 2 credits) or twelve 25-minute lessons (for 1 credit) on an instrument or in voice. Successful completion of senior recital requirements is necessary for a passing grade in this course for Music Education majors. For Music Education or B.A. in Music majors only. This course is repeatable. Fall, Spring.

MUAP 401 APPLIED MUSIC: PERFORMANCE
4 credits
Individual instruction consisting of twelve 50-minute lessons on an instrument or voice. For Music Performance majors only. Fall, Spring.

MUAP 402 APPLIED MUSIC: PERFORMANCE
4 credits
Individual instruction consisting of twelve 50-minute lessons on an instrument or voice. Successful completion of senior recital requirements is necessary for passing grade in this course. This course is repeatable. For Music Performance majors only. Fall, Spring.

MU 404 ANALYTICAL TECHNIQUES IN MUSIC
2 credits
Formal analysis of representative examples of music literature. Emphasis is on the larger structural units of tonal composition. Prerequisite: MU 252. Spring, odd years.

MU 405 COUNTERPOINT
2 credits
Contrapuntal techniques in music of the 16th and 18th centuries; survey of “species” counterpoint and the basics of canon, fugue, and invertible counterpoint. Prerequisite: MU 252. Fall, odd years.

MU 411 ELECTRONIC MUSIC PROJECTS
1 credit
In this elective course, students will produce a music project that brings together their knowledge of an area in music with their acquired skills in electronic music. May be repeated for credit. Prerequisite: MU 211 or permission of instructor. Fall, Spring.

MU 419 PRACTICUM IN ENSEMBLE DIRECTING
1-4 credits
Allows upper-division Music majors to participate as apprentices in performing groups. Students may be asked to assist in selection of literature, group logistics, rehearsal, and performance. Prerequisites: MU 315 and MU 316, an audition, and permission of instructor. Fall, Spring.

MU 426 INTERMEDIATE PIANO PEDAGOGY
2 credits
Techniques, methods, materials, and repertoire for teaching intermediate and early advanced levels of piano instruction. Also, the history of piano pedagogy, the development of modern piano technique, and current approaches to piano technique. A practicum in teaching both individual and group lessons is an essential component of the course. Prerequisite: MU 326. Spring, even years.

MU 475 STUDENT TEACHING – ELEMENTARY
6 credits
Full-time seven-week placement in elementary-level music classroom setting(s) appropriate to intended certification. Supervision provided by college supervisor and field-based professional toward mastery of principles, attitudes, and techniques for successful teaching. Graded Pass/Fail. Prerequisite: Permission of Teacher Education Office. Fall, Spring.

MU 476 STUDENT TEACHING – SECONDARY
6 credits
Full-time seven-week placement in secondary-level music classroom setting(s) appropriate to intended certification. Supervision provided by college supervisor and field-based professional toward mastery of principles, attitudes, and techniques for successful teaching. Graded Pass/Fail. Prerequisite: Permission of Teacher Education Office. Fall, Spring.
MU 477 MUSIC STUDENT TEACHING SEMINAR
2 credits
Seminar taken during student teaching focuses on current social, legal, and ethical issues affecting music education. Includes reflection on professional identity and culminating portfolio development. Corequisites: MU 475 and MU 476. Fall, Spring.

MU 486 20TH CENTURY MUSIC
Analytical study of representative works from 20th-century art music. Students apply theoretical and style-analytical knowledge to a small body of works and present academic papers on topics of their choice. Prerequisite: Completion of all Music Core courses or permission of instructor. Fall, odd years.

MU 495 SEMINAR IN MUSIC
Integrates a student’s knowledge and skills in music and applies them in an upper-level seminar setting. Presents one topic per semester: counterpoint, analytical techniques in music, or 20th-century music. Final projects relate to a student’s degree specialization or interests. May be repeated as topics change. Prerequisite: MU 252. Fall, Spring.

MU 497 INTERNSHIP IN MUSIC TECHNOLOGY
1-4 credits
Supervised, contracted internship arranged by the student with an approved recording studio, or, in certain cases, with another compatible facility, for either a semester’s work or summer employment. Contract must be approved by the music technology coordinator. Responsible faculty supervision and review required. Prerequisites: MU 211, MU 213, MU 214, and MU 411. Fall, Spring.

MU 498 INDEPENDENT STUDY
1-6 credits
Independent reading and study in a selected area of Music, conducted on a tutorial basis. Students must obtain approval of the supervising faculty member before registering. May be repeated for a total of 6 credits.

Nursing

INURS 301 INTRODUCTION TO PROFESSIONAL NURSING
2 credits
The purpose of this course is to explicate the values and philosophy of the Nursing program and provide an overview of nursing practice and the issues confronting professional nurses. Emphasis is placed on history, trends, policy issues, and socio-cultural forces affecting the quality, nature, and delivery of nursing care. Prerequisite: Admission to the Nursing major. Spring.

NURS 302 INTRODUCTION TO PATIENT-CENTERED CARE
This course introduces students to the theoretical foundations of practice and begins to establish the knowledge, attitudes, and skills required in the field. The course will emphasize the need for nurses to recognize and respond to patient values and needs with respect and compassion in a coordinated health care environment. Prerequisite: NURS 301. Generic option candidates are also required to enroll in NURS 303 and NURS 304 concurrently. Spring.

NURS 303 PHARMACOLOGY AND PATHOPHYSIOLOGY
An understanding of developmentally relevant pharmacodynamic and pharmacokinetic processes following drug therapy is essential to prevent adverse drug interactions and patient harm. This course will explore these processes, basic physiological mechanisms underlying illness and disease, and the positive outcomes associated with health promotion and disease prevention actions in populations. Prerequisite: NURS 301. Concurrent with NURS 302 and NURS 304. Spring.

NURS 304 CLINICAL: PATIENT-CENTERED CARE
Students are introduced to the holistic care of clients, beginning clinical decision-making and therapeutic nursing interventions as the foundation of nursing practice. Skills in nursing process, assessment, documentation, therapeutic communication skills, aseptic technique and medication administration are developed. Prerequisite: NURS 301. Concurrent with NURS 302 and NURS 303. Spring.

NURS 305 EVIDENCE-BASED PRACTICE
Students develop the knowledge necessary to identify, apply, and evaluate current evidence to support clinical expertise. Decision-making skills that demonstrate compassionate awareness of patient and family preferences, experience, and values will be developed. Therapeutic interventions for acute, chronic, and mental health alterations are presented. Prerequisite: NURS 302. Concurrent with NURS 306*. *Generic option candidates are also expected to enroll in NURS 307. Summer.

NURS 306 LEGAL AND ETHICAL FOUNDATIONS
Laws and ethical principles guiding practice are emphasized. Areas of legal exploration will include: malpractice, negligence, and standards of care. Students will apply critical thinking and analysis as they consider ethical decision-making as care providers in this complex and rapidly advancing profession. Prerequisite: NURS 302. Concurrent with NURS 305*. *Generic option candidates are also expected to enroll in NURS 307. Summer.
**NURS 307 CLINICAL: EVIDENCE-BASED PRACTICE**
This clinical course provides the experience of applying evidence and skills in caring for adult clients, including the elderly. These clinical experiences promote disciplined decision-making, support effective communication, facilitate positive patient care outcomes, strive for error reduction, and use nursing informatics to document nursing care and outcomes. Prerequisites: NURS 302 and NURS 304. Concurrent with NURS 305 and NURS 306. *Summer.*

**NURS 401 COLLABORATIVE CARE OF POPULATIONS**
Students learn to function as members of interdisciplinary teams to provide care. This course will support skillful integration of patient-centered care and evidence-based practice theories in decision-making. Students will also develop skills to foster open communication, ensure mutual respect, and engage in shared decision-making within teams. Prerequisite: NURS 307 or permission of instructor. Concurrent with NURS 402 and NURS 403. *Fall.*

**NURS 402 SPECIALTY NURSING PRACTICE**
Critical thinking and the nursing process are used to provide therapeutic nursing interventions to manipulate complex environmental factors while maintaining health and promoting wellness. Focus is on advanced assessment techniques and nursing skills, caring for the childbearing family, clients in schools, and the workplace. Prerequisite: NURS 307 or permission of instructor. Concurrent with NURS 401 and NURS 403. *Fall.*

**NURS 403 CLINICAL: SPECIALTY SETTINGS**
2-4 credits
Note: B.S.N. Completers take this course as a 2-credit requirement.
Students apply nursing knowledge and skills in community health, occupational health, child-bearing and child rearing agencies, and school settings. This course supports the development of advanced skills for nurses who will serve as members of health care teams in various settings. Prerequisite: NURS 307 or permission of instructor. Concurrent with NURS 401 and NURS 402. *Fall.*

**NURS 404 NURSING LEADERSHIP**
Students gain understanding of how nursing leadership influences patient care and team functioning using outcomes data to evaluate and improve nursing care delivery systems. The concept of nurse as a leader and manager is examined using theories of organization, management, leadership, change, decision-making, and group process. Prerequisite: NURS 403. Concurrent with NURS 405*. *Generic option candidates are also required to enroll in NURS 406 concurrently. *Spring.*

**NURS 405 NURSING RESEARCH**
This course prepares students to identify problems within a variety of practice settings, evaluate relevant research literature and evidence, and apply research evidence to support change processes in the clinical setting. Prerequisite: NURS 403. Concurrent with NURS 404*. *Generic option candidates are also required to enroll in NURS 406 concurrently. *Spring.*

**NURS 406 CLINICAL: ADVANCED CARE**
6 credits
This clinical capstone course provides experience as a nursing leader to direct the provision of quality health care by interdisciplinary teams. Experiences promote skills of decision-making, management, quality control, and the application of research in nursing practice in a selected setting that support individual goals for practice. Prerequisite: NURS 403. Concurrent with NURS 404 and NURS 405. *Spring.*

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**Philosophy**

**IHPHIL 100 LOGICAL ARGUMENTATION**
The art of correct reasoning, advanced by studying forms of argument. Emphasizes deductive arguments, both categorical and sentential, and informal fallacies. *Fall, Spring.*

**IHPHIL 220 ETHICS**
Are abortion, euthanasia, and capital punishment morally acceptable? This course will examine the most influential philosophical approaches to resolving ethical questions such as these. We will apply philosophical theories and principles to a variety of moral dilemmas, with the aim of developing the skills necessary to successfully analyze ethical arguments. *Fall, Spring.*

**PHIL 200 PHILOSOPHY AND CRITICAL ANALYSIS**
Critical readings in works of the Greek, Medieval, and Modern periods of Western philosophy. Skills of analyzing, evaluating, and paraphrasing are nurtured and applied to philosophical arguments, classifications, definitions, explanations, and refutations. *Fall, Spring.*

**PHIL 222 MEDIA ETHICS**
From a preliminary analysis of the nature and function of ethics, this course examines contemporary topics in media ethics such as advertising, political reporting, and artistic expression. Also examines some theoretical issues such as the debate over the right to privacy as opposed to the public’s right to know. Prerequisites: JRN 100 or permission of instructor. *Occasionally.*
PHIL 231 COMPARATIVE RELIGION
A philosophical introduction to many of the world’s religions, including Buddhism, Christianity, Confucianism, Hinduism, Islam, Judaism, and Taoism. Investigates the differing aspects of human religious experience and examines the similarities and differences both between religions and among the denominations within them.

PHIL 240 SKIN, SEX, AND GENES
This course reviews some of the ways in which modern biology has been a site of conflict about race, gender, and sexuality. We will consider scientific studies, as well as feminist, queer, and anti-racist critiques of those studies, in an effort to understand how science marks certain bodies as different. Fall.

PHIL 260 THEORIES OF THE BODY
This course examines the argument that bodies are only produced once they have been given meaning within a society, focusing on scholarship from disability studies, queer theory, antiracist theory, and feminist theory. What does embodiment reveal about structures of inequality and the operations of power in our society? Occasionally.

PHIL 280 KNOWLEDGE AND REALITY
How do you know you’re not dreaming? What is knowledge, and what kinds of knowledge can we have? What makes you the same person you were yesterday? Do people have free will? We will examine philosophical answers to these questions as we explore central issues in metaphysics and epistemology. Occasionally.

PHIL 290 SPECIAL TOPICS
Examines a selected topic, or the works of one or two major thinkers, at an intermediate level. May be repeated as topics change. Occasionally.

PHIL 298 INDEPENDENT STUDY
2-8 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Consent required of the instructor who will supervise the independent study. May be repeated for a total of 8 credits.

PHIL 300 ANCIENT PHILOSOPHY
An examination of Western philosophy among the Greeks and Romans, from Thales through Plotinus. Reading and discussion of primary sources. Prerequisite: One course in Philosophy or permission of instructor. Alternate years.

PHIL 304 AMERICAN PHILOSOPHY
A critical study of American Pragmatism, its critique of earlier Modern philosophy, and its appropriation of evolutionary theory. Prerequisite: One course in Philosophy or permission of instructor. Alternate years.

PHIL 306 EXISTENTIALISM AND LITERATURE
An examination of philosophic writings, novels, and plays from writers such as Nietzsche, Kierkegaard, Kafka, Camus, Beckett, Ionesco, and Sartre. Attempts are made to isolate and evaluate typical existentialist themes and contrast them with nonexistentialist themes.

PHIL 308 CONTEMPORARY PHILOSOPHY
An examination of 20th-century Anglo-American and continental thought, including analytic philosophy, phenomenology, logical positivism, hermeneutics, ordinary language philosophy, existentialism, structuralism, and deconstructionism. Attention is given to influential theorists such as Russell, Husserl, Wittgenstein, Heidegger, Quine, Sartre, and Derrida. Prerequisite: One course in Philosophy or permission of instructor. Occasionally.

PHIL 313 PHILOSOPHY AND THE HOLOCAUST
This course examines ethical, philosophical, and theological issues relating to the experience of the Holocaust and the broader human concerns of evil and suffering. Topics include the uniqueness and universality of the Holocaust as well as questions of justice. Prerequisite: IHHGS 252/IHHIST 252, or permission of instructor. Cross-listed as HGS 313. Fall.

PHIL 350 AESTHETICS
A philosophic introduction to a variety of influential theories of art in areas as diverse as literature, dance, and film. Examination of the role of the creative process in human experience as perceived by philosophers from Plato to Derrida.

PHIL 360 PHILOSOPHY OF LAW
Examines questions in the area of the philosophy of law including discussions of the appropriate roles of liberty, justice, and responsibility in a society that reconciles a respect for the individual with the need for legitimate governmental authority. Prerequisite: One course in Philosophy or permission of instructor. Spring, alternate years.
PHIL 370 PHILOSOPHY OF LANGUAGE
What gives words meaning? How do pointing and other contextual factors influence interpretation? What role do intentions play? How do Superman and Santa Claus differ from the names of real people? We will explore questions such as these from a philosophical perspective, through readings by Russell, Kripke, Putnam, and others. Prerequisite: IHPHIL100. Occasionally

PHIL 406 EXISTENTIALISM AND FILM
The success of many films derives not only from their entertaining qualities, but also from existential themes. Philosophical perspectives are applied to the films of directors such as Woody Allen and Alfred Hitchcock. Spring, alternate years.

PHIL 490 ADVANCED SPECIAL TOPICS
Examines a selected topic, or the works of one or two major thinkers at an advanced level. May be repeated as topics change. Prerequisite: One course in Philosophy or permission of instructor. Occasionally.

PHIL 498 INDEPENDENT STUDY
2-8 credits
Independent reading and study in a selected area of philosophy, conducted on a tutorial basis. Students must obtain approval of the supervising faculty member before registering. May be repeated for a total of 8 credits. Occasionally.

Physical Education

IIPE 310 THE PSYCHO-SOCIAL ASPECTS OF SPORT
The purpose of this course is to present an interdisciplinary approach to sport that will challenge students to critically reflect and discuss sport from psychological and sociological perspectives. The central focus of the course is to understand how these perspectives and experiences interconnect our personal and societal viewpoints of sport today. Prerequisites: 24 credits in ISP, including ITW 101 and IQL 101.

IIPE 311 OUTDOOR RECREATIONAL LEADERSHIP
This interdisciplinary course will explore outdoor recreational leadership qualities, styles, and group dynamics from multiple perspectives (physical education/communication). Additional focus is placed on experiential learning and examinations of selected program activities. Students develop, lead, and evaluate activities based on varying participant requirements, and earn a Leave No Trace certification. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Summer.

PE 100 FOUNDATIONS OF PHYSICAL EDUCATION
2 credits
An introduction to the foundations of sport, fitness, and physical education professions. Examines the historical, sociological, and psychological concepts, issues, and current trends. This course is designed for students who intend to major in Physical Education, Teacher Certification option. Fall.

PE 140 INTRODUCTION TO ATHLETIC TRAINING
2 credits
An orientation for students applying to the Athletic Training major. Includes the historical perspective of athletic training as a career, introduction of legal concerns and basic terminology related to athletic training. Provides opportunities to develop basic clinical skills and knowledge through observation hours and skills proficiencies. Lecture and labs. Prerequisites: Permission of instructor. Fall, Spring.

PE 141 PERSONAL HEALTH
2 credits
An introduction to a broad range of concepts in personal health. Topics covered include emotional health, stress and stress management, nutrition, drugs and alcohol, tobacco, family planning and safe sexual practices, the aging process, infectious diseases, heart disease, cancer and other noncommunicable diseases, and physical activity benefits. Prerequisites: Permission of instructor. Fall.

PE 150-199 SPORT AND LEISURE ACTIVITIES
1 credit each (2 credits as noted)
Each course provides an opportunity for students to acquire basic knowledge, skills, and techniques in a sport or leisure activity. Designed for non-PE majors. Graded Pass/Fail.

PE 150 BEGINNING SWIMMING. Fall.

PE 152 AQUATICS CONDITIONING. Fall.

PE 154 LIFEGUARD TRAINING
2 credits
Note: Candidates must pass a swimming competency test given on the first day of class. This course provides an opportunity for students to acquire basic knowledge, skills, and techniques in a sport or leisure activity. Designed for non-PE majors. Graded Pass/Fail. Fall, Spring.
PE 155 Water Safety Instructor
2 credits
Note: Candidates must pass a written water safety exam and a swimming competency test on the first day of class. This course provides an opportunity for students to acquire basic knowledge, skills, and techniques in a sport or leisure activity. Designed for non-PE majors. Graded Pass/Fail. Spring.

PE 160-162 PHYSICAL CONDITIONING
PE 160 CARDIOVASCULAR FITNESS. Fall, Spring.
PE 161 STRENGTH TRAINING. Fall, Spring.
PE 162 TENSION CONTROL. Fall, Spring.

PE 176-184 INDIVIDUAL SPORTS
PE 177 GOLF. Fall.
PE 181 TENNIS. Fall.

PE 191 FIRST AID AND CPR FOR THE PROFESSIONAL RESCUER
First aid and CPR for the Professional Rescuer procedures for certification. Fall, Spring.

PE 200 APPLIED KINESIOLOGY
Study of the skeletal and muscular systems as applied to physical education activities. Mechanical analysis of basic motor patterns and sports skills using video and high-speed film. Lecture and labs. Prerequisites: BIO 230 or permission of instructor. Fall, Spring.

PE 201 PHYSIOLOGY OF EXERCISE
The study of physiological principles and adaptations to exercise and physical activity. Focuses on the scientific evaluation and understanding of immediate and long-term effects of exercise on the human body. Emphasis placed on the muscular, cardiovascular, endocrine and respiratory systems. Lecture and labs. Prerequisites: BIO 230 and BIO 232 or permission of instructor. Fall, Spring, Summer.

PE 210 INTRODUCTION TO COACHING
3 credits
Course is designed as an introduction to coaching. Topics covered include developing a personal coaching philosophy, planning for coaching, conditioning for sport participation, effective teaching of sport skills, sport psychology, legal responsibilities, and nutrition for competition. Spring.

PE 240 EMERGENCY MEDICAL TECHNICIAN
Based on the curriculum established by the U.S. DOT for Emergency Medical Technician (EMT-Basic) and authorized by the State of New Hampshire-Bureau of Emergency Medical Services (EMS). Topics include patient evaluation, treatment for trauma and emergencies, and infection control procedures. Lecture and labs. Proof of current certification in CPR at the professional rescuer level. Prerequisite: PE 241 and Athletic Training major, or permission of instructor. Fall.

PE 241-289 MAJOR SKILLS AND TECHNIQUES
1 credit each (2 credits as noted)

PE 241 TECHNIQUES OF ATHLETIC TAPING
1 credit
This laboratory course is designed to present an introduction of techniques used when applying athletic taping, compressive/supportive wrapping and padding for sports injuries. Prerequisite: Permission of instructor. Spring.

PE 242 EMT PRACTICUM
1 credit
This laboratory/supervised experience provides opportunities for students to be formally assessed and to participate in clinical experiences with emergency department and ambulance service. Students have the option to take the NH-EMS Practical Examination and the National Registry Written Examination for EMT-Basics. Passage of both these examinations leads to national certification as an EMT-Basic. Proof of current certification in CPR at the professional rescuer level. Prerequisites: PE 240 or permission of instructor. Spring, Summer.

PE 250 CONCEPTS OF EXERCISE TRAINING
An introduction to fundamental exercise training techniques. Topics covered include appropriate cardiovascular exercise guidelines, introduction to different modes of exercise, introduction to resistance training exercises and guidelines, resistance training technique, resistance training spotting technique, introduction to plyometrics, and benefits of cardiovascular and resistance exercise. Prerequisites: Physical Education major and Exercise Science option, or permission of instructor. Fall, Spring.
PE 255 DEVELOPMENTAL MOVEMENT
2 credits
Develops skill and knowledge to perform and teach fundamental motor skills. Teaching emphasis on skill practice, feedback, skill application, and incorporating cognitive objectives. Prerequisite: PE major Teacher Certification option or permission of instructor. Fall.

PE 256 RHYTHMS
2 credits
Develops skill and knowledge to perform and teach selected rhythmic activities. Teaching emphasis on cueing. Prerequisites: PE 360 and PE major, Teacher Certification option or permission of instructor. Spring.

PE 260 TOTAL FITNESS
2 credits
Develops skills and basic knowledge related to principles of physical fitness. Students will have opportunities to participate in various fitness activities. Teaching emphasis on leading warm-up. Prerequisite: PE major Teacher Certification option or permission of instructor. Fall, Spring.

PE 261 FITNESS CURRICULUM FOR K-12 LEARNERS
1 credit
Provides students with opportunities to plan health-related physical fitness curriculum for K-12 learners. Teaching emphasis will be on designing learning experiences and activity demonstration/explanation with feedback. Prerequisites: PE 260 and PE major, Teacher Certification option or permission of instructor. Spring.

PE 265 SECONDARY ACTIVITIES
1 credit
Develops skill and knowledge to perform and teach selected secondary activities. Teaching emphasis on game supervision, including teachable moments, cueing, and incorporating affective (psychosocial) objectives. Prerequisite: PE major Teacher Certification option or permission of instructor. Fall.

PE 268 OUTDOOR SKILLS
1 credit
Provides students with basic knowledge and introductory experiences in outdoor leisure activities that would be appropriate to be taught in a physical education setting. Emphasis is on learning to provide safe outdoor experiences for physical education students. Prerequisites: PE 360 and PE major, Teacher Certification option or permission of instructor. Spring.

PE 278 RACQUET SPORTS
2 credits
Develops skill and knowledge to perform and teach selected racquet sports. Teaching emphasis on skill practice and group feedback. Prerequisite: PE major Teacher Certification option or permission of instructor. Spring.

PE 282 TRACK AND FIELD
1 credit
Develops skill and knowledge to perform and teach track and field. Teaching emphasis on leading warm-up and skill review and practice with feedback. Prerequisites: PE 360 and PE major, Teacher Certification option or permission of instructor. Fall.

PE 283 GYMNASTICS
2 credits
Develops skill and knowledge to perform and teach gymnastics. Teaching emphasis on leading warm-up, skill review and practice with feedback, and incorporating cognitive and affective goals. Prerequisite: PE major Teacher Certification option or permission of instructor. Spring.

PE 285 VOLLEYBALL
1 credit
Develops skill and knowledge to perform and teach volleyball. Teaching emphasis on skill review and individual and group feedback. Prerequisite: PE major Teacher Certification option or permission of instructor. Spring.

PE 286 BASKETBALL
1 credit
Develops skill and knowledge to perform and teach basketball. Teaching emphasis on skill practice, individual feedback, and officiating. Prerequisite: PE major, Teacher Certification option or permission of instructor. Spring.

PE 287 SOFTBALL
1 credit
Develops skill and knowledge to perform and teach softball. Teaching emphasis on skill review and practice with feedback. Prerequisite: PE major Teacher Certification option or permission of instructor. Fall.

PE 288 SOCCER/SPRINTBALL
1 credit
Develops skill and knowledge to perform and teach soccer and speedball. Teaching emphasis on skill demonstration/explanation. Prerequisite: PE major Teacher Certification option or permission of instructor. Fall.
PE 290 SPECIAL TOPICS
1-6 credits
Study of a selected topic in physical education. May be repeated as topics change. Prerequisite: PE major or permission of instructor. Fall, Spring.

PE 298 INDEPENDENT STUDY
1-6 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Consent required of the instructor who will supervise the independent study. May be repeated for a total of 6 credits. Fall, Spring.

PE 332 EXERCISE TESTING AND PROGRAMMING
The principles of exercise testing in all five components of health-related fitness, using nationally accepted assessment tools and standards. Designing and implementing exercise programs based on testing results for apparently healthy adults and those with chronic conditions. Prerequisites: Physical Education major, Exercise Science option, and PE 201. Fall, Spring.
Equivalent course for HLSC 332 and HLSC 333.

PE 335 ADVANCED STRENGTH AND CONDITIONING
Examination and application of strength training and conditioning principles to enhance individual fitness and sport performance. Students develop skills in strength training, conditioning, and exercise leadership to improve individual and group fitness levels. National certification preparation is emphasized. Prerequisites: PE 250, PE 201, or permission of instructor. Fall, Spring.
Equivalent course for HLSC 335.

PE 340 PREVENTION AND CARE OF ATHLETIC INJURIES
An introduction to the primary mechanisms of athletic injuries, techniques of injury prevention including specialized equipment for collision sports, basic equipment presented dealing with injury specific to extremities and head, and the impact of the Certified Athletic Trainer in the prevention and care of athletic injuries. Lecture and labs. Prerequisites: PE 140, PE 240, and Athletic Training major, or permission of instructor. Fall.

PE 341 EVALUATION OF THE LOWER EXTREMITY AND AXIAL REGION
Analyzes the inflammatory process and the implications for treatment of sports injuries. Identifies of signs, symptoms and pathology of common sports injuries of the lower extremity and axial region. The evaluation process including history, observation, palpation, range of motion, joint stability, muscle function and special tests. Lecture and labs. Prerequisites: PE 200, PE 340, PE 383, and Athletic Training major, or permission of instructor. Spring.

PE 342 THERAPEUTIC MODALITIES
Provides knowledge and skills in the application of contemporary therapeutics modalities used in the treatment of athletic injuries. Modalities covered are classified as thermal agents, electrical agents or mechanical agents. Emphasis is placed on physiological effects, therapeutic indications and contraindications, and clinical application. Lecture and labs. Prerequisites: PE 340, PE 383, and PE Athletic Training major, or permission of instructor. Spring.

PE 343 CLINICAL EXERCISE THERAPY
Design and modification of rehabilitation protocols based on evaluation of structural and functional pathology, postural anomalies, and gait modification. Includes multiple methods and techniques of therapeutic exercise emphasizing basic principles and specific rehabilitation programs. Resistance training and cardiovascular conditioning program design for prevention of sports injuries. Lecture and labs. Prerequisites: PE 341, PE 342, PE 384, and Athletic Training major, or permission of instructor. Fall.

PE 344 SPORTS NUTRITION
An introduction to Sports Nutrition, including the digestion, absorption, and assimilation of food nutrients; bioenergetics in training; optimal nutrition for sports and exercise; thermoregulation and fluid balance; body composition, weight control, and disordered eating. Prerequisites: CHEM 100 or CHEM 103, PE 201, and Athletic Training or PE major, or permission of instructor. Spring.

PE 360 TEACHING PHYSICAL EDUCATION
Developmental characteristics and needs in relation to physical education and curriculum planning. Emphasis on the development of effective teaching skills including planning and preparation, the classroom environment (classroom management and interpersonal relationships), instruction, and professional responsibilities. Prerequisites: EDUC 100, EDSP 202, and PE major, Teacher Certification option or permission of instructor. Spring.

PE 361 ADAPTED PHYSICAL EDUCATION
Treats legal issues and the concept of inclusion as they apply to the physical educator. Motor and perceptual motor development, screening, and programming. Adaptation of physical education activities to meet special needs of students. Individual child work included. Prerequisites: PE 360 and PE major, Teacher Certification option or permission of instructor. Fall.
PE 362 ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION PROGRAMS
Issues related to the organization and delivery of PE programs including philosophy, licensure, program standards, curricular approaches to programming, collaboration, advocacy, and behavior, resource, and risk management. Prerequisites: PE 360 and PE major, Teacher Certification option or permission of instructor. Spring.

PE 363 ASSESSMENT OF K-12 PE LEARNERS
2 credits
Overviews the purpose of evaluation in K-12 physical education programs. Program standards and various methods of evaluation are examined. Emphasis is placed on designing effective assessment tools that are aligned with program objectives as well as methods for using and reporting results. Prerequisites: PE 360 and PE major, Teacher Certification option or permission of instructor. Spring.

PE 372 PRACTICUM: EXERCISE LEADERSHIP
Designed to provide students with a practical setting to apply the knowledge and skill learned throughout the Exercise Science program. Students will practice testing, planning, and facilitating exercise programs for individuals as well as groups. Prerequisite: PE 332. Equivalent course for HLSC 372. Fall, Spring.

PE 375 PRACTICUM: TEACHING ELEMENTARY
4 credits
Provides an opportunity for students to plan, teach, and evaluate Physical Education lessons and units at the elementary school level, apply knowledge of elementary school children, and understand the role of Physical Education within the school curriculum. Prerequisites: PE 255, PE 360 (grade C or higher), admission to the PE major, admission to Teacher Education, and current certification in CPR for the Professional Rescuer and Standard First Aid. Cannot be taken concurrently with PE 376. Fall, Spring.

PE 376 PRACTICUM: TEACHING SECONDARY
4 credits
Provides an opportunity for students to plan, implement, and evaluate secondary level Physical Education programs, gain knowledge of the school environment, and develop an understanding of the social and psychological dynamics experienced by novice teachers. Prerequisites: PE 360 (grade C or higher), admission to the PE major, Teacher Certification option, admission to Teacher Education, and current certification in CPR for the Professional Rescuer and Standard First Aid. Cannot be taken concurrently with PE 375. Fall, Spring.

PE 383 CLINICAL ATHLETIC TRAINING I
1 credit
A supervised clinical experience designed to provide an opportunity for students to apply previously learned knowledge and skills in an athletic training setting. Responsibilities reflect an introductory level of cognitive, psychomotor, and affective skills. Proof of current certification in CPR for the Professional Rescuer. Prerequisites: PE 241 and Athletic Training major, or permission of instructor. Fall.

PE 384 CLINICAL ATHLETIC TRAINING II
1 credit
A supervised clinical experience designed to provide an opportunity for students to apply previously learned knowledge and skills in an athletic training setting. Responsibilities reflect an intermediate level of cognitive, psychomotor, and affective skills. Proof of current certification in CPR for the Professional Rescuer. Prerequisites: PE 383 and Athletic Training major. Spring.

PE 440 EVALUATION OF THE UPPER EXTREMITY AND SPINE
Analysis of the inflammatory process and implications for treatment of sports injuries and the identification of signs, symptoms, and pathology of common sports injuries of the upper extremity and spine. The evaluation process including history, observation, palpation, range of motion, joint stability, muscle function and special tests. Lecture and labs. Prerequisites: PE 341, PE 384, and Athletic Training major, or permission of instructor. Spring.

PE 441 PHARMACOLOGY AND PATHOLOGY FOR ATHLETIC TRAINERS
Provides knowledge of pharmacology application in athletic training including pharmakinetics, indications and contraindications for pharmacological agents used in the treatment of sports injuries. Provides knowledge and skills in the identification of etiology, signs and symptoms, treatment alternatives and assessment for general medical conditions with applications for athletic trainers. Prerequisites: PE 440, PE 483, and Athletic Training major, or permission of instructor. Spring.

PE 443 ADMINISTRATION OF ATHLETIC TRAINING
Introduction to the managerial tasks and administrative issues regarding athletic training including successful management skills, staffing, financial resource management, information management, athletic injury insurance, legal considerations, employment techniques and the formal interview process. Information on current sports medicine policies for national athletic governing organizations. Prerequisites: PE 440, PE 483, and Athletic Training major, or permission of instructor. Spring.
PE 460 EXPERIMENTAL DESIGN AND ANALYSIS FOR PHYSICAL EDUCATION
Introduction to practical methods and techniques for experimental design and analysis. Topics include simple distributions, correlation, regression, basic statistical tests (both parametric and nonparametric), analysis of variance through factorial analysis, and analysis of frequencies. Prerequisite: Athletic Training or PE major or permission of instructor. Fall, Spring.

PE 472 EXERCISE SCIENCE EXTERNSHIP
4-12 credits
A supervised experience designed to provide the advanced student an opportunity to gain experience and practical knowledge in an exercise-related facility. The student will practice planning, supervising, and mentoring individuals of all health backgrounds in all aspects of fitness and health. Prerequisite: PE 372 or permission of instructor. Fall, Spring.

PE 475 STUDENT TEACHING: ELEMENTARY
6 credits
Full-time placement in an elementary physical education setting. Supervision provided by college supervisor and field-based professional toward mastery of principles, attitudes, and techniques for successful teaching. Graded Pass/Fail. Prerequisite: Permission of Teacher Education Office. Fall, Spring.

PE 476 STUDENT TEACHING: SECONDARY
6 credits
Full-time placement in a secondary physical education setting. Supervision provided by college supervisor and field-based professional toward mastery of principles, attitudes, and techniques for successful teaching. Graded Pass/Fail. Prerequisite: Permission of Teacher Education Office. Fall, Spring.

PE 477 STUDENT TEACHING SEMINAR
Issues faced by physical education professionals in schools including but not limited to school policies and procedures, behavior management, record keeping, assessing student performance, student equity, collaboration, technology, advocacy, professional development, licensure, job search, interview skills. Corequisites: PE 475 and PE 476. Fall, Spring.

PE 483 CLINICAL ATHLETIC TRAINING III
Supervised clinical experience that provides students with an opportunity to demonstrate their ability to problem solve, employ critical thinking skills and integrate previously learned knowledge and skills. Responsibilities reflect an advanced level of cognitive, psychomotor, and affective skills. Cannot be taken concurrently with participation in varsity or club sport. Proof of current certification in CPR for the Professional Rescuer. Prerequisites: PE 384 and Athletic Training major. Fall.

PE 484 CLINICAL ATHLETIC TRAINING IV
A supervised clinical experience designed to provide the student with an opportunity to demonstrate analytical decision-making and refine clinical application of previously learned knowledge and skills. Responsibilities reflect an advanced, accomplished level of cognitive, psychomotor and affective skills. Cannot be taken concurrently with participation in varsity or club sport. Proof of current certification in CPR for the Professional Rescuer. Prerequisites: PE 483 and Athletic Training major. Spring.

PE 490 ADVANCED SPECIAL TOPICS
1-6 credits
Study of a selected topic in Physical Education at an advanced level. May be repeated as topics change. Prerequisite: PE major or permission of instructor. Fall, Spring.

PPE 492 EXERCISE SCIENCE SEMINAR
A research based capstone course intended to allow students to research, present, and discuss current topics within the health, performance, fitness, and nutrition fields. Prerequisites: Physical Education major and Exercise Science option, or permission of instructor. Fall, Spring.

PE 493 ATHLETIC TRAINING EXTERNSHIP
6 credits
An intensive clinical experience at an off-campus site providing the advanced student with an opportunity to demonstrate analytical decision-making and refine clinical application of knowledge and skills prior to certification. Cannot be taken concurrently with participation in varsity or club sport. Cannot be taken with PE 494 without permission of the athletic training program coordinator. Proof of current certification in CPR for the Professional Rescuer. Prerequisite: PE 484, Athletic Training major, and permission of the instructor. Fall, Spring.

PE 494 ATHLETIC TRAINING PRACTICUM
2 credits
A supervised experience designed to provide the advanced student an intensive experience in rehabilitation and orthopedics and an opportunity to demonstrate analytical decision-making of general medical pathologies. The course also provides the preprofessional student an opportunity to refine and demonstrate clinical skills in practical situations. Cannot be taken concurrently with PE 493 without permission of the athletic training program coordinator. Proof of current certification in CPR for the Professional Rescuer. Prerequisites: PE 484 and Athletic Training major. Fall, Spring.
PE 498 INDEPENDENT STUDY
1-6 credits
Advanced independent study. The student completes a written research project under supervision of a PE faculty member who, in consultation with the dean of Professional and Graduate Studies, determines the credit value. May be repeated for a total of 6 credits. Prerequisites: PE major and permission of instructor. Fall, Spring.

Physics

IIPHYS 210 HISTORY OF SCIENCE
The history and philosophy of science (astronomy, chemistry, geology, physics, and evolution) from its origins in Ancient Greece through Rome, the Middle Ages, the Islamic period, and the Renaissance to the Scientific Revolution of the 17th century to modern times, including plate tectonics, relativity, quantum physics and cosmology. Prerequisites: ITW101 and IQL101 or equivalent. Fall.

IIPHYS 305 THE PHYSICS OF MUSIC
An interdisciplinary exploration of how analyses of the physics of sound aid our understanding of music. Students will learn how sound is created, sustained, and amplified; how limits in human physiology shape approaches to music; and how physical properties of instruments relate to tone quality and give insight into different genres of music. Prerequisites: 24 credits in ISP, including ITW 101 and IQL 101. Fall, Spring.

INPHYS 141 COLLEGE PHYSICS I
Algebra-based introduction to Newtonian mechanics. Emphasis on conceptual understanding and problem-solving: motion, forces, Newton's laws applied to both linear and rotational situations, momentum, energy, and conservation laws. Knowledge of algebra and trigonometry are expected. A math competency assessment is administered. Includes two-hour laboratory. Fall, Spring.

INPHYS 201 PHENOMENAL SCIENCE
4 credits
A hands-on, minds-on inquiry-based exploration of the basic physical principles that underlie our observations and experiences in the everyday world. Topics include motion, forces, energy, fluids, sound, heat, light, electricity, magnetism, and the atom. Ideal for preservice teachers. Prerequisite: IQL 101 or by permission of the instructor. Fall, Spring.

INPHYS 241 UNIVERSITY PHYSICS I
The first semester of a two-semester calculus-based sequence for science and technology majors. Emphasized are kinematics, forces, both static and dynamic, energy and momentum, gravitation and fluids, thermal physics, and thermodynamics. Includes a two-hour laboratory. Spring.

PHYS 142 COLLEGE PHYSICS II
Continuation of PHYS 141 with the extension of basic concepts to include fluids, vibrations and waves, thermal physics, thermodynamics, electrostatics, electrical circuits and magnetism, and geometrical and physical optics. Includes two-hour laboratory. Prerequisite: IIPHYS 141. Spring.

PHYS 242 UNIVERSITY PHYSICS II
A continuation of PHYS 241 that treats rotational dynamics and angular momentum, oscillations and waves such as sound, geometrical and physical optics, electrostatics, electric circuits, and magnetism. Includes a two-hour laboratory. Prerequisite: Grade C or higher in PHYS 241 or permission of instructor. Fall.

PHYS 260 ELECTRONICS
Instrumentation, DC and AC circuitry, signals and noise, filters, amplifiers, transducers, and solid-state components. Digital concepts and applications, including coding, gating and counting, and logic circuitry. Includes three-hour lab. Prerequisite: PHYS 142 or PHYS 242. Alternate years.

PHYS 298 INDEPENDENT STUDY
1-4 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Consent is required from the instructor who will supervise the independent study. May be repeated for a total of 4 credits.

PHYS 330 THERMODYNAMICS
Temperature and the zeroth law, heat, work and energy, the three laws of thermodynamics, and applications. Emphasis is on entropy and its applications: the thermodynamic potentials, aspects of kinetic theory, and Maxwell-Boltzmann statistics. Prerequisites: Grade C or higher in PHYS 242 or permission of instructor. Alternate years.
PHYS 339 CLASSICAL MECHANICS
Analytical treatment of Newton's laws in kinematics and dynamics, oscillations, non-inertial reference systems, gravitation and central forces, mechanics, and motion of rigid bodies. Lagrangian mechanics. Prerequisite: Grade C or higher in PHYS 242 or permission of instructor. Alternate years.

PHYS 342 MODERN PHYSICS
A lab-lecture format with laboratory exercises to complement such topics as special and general relativity, the historical overview of atomic and nuclear physics, wave-particle duality, the one-dimensional Schrödinger equation and applications, nuclear structure, radioactivity and nuclear reactions, fission and fusion, elementary particles, and the Standard Model. Prerequisite: Grade C or higher in PHYS 242, or permission of the instructor. Alternate years.

PHYS 440 ELECTRICITY AND MAGNETISM
Vector analysis, Coulomb's law, the electric field, Gauss's law, the Poisson and Laplace equations, properties of dielectrics, electric current, Ampere's law, electromagnetic induction, and Maxwell's equations. Prerequisites: Grade C or higher in PHYS 242 and MATH 361 or permission of instructor. As needed.

PHYS 490 ADVANCED SPECIAL TOPICS
1-4 credits
Study of selected topics not covered adequately in other Physics courses. Includes the study of experimental techniques and results, as well as various theoretical models. Prerequisites: Grade C or higher in PHYS 242 and permission of instructor. Fall, Spring.

PHYS 498 INDEPENDENT STUDY
1-4 credits
Individualized, directed study in an area of Physics or to a depth not normally available within the curriculum. The student initiates a research project or takes part in ongoing research under supervision of a faculty investigator. May be repeated for a total of 4 credits. Prerequisite: Permission of instructor. Fall, Spring.

Political Science
ISPOSC 101 WHAT IS POLITICS?
An introduction to the study of politics and an overview of the content areas of political science. The course will include a variety of developmental skills, including writing, oral presentation, and use of scholarly sources and information technology. Junior- and senior-status students require permission of instructor. Fall, Spring.

ISPOSC 210 UNITED STATES POLITICS
Survey of U.S. politics at the federal level. Emphasis is on the context and development of the Constitution and the evolution of political institutions, such as Congress, the presidency, and the courts. Other topics include political economy, media, public opinion, parties, elections, interest groups, and social movements. Fall, Spring.

ISPOSC 211 STATE AND LOCAL POLITICS
The role of power and institutions in the states and their government subdivisions. Comparative state and local cultures, federalism, revenues and expenditures, and contemporary problems. Spring.

ISPOSC 220 GLOBAL POLITICS
International politics in the era of globalization. International security frameworks, the global political economy, and critical agendas. Fall, Spring.

ISPOSC 223 COMPARATIVE GOVERNMENT: CANADA AND UNITED STATES
Introduction to comparative analysis, focusing on Canada and the United States – countries with similar histories and societies, but different governments and policy outcomes. Primary emphasis is placed on the context and evolution of political traditions, institutions, and behavior. Secondary emphasis is placed on the methods of comparative analysis. Spring.

ISPOSC 228 UNDERSTANDING GLOBAL POLITICS THROUGH LITERATURE AND FILM
Survey of important concepts in global politics that can be studied through such media as documentaries, films, and novels. The course treats important political questions and provocative theories about the international environment, hegemony, the international monetary regime, and the use of war. Occasionally.

ISPOSC 230 FOUNDATIONS OF POLITICAL THOUGHT
Introduction to the political philosophies that framed political action and governance in the West between the Classical Era and the end of the 17th century. Students learn the political contributions of Greek, Roman, Church, Reformation, and Enlightenment thinkers. Students also learn how to ask, answer, and assess philosophical questions about political power. Fall, Spring.
POSC 215 PUBLIC ADMINISTRATION
Local government planning and administration techniques emphasizing field study and observation of local public institutions at work. Consideration of public/private partnership and conflict. Spring, odd years.

POSC 290 SPECIAL TOPICS
1-4 credits
Study of a selected topic in Political Science. May be repeated as topic changes.

POSC 294 COOPERATIVE EDUCATION
1-4 credits
Introductory work-learning experience related to career interests, for which compensation may be received. Positions arranged by students with sponsorship, approval, and evaluation by full-time faculty. Elective credit only (normally 120 hours per credit) for a total of 12 credits per degree program. Prerequisites: 24 total credits earned, 2.0 cumulative GPA, and permission of instructor. Graded Pass/Fail.

POSC 298 INDEPENDENT STUDY
1-4 credits
Individualized study of an issue, problem, or topic, selected and pursued in consultation with a faculty member. May be repeated. Prerequisite: Permission of instructor.

POSC 301 WRITING AND RESEARCH
Emphasizes the background study and the writing tasks that are intrinsic to applied public policy analysis and scholarly analysis. Students will complete a thoroughly researched and carefully revised analytical study that will be an exemplary demonstration of their research and writing skills. Prerequisite: Two courses in Political Science at the 200 level or higher. Fall, Spring.

POSC 310 PARTICIPATION AND DEMOCRACY IN AMERICA
An examination of American elections and voting, assessing the quality of modern democracy. Theories about participatory democracy will be analyzed and used to evaluate alternative forms of citizen action proposed or practiced in America. Class experience will include some form of active participation or observation in the political arena. Prerequisite: ISPOSC 210 is strongly recommended but not required. Fall, even years.

POSC 312 PUBLIC POLICY ANALYSIS
Emphasis is on the study of public policy and the profession of policy analysis. Central to the course will be an understanding of three main ideological approaches to policy problems and the ability to see these approaches enacted in real-life cases. Application of popular models of how policy is made and to understand the role of institutions and actors in policy. Prerequisite: ISPOSC 210 or permission of instructor. Spring, even years.

POSC 315 ENVIRONMENTAL POLICY
Critical discussion of specific environmental policies broken into two categories: policies dealing with pollution and public health and policies dealing with land management and the public realm. Includes a brief history and discussion of policy theory applied to the environment. Prerequisite: ISPOSC 210 or permission of instructor. Spring, odd years.

POSC 316 CONSTITUTIONAL LAW
The Constitution as interpreted by the U.S. Supreme Court, nature and origins of judicial review, battles over strict and loose construction and judicial activism, recent cases in political and civil rights, economic regulation, and distribution and scope of government powers. Prerequisite: ISPOSC 210, ISPOSC 220, or ISPOSC 223, or permission of instructor. Fall.

POSC 321 U.S. FOREIGN POLICY AND GLOBALIZATION
Analysis of foreign policy formation in the United States as it interacts with the international system, and investigation of the major role of the United States in shaping the ideology and institutions of the international monetary regime. Includes historical setting and contemporary policies and problems. Prerequisite: ISPOSC 210, ISPOSC 220, or ISPOSC 223, or permission of instructor. Fall, odd years.

POSC 322 GLOBAL POLITICAL ECONOMY
Investigation of the interrelationships between political and economic interests, institutions and processes that form an international monetary regime, and the political resources determining the relative power of global actors to affect the allocation of scarce resources on the planet. Prerequisite: ISPOSC 210, ISPOSC 220, or ISPOSC 223, or permission of instructor. Fall, even years.

POSC 323 ADVANCED COMPARATIVE GOVERNMENT
Focuses on key concepts and techniques of comparative analysis, and provides an opportunity to conduct original comparative research on polities of interest to the student. Prerequisite: ISPOSC 223 is strongly recommended but not required. Fall, odd years.
POSC 324 CONFLICT MANAGEMENT
Analysis of social conflict and assessment of alternative processes for resolving disputes at macro and micro levels of conflict, including the workplace and diplomacy. Students will engage in simulations and contract negotiation to become familiar with conflict management. Prerequisite: ISPOSC 210, ISPOSC 220, or ISPOSC 223, or permission of instructor. Fall, even years.

POSC 334 MODERN POLITICAL THOUGHT
Critical study of political philosophies that have explained and critiqued political action and governance since the 17th century. Students integrate knowledge of foundational political thought with modern political thought. ISPOSC 230 is strongly recommended, but is not required. Spring, even years.

POSC 390 SPECIAL TOPICS
1-4 credits
Study of a selected topic in Political Science. May be repeated as topic changes. Occasionally.

POSC 401 KEYSTONE IN POLITICAL SCIENCE
Advanced study and writing about politics that integrates the individual student’s previous work in political analysis through the scholarly study of a topic that the student and instructor jointly select. Prerequisites: 16 credits in Political Science or permission of instructor. Fall, Spring.

POSC 497 INTERNSHIP
1-4 credits
Application of a political science background to the practical affairs and activities of a political organization or institution as a participant observer. May be repeated for a total of 8 credits. Prerequisites: A minimum of 12 credits in Political Science, 2.5 cumulative GPA in major, and permission of instructor.

POSC 498 INDEPENDENT STUDY
1-4 credits
Intensive study of an issue, problem, or topic. May be repeated. Prerequisite: A minimum of 12 credits in Political Science at the 200 level or higher, and permission of instructor.

Psychology

IIPSYC 350 WHEN HARM IS DONE
An interdisciplinary exploration of restorative justice, difficult dialogue, nonviolent resistance, and other models that differ from revenge and punishment as responses to crime and injustice. We will examine applications at the national and international level, in community criminal justice systems, in schools, in groups, and in personal relationships. Prerequisites: 24 credits in the ISP, including ITW and IQL. Fall.

IIPSYC 100 TOPICS IN PSYCHOLOGY
An exploration of topical psychological issues for non-majors. Topics vary in sub-areas of psychology such as biological, social, cognitive, developmental, and clinical psychology. May be repeated for credit as topics change. Fall, Spring.

IIPSYC 312 LIFESPAN PSYCHOLOGY
This course investigates the major psychological theories of lifespan development and provides a multifaceted introduction to the dynamics of intrapsychic development that occurs across the human lifespan. Major developmental milestones, effects of diversity and multiculturalism, socioeconomic status, family constellation, and socio-cultural variables are essential components of this analysis. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Fall, Spring.

PSYC 101 GENERAL PSYCHOLOGY
Surveys the major topics involved in an understanding of the behavior of humans and animals. Fall, Spring.

PSYC 221 SOCIAL PSYCHOLOGY
Human thought, feeling, and behavior in the social environment. Topics include the perception of people and social situations, aggression and altruism, competition and cooperation, love and friendship, communication and persuasion, attitudes and attitude change, social influence, and group dynamics. Prerequisite: PSYC 101 or permission of instructor. Fall, Spring.

PSYC 242 PERSONALITY
Systematic study of the major theories and scientific assumptions endemic to the development, structure, and functions of human personality. Exploration of the methodological and research dimensions of this inquiry will be a central component of this course. Consideration of the roles of multiculturalism in theory development will also be examined. Prerequisite: PSYC 101 or permission of instructor. Fall, Spring.
PSYC 251 PSYCHOLOGICAL STATISTICS
An introduction to descriptive and inferential statistics used in psychological research. Topics include measures of central tendency, variability, and correlation, as well as probability, sampling, hypothesis testing, and analysis of variance. Prerequisite: May not be taken for credit by students who have completed MATH 141. Fall, Spring.

PSYC 252 RESEARCH METHODS IN PSYCHOLOGY
Methodologies of psychological research will be explored. Students will learn to conduct, evaluate, and interpret experiments within various subareas of psychology. Prerequisite: Formal admission to the major in Psychology. Fall, Spring.

PSYC 253 BRAIN AND BEHAVIOR
This course examines how the central and peripheral nervous systems as well as the endocrine system relate to human and animal behavior. Prerequisites: PSYC 101 or permission of instructor. One Biology course recommended. Fall, Spring.

PSYC 290 PSYCHOLOGY TOPICS
1-4 credits
Exploration and analysis of elementary topics in psychology. Prerequisite: Permission of instructor. Occasionally.

PSYC 298 INDEPENDENT STUDY
1-4 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Prerequisite: Permission of instructor. May be repeated. Fall, Spring.

PSYC 311 CHILD AND ADOLESCENT PSYCHOLOGY
The study of child and adolescent psychology focusing on current research in cognitive, physical, social, and emotional development. Prerequisite: PSYC 101. Fall, Spring.

PSYC 314 ADULTHOOD AND AGING
A psychological analysis of human development from post-adolescence to death. Topics include sexuality, self-image, family and work relationships, independence, power, developmental experiences, multicultural issues, emotional and physical health, and aging. Prerequisites: PSYC 101 and junior standing, or permission of instructor. Spring.

PSYC 321 CULTURE AND PSYCHOLOGY
The study of issues at the intersection of culture and psychology. Topics may include the learning of culture, the impact of culture on behavior, conflict and cooperation across cultural boundaries, and social processes in multicultural communities. Prerequisite: PSYC 101. Fall.

PSYC 323 ETHOLOGY
The study of animal behavior to provide a broader frame of reference for evaluating human behavior. Prerequisite: PSYC 101 or permission of instructor. Fall.

PSYC 340 PSYCHOLOGICAL TESTING
Introductory theory and practice of psychological assessment. Examination of varied approaches to assessment and experiences with select test types. Prerequisites: PSYC 101, PSYC 251, or MATH 141 and junior standing, or permission of the instructor. Fall.

PSYC 345 ABNORMAL PSYCHOLOGY
An introduction to the systematic study of theories of ideology, signs, and treatment of psychopathology with an emphasis on prevention, and the social and cultural forces that influence views of abnormality. Prerequisites: PSYC 242 and junior standing, or permission of instructor. Fall, Spring.

PSYC 355 PSYCHOLOGY OF LEARNING
Analysis of contemporary theories and research on learning. Integration of behavioral, cognitive, and ecological perspectives. Prerequisites: PSYC 101 and junior standing, or permission of instructor. Spring.

PSYC 357 COGNITIVE PROCESSES
An investigation of the continuum of cognitive activities from perception to memory and thought processes. Traditional, neo-behaviorist, information processing, and computer model approaches to understanding cognition are considered. Prerequisites: PSYC 101 and junior standing, or permission of instructor. Fall.

PSYC 382 HISTORY OF PSYCHOLOGY
Exploration of the development of modern psychology through an examination of influential figures, events, and ideas from the mid-19th century to the present. Prerequisites: PSYC 101 and junior standing, or permission of the instructor. Fall, Spring.

PSYC 425 PSYCHOLOGY OF WOMEN
Exploration of current and historical understandings of the psychology of women. Includes psychoanalytic, biological, and social explanations of women's psychology and development and critical examination of research on gender differences and similarities. Prerequisite: Junior standing and ITW 101, or permission of instructor. Fall.
**PSYC 444 COUNSELING**
Exposes students to counseling techniques and corresponding theoretical frameworks to cultural, ethical, and psychological issues that are confronted by counselors, and to an examination of students’ interests and aptitudes as they relate to the counseling profession. Prerequisites: PSYC 242, PSYC 345, and junior standing, or permission of instructor. *Fall, Spring.*

**PSYC 447 CLINICAL PSYCHOLOGY**
Introduction to the spectrum of subdisciplines within clinical psychology. Topics include clinical theory and research, assessment procedures, ethical decision making, and risk assessment. Prerequisites: PSYC 345 and junior standing, or permission of instructor. *Fall, Spring.*

**PSYC 451 MOTIVATION**
Examines factors that direct human behavior, with emphasis on the influence of physiological changes and learning on motivation. Prerequisites: PSYC 253 and senior standing, or permission of instructor.

**PSYC 453 SENSATION AND PERCEPTION**
An examination of contemporary theories and research on how the brain makes sense of all the sensory inputs it receives to produce the rich perceptual world we experience. Prerequisites: PSYC 252 and PSYC 253. *Spring, odd years.*

**PSYC 470 PRACTICUM**
1–8 credits
Field experience focused on the ethical application of psychological theory and data in an organization or service setting under faculty and agency supervision. The readings, work assignments, supervisory sessions, and written product are determined by the student, the faculty, and the agency prior to the practicum. Prerequisites: Junior standing and permission of instructor. May be repeated to a total of 8 credits. *Fall, Spring.*

**PSYC 490 ADVANCED SPECIAL TOPICS**
1–4 credits
Exploration and analysis of advanced topics in Psychology. Prerequisite: Permission of instructor.

**PSYC 495 SEMINAR**
Capstone experience that refines basic skills and concepts through an exploration of specific themes in psychological literature. Course work emphasizes analysis, synthesis, organization and oral communication. Students lead classroom discussions; active participation is essential. May be repeated as topics change. Prerequisites: Senior psychology major or permission of instructor. *Fall, Spring.*

**PSYC 496 HONORS SEMINAR**
1 credit
Research seminar for participants in the Psychology Honors Program. Prerequisite: admission to Psychology Honors Program. Graded Pass/Fail. Must be repeated to qualify for psychology honors. *Fall, Spring.*

**PSYC 498 INDEPENDENT STUDY**
1–4 credits
Individual study or research in selected topics in Psychology under direction of a faculty member. May be repeated. Prerequisite: Permission of instructor.

**PSYC 499 HONORS RESEARCH**
Independent topical research for participants in the Psychology Honors Program. Prerequisite: Admission to Psychology Honors Program. Graded Pass/Fail. Must be repeated to qualify for psychology honors. *Fall, Spring.*

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**Safety and Occupational Health Applied Sciences**

**SAFE 101 SAFETY AWARENESS**
Students study the impact of accidents and develop strategies to eliminate or mitigate accident outcomes through education and awareness. Students identify factors associated with activities at school, home and work that result in accidents. By applying this knowledge people can make informed decisions leading to minimum risk and maximum success. *Fall, Spring.*

**SAFE 200 SAFETY INTERNSHIP**
2–8 credits
Career related work-learning experience. Placements arranged, supervised, and evaluated by Safety faculty. Elective credit only (cannot be applied to credits in the major; maximum coop credits 16 hours per degree program). Minimum 12 weeks per semester required (120 hours, 2 credits; 240 hours, 4 credits; 360 hours, 6 credits; 480 hours, 8 credits). Prerequisites: 16 SAFE credits earned, 2.0 cumulative GPA, and permission of instructor. Graded Pass/Fail. *Fall, Spring.*
SAFE 202 OCCUPATIONAL SAFETY
The application of scientific and engineering principles to the analysis of processes, equipment, products, facilities and environments in order to optimize safety and health effectiveness. Topics include legislative overview, problem identification, control concepts, and basic engineering principles, including a review of basic geometry and mathematical calculations and conversion factors. **Fall, Spring.**

SAFE 203 FIRE AND HAZMAT RESPONSE
An overview of the National Fire Protection Association Codes that apply to occupational exposures. The safe handling, storage, and use of hazardous materials for industrial, commercial, transportation, and public service operations are covered in detail. Fire and accident prevention measures, training, regulatory requirements, emergency procedures and response are studied. Prerequisites: Safety Studies majors or minors only, or permission of instructor. **Fall, Spring.**

SAFE 204 HUMAN FACTORS IN SAFETY
This course will provide students with the understanding of the importance of ergonomic design and evaluation of workplaces and the work environment. To enable the student to understand physiological, psychological stresses, human capabilities and limitations and their importance in designing work spaces, processes, tool, equipment and product. Prerequisites: Safety Studies majors or minors and SPDI Majors only, or permission of instructor. **Fall, Spring.**

SAFE 205 BEHAVIORAL BASED SAFETY
Research reveals that behavioral based safety is the most effective method of reducing work place injuries. This course focuses on the science of identifying at risk workplace behaviors, how employees can meaningfully participate, how to measure, evaluate and report performance. Prerequisites: Safety Studies majors or minors only, or permission of the instructor. **Fall, Spring.**

SAFE 206 CONSTRUCTION SAFETY STANDARDS
Compliance with OSHA standards specific to construction, including rights and responsibilities under OSHA, inspections, citations, appeals, and record keeping. The course will also cover the most frequently referenced OSHA standards in the construction industry. Prerequisites: SAFE 202 or permission of the instructor.

SAFE 222 INTRODUCTION TO TRAFFIC SAFETY
3 credits
Elements that compose driving and the highway transportation system. Emphasis is on human performance, traffic engineering, and related research. For educators and those whose responsibilities include motor fleet safety. Due to the extensive content, students can expect considerable out of class assignments. Additional driving time will be scheduled with the instructor. Prerequisites: State of N.H. Driver Education Teacher Certification requires driver license possession for five consecutive years, high school diploma or GED, valid operator's license and acceptable driving record.

SAFE 290 SPECIAL TOPICS IN SAFETY
1-4 credits
Study of a selected topic in the Safety Studies program. May be repeated as topics change. Prerequisites vary as topics change. **Fall, Spring.**

SAFE 298 INDEPENDENT STUDY
1-4 credits
An opportunity for a qualified student to explore work in an area of individual interest, in Safety, selected and pursued in consultation with a faculty member. Consent is required from the instructor who will supervise the independent study. May be repeated for a total of 4 credits.

SAFE 301 LOSS PREVENTION
A dual approach to Safety examining both the proactive strategies of anticipation, recognition and control of hazards to prevent accidents and the remedial strategies of accident investigation to acquaint students with investigative techniques, active data acquisition, hazard classification systems and loss causation modeling to prevent the reoccurrence of accidents. Prerequisites: SAFE 101, SAFE 202, Safety Studies majors or minors only, or permission of the instructor.

SAFE 302 LAW AND ETHICS IN SAFETY
This course will provide an introduction to federal and state regulatory authorities governing safety in industry and the environmental impacts of industrial activity. Ethical dilemmas, management challenges and professional responsibilities will be discussed, as will the liability and the legal ramifications of accidents. Prerequisites: SAFE 101, SAFE 202, Safety Studies majors or minors only, or permission of instructor. **Fall, Spring.**

SAFE 303 SAFETY AND HEALTH STANDARDS
Compliance with OSHA in the workplace, including rights and responsibilities under OSHA, inspections, citations, appeals, and record keeping. The course will also cover the more frequently referenced standards in general industry. Prerequisite: SAFE 202 or permission of instructor. **Fall, Spring.**
SAFE 304 ENVIRONMENTAL LAW AND REGULATION
Develops an understanding of the system of laws and regulations that protect the environment, human health, and natural resources. The role of science in the legal/regulatory process will be emphasized, as will federal/state regulatory processes and requirements. Prerequisite: ENST 253, SAFE 302, or permission of instructor. Cross-listed as ENST 304. Fall.

SAFE 305 HEALTH HAZARD IDENTIFICATION
This course reviews health hazards in industry and their effects on humans. Students study hazards involved with stressors at work, with an emphasis on the principles of occupational toxicology. Each student develops a semester synopsis, which summarizes key learning as compared to course objectives and programmatic competencies. Prerequisites: Electronic Portfolio, SAFE 101, SAFE 202, one course in Chemistry, Safety Studies majors or minors only, or permission of the instructor.

SAFE 333 DRIVER EDUCATION METHODS
3 credits
Professional preparation to meet the traffic and safety needs of schools and communities. Focus on methods of classroom and laboratory teaching. State and national standards are recommended for teaching driver and traffic safety education. (Includes laboratory experience.) Students can expect considerable out of class assignments. Prerequisite: State of N.H. Driver Education Teacher Certification requires driver license possession for five consecutive years, high school diploma or GED, valid operator's license and acceptable driving record, access to Internet and e-mail, and successful completion of Introduction to Traffic Safety.

SAFE 400 ADVANCED SAFETY INTERNSHIP
1-8 credits
Sequential work-learning experience related to career interests. Compensation may be received. Placements arranged, supervised, and evaluated by full-time Safety faculty. Open-elective credit only (does not apply to elective credits in the major; maximum coop credits 12 hours per degree program). See KSC catalog for credits per hours worked. Prerequisites: Declaration of major, junior standing 32 credit hours in the major, 2.5 cumulative GPA, and permission of instructor. Graded Pass/Fail. Fall, Spring.

SAFE 401 INDUSTRIAL HYGIENE
This course will familiarize students with the various techniques and procedures involved in the practice of the profession of Industrial Hygiene. Laboratory exercises will illustrate the equipment and methodologies commonly used by Industrial Hygienists in the recognition and control of occupational health hazards in today's workplace. Prerequisites: SAFE 303, SAFE 305, one course in Chemistry, and Safety Studies majors only.

SAFE 402 CRITICAL INCIDENT RESPONSE
The emergency planning process includes planning, preparing, responding and recovering from an emergency. This course will introduce the key activities in the emergency planning process such as; vulnerability analysis, incident command, and asset protection. Prerequisites: SAFE 303, Safety Studies majors or minors only or permission of instructor. Fall, Spring.

SAFE 444 IN-VEHICLE DRIVER ED METHODS
3 credits
Examines methods for delivering a sequential in-vehicle phase of a driver education program to novice drivers. Includes program organization, route and lesson design, instructional delivery, and assessment of behind-the-wheel lessons in a dual controlled vehicle. Requires in-vehicle demonstrations by staff and students. Students can expect considerable out of class assignments. Prerequisites: State of N.H. Driver Education Teacher Certification requires driver license possession for five consecutive years, high school diploma or GED, valid operator's license and acceptable driving record, and successful completion of Introduction to Classroom Safety and Classroom Methods for Teaching Driver Education.

SAFE 490 SPECIAL TOPICS IN SAFETY
1-4 credits
Study of a selected topic in the Safety program at an advanced level. May be repeated as topics change. Prerequisites vary as topics change. Fall, Spring.

SAFE 491 HONORS RESEARCH
4-8 credits
Participation in ongoing programmatic research in the Safety Honors Program. Prerequisite: admission to the Safety Honors Program. Graded Pass/Fail. May be repeated for a total of 8 credits.

SAFE 495 SAFETY SEMINAR
1-4 credits
Group discussion of problems and issues in Occupational Safety and Health. May be repeated as topics change. Prerequisites vary as topics change. Fall, Spring.
SAFE 497 INNOVATIVE SAFETY LEADERSHIP
Instructional and administrative aspects of comprehensive safety programs. Emphasizes the application of knowledge and skills through classroom and field experiences. Analysis of personal and environmental safety factors. Recommended for educators and people in safety-related fields. Prerequisites: SAFE 101, SAFE 202, SAFE 302, SAFE 303, SAFE 305, one course in Chemistry, (104 credit hours earned) and signature of department chair. Fall, Spring.

SAFE 498 INDEPENDENT STUDY
1-4 credits
Advanced independent study of various aspects of safety through independent reading, writing, laboratory work, or field investigation. Requires a written report. Prerequisite: Permission of instructor. May be repeated to a total of 4 credits.

SAFE 597 SAFETY AND HEALTH RESEARCH
Participation in post-baccalaureate, programmatic research projects in Safety under the direction of a faculty member. Prerequisites: Permission of the Post-Baccalaureate Program Committee. Prerequisites may change with course subject. May be repeated for a total of 8 credits.

SAFE 601 CURRENT ISSUES IN SAFETY
This course examines promotion and management of occupational safety. Globalization, epidemics, foreign workers, and more will be considered. Computer searches, literature reviews, periodicals, and other methods will be used to illustrate the remarkable pathway that occupational safety has taken. Basic research methods are used to enhance the discovery process.

SAFE 602 BEST PRACTICES IN SAFETY
Participants research and define best practices of the safety process and explore how programs are developed, implemented, assessed, and modified. Organizations recognized with awards for their excellence by private and governmental agencies are used as case studies to facilitate learning and understand relationships of best practices and beneficial stakeholder outcomes.

SAFE 603 APPLIED OCCUPATIONAL HEALTH
This course is designed to provide practical knowledge for safety professionals. This course will examine historic examples of occupational diseases and develop an understanding of exposure assessment techniques in today's workplace. Course discussion and instructional assignments provide students knowledge and skills to manage illness risks in Safety and Health Programs.

SAFE 604 LEADING SAFETY CHANGE
What defines leadership, and what about change, can you be a leader without change? This reflective course will study leadership and change concepts by surveying literature, analysis tools, models, and case studies to tease out leadership and change concepts that effectively enhance employee health and safety systems within organizations.

SAFE 605 SAFETY MANAGEMENT SYSTEMS
Surveys leading international safety and environmental management systems, including ISO 14000. Focus on requirements of management systems to identify and implement strategies in organizations. Integration of EMS and SMS is emphasized: management, document control, training, and corrective actions. Students will learn to move organizations beyond basic compliance to innovative performance.

SAFE 610 RISK AND SAFETY
Introduction to scholarly based risk literature in occupational and environmental health. Students learn basic risk concepts and critically evaluate quantitative risk assessment (QRA). The class will examine the interplay of science and policy, especially how scientific uncertainty can become controversial. An innovative decision-making processes will be reviewed.

SAFE 620 LEGAL AND ETHICAL ISSUES
Ethical and legal issues faced by safety professionals. Students evaluate issues in terms of their own value system and prudent practices. Case studies and anecdotal presentations examine issues and prepare students for roles in actions such as litigation and worker's compensation claims as well as various court hearings and trials.

SAFE 650 SELF-DIRECTED STUDY
An in-depth study of a topic not available through other course work. Student works with supervising faculty member on a carefully planned, student-initiated project. Prior approval is necessary. Prerequisite: Permission of instructor.

SAFE 695 GRADUATE PRACTICUM
The practicum course experience serves as a central component of our degree program. Prior to the practicum, you will complete core courses in the degree program. Your practicum experience provides you with an opportunity to translate classroom theory into practice in a workplace environment. Prerequisites: 32 earned Safety M.S. program credits and permission of instructor.
SAFE 697 ADVANCED SAFETY AND HEALTH RESEARCH
Participation in post-baccalaureate, programmatic research projects in Safety under the direction of a faculty member. This course will provide advancing research opportunities for motivated undergraduate students or continuing professionals. Prerequisites: Permission of the Post-Baccalaureate Program Committee. Prerequisites may change with course subject. May be repeated for a total of 8 credits.

SAFE 699 THESIS
Students pursue safety as a profession. Technical, theoretical, and historical aspects of the discipline are studied in an inventive and interconnected manner, with an emphasis on developing cogent and comprehensive safety knowledge rooted in critical thinking. Students are expected to bring their knowledge and critical capacity to bear. Prerequisite: 32 earned Safety M.S. program credits and permission of instructor.

Social Science

IISOSC 305 TRAVEL: CRITICAL PERSPECTIVES
This is an interdisciplinary course examining travel as a dynamic blend of the social sciences. How can travelers apply social science principles to develop global understanding? Travel critically engages the multiple perspectives of political science, economics, geography, archeology, anthropology, history, and sociology. The course will utilize lectures, discussions, and projects. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Spring, Summer.

IISOSC 310: WAR: WHY WE FIGHT
Interdisciplinary examination of war as a social phenomenon. Central to the course are questions regarding the nature and necessity of war. Emphasis is placed on class discussion and on readings from the fields of Geography, Psychology, Economics, Political Science, History, and Sociology. Prerequisites: 24 credits in the ISP, including ITW and IQL. Occasionally.

SOSC 201 GLOBAL STUDIES I
Application of social science concepts and multiple perspectives to the study of global history in pre-modern times to 1450. Spring.

SOSC 301 GLOBAL STUDIES II
Application of social science concepts and perspectives to the study of world or global history in modern times (1600) to the present. Prerequisite: SOSC 101. Fall.

SOSC 390 SPECIAL TOPICS
Intensive study of selected topics in the social sciences. May be repeated as topics change. Prerequisite: One 200-level course in the social sciences. Occasionally.

SOSC 495 SENIOR SEMINAR
Capstone course with an interdisciplinary theme selected by the instructor that requires active analysis of causes, manifestations, and consequences of complex social phenomena. A major independent project is required. Prerequisite: Senior Social Science major or permission of the instructor.

Sociology

IISOC 360 NICARAGUA IN CHANGE
Experiential service-learning course examines the effects of revolution and social change in Nicaraguan society. Faculty and students travel to the city of Managua and a rural farming cooperative in Nicaragua. Students conduct interdisciplinary research on public health and social conditions and share results in a public forum. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Occasionally.

ISSOC 125 SOCIOLOGY NOW
Course covers current events, applying a sociological perspective. Intended for students completing the ISP or those interested in a major in Sociology or social sciences. Students will learn how sociologists apply the scientific method to study current events. Fall, Spring.

ISSOC 260 POPULAR CULTURE
This course focuses on dominant ideas or ideologies of inequality and how they are perpetuated (or not) in mass media and popular culture products such as TV shows, movies, songs, websites, games, and the like. Spring.
ISSOC 310 SOCIAL PROBLEMS
A study of selected social problems using a sociological lens. Problems may include alcoholism and drug addiction, crime, divorce, poverty, gender inequality, race relations, and others. Prerequisites: 24 credits in ISP, including ITW 101 and IQL 101, and one course from the IS category. Fall, Spring.

SOC 190 KEY TOPICS IN SOCIOLOGY
Selected topics in sociology. A total of four credits may count toward the major or minor. Course may be repeated as topics change. Occasionally.

SOC 201 INTRODUCTION TO SOCIOLOGY MAJOR
Introduces basic concepts, theories, and methods of sociology. Develops a sociological perspective on social issues, problems, and events. Provides an overview of major subfields in sociology. Also prepares students for the major and a career in sociology and related professions. Fall, Spring.

SOC 234 INTRODUCTION TO SOCIAL WORK
An overview of the ethics, philosophy, and methods of the field of social work. Attention will be paid to social problems encountered in central social institutions and community resources available to address these social problems. Prerequisites: SOC 201 and ISSOC 225 or permission of instructor. Fall, Spring.

SOC 270 URBAN SOCIETY
Analysis of urban structure and ecology. Emphasis is on personality and socialization patterns in large urban communities and consideration of the problems that stem from increasing urbanization in American society and across the globe. Prerequisite: SOC 201 or permission of instructor. Occasionally.

SOC 275 DEVIANCE AND SOCIAL CONTROL
This course studies how a society defines "normal" and "deviant" behavior. The social institutions and processes related to this act of labeling, as well as those concerned with controlling such behavior, are critically analyzed through a survey of the sociological literature on deviance. Fall.

SOC 277 SOCIOLOGY OF EDUCATION
This course examines education from a sociological perspective. Evaluates research and theories of schooling, learning, and education, both formal and informal. Analyzes schools, colleges, and universities as organizations. Compares practices and policies around the world. Prerequisite: SOC 201 or permission of instructor. Occasionally.

SOC 290 TOPICS IN SOCIOLOGY
Selected topics in sociology. May be repeated as topics change. Total of 8 credits. Prerequisite: SOC 201. Occasionally.

SOC 301 SOCIOLOGICAL RESEARCH METHODS
Methodologies and types of research commonly used in sociology. Focus on the research process, including the research problem and techniques of data gathering. Design and use of the interview, questionnaire, and case study approaches to sociological analysis. Three-hour lecture, one-hour lab. Prerequisite: SOC 201. Fall, Spring.

SOC 303 SOCIOLOGICAL QUANTITATIVE ANALYSIS
Embeds statistical techniques in the sociological research process. Application of statistical techniques to test sociological hypotheses, assess social theories, and draw conclusions about sociological problems from statistical data. Review of descriptive/inferential statistics and instruction of statistical software. Three-hour lecture, one-hour lab. Prerequisite: SOC 301. Fall, Spring.

SOC 305 SOCIOLOGICAL THEORY
The assumptions, orientations, and applications used by both classical and contemporary schools of sociological thought in explaining social phenomena. Prerequisite: SOC 201. Fall.

SOC 320 WOMEN, GENDER, AND SOCIETY
A sociological, global, and theoretical approach to the study of women and gender. Emphasis on the social construction of sex and gender. Also analyzes gender inequality and its connections with different forms of oppression over time. Prerequisite: SOC 201 or permission of instructor. Occasionally.

SOC 325 ETHNIC RELATIONS
This course applies sociological theories of ethnicity to the study of past and current ethnic relations across the globe. Emphasizes sociological research on status of ethnic groups in the broader society and in specific social institutions. Prerequisite: SOC 201 or permission of instructor. Fall, even years.

SOC 326 SOCIOLOGY OF THE HOLOCAUST
Analyzes the Holocaust from a comparative, sociological perspective, applying relevant theories and concepts. Emphasis is on social and cultural forces that led to the Holocaust, including stereotyping, discrimination, anti-Semitism, institutional changes, and social-political indifference. Prerequisite: IHHGS 252/IHHIST 252 or SOC 201. Cross-listed as HGS 326. Fall, odd years.
SOC 327 SOCIOLOGY OF GENOCIDE
Focusing on genocide after the Holocaust, this course evaluates theoretical debates on what constitutes genocide and why genocide takes place. It also comparatively analyzes genocide that has occurred in different nation-states from a sociological perspective. Prerequisite: IIHGS 255 or SOC 201. Cross-listed as HGS 327. Spring, even years.

SOC 335 PRACTICUM IN SOCIOLOGY
This course provides an opportunity for students to use sociological learning in a community setting for 8 to 10 hours each week. Students may select from among applied research, human services, or other social change settings. Prerequisites: SOC 301 and permission of instructor. Fall.

SOC 340 CRIMINOLOGY
Analysis of criminal behavior from the functional and social problem points of view. Examination of theories and procedures in prevention and treatment, including history and theories of punishment. Prerequisite: SOC 201 or permission of instructor. Spring.

SOC 345 SOCIOLOGY OF FAMILIES
This course examines various family forms, with primary emphasis on U.S. families. Includes the history and functions of families, theoretical and methodological approaches to studying families, intimate relationships, parenting and socialization of children, and family disruption. Prerequisite: SOC 201 or permission of instructor. Spring.

SOC 350 SOCIOLOGY OF GLOBALIZATION
Examines major sociological trends relating to globalization, giving special attention to topics such as development theory, consumerism, opposing viewpoints on the benefits of globalization, and consequences of globalization for economics, culture, technology, politics, and other institutions. Prerequisite: SOC 201. Fall, odd years.

SOC 360 LAW AND SOCIETY
This course examines the justice system with reference to substantive and procedural laws, criminal and civil laws, and regulatory laws. We will also discuss the interrelationship between law and other social institutions and practices, including culture, politics, and social inequality, and debate public policy issues concerning law enforcement and justice. Prerequisite: SOC 201. Spring.

SOC 361 JUVENILE DELINQUENCY
A study of cultural influences defining the juvenile justice system. The structure of the juvenile court, choices for intervention, methods for measuring juvenile crime, and comparisons between juvenile and the adult justice systems are discussed. Prerequisite: SOC 201 or permission of instructor. Spring, odd years.

SOC 375 COMMUNITY STUDIES
Students in this service-learning course develop their research and professional skills while doing research for a local non-profit or public agency. Specific activities may include one or more of the following: developing a research design, writing a grant proposal, analyzing data, and conducting a needs assessment or program evaluation. Prerequisite: SOC 301, PSYC 252, or permission of instructor. Fall, Spring.

SOC 380 ENVIRONMENTAL SOCIOLOGY
Introduces students to the sociological analysis of human systems as they relate to the natural environment around the world. Topics include population, food energy, sustainable development, environmental justice, the environmental movement, international environmental conflicts, and globalization. Prerequisite: SOC 201. Fall, even years.

SOC 390 STUDIES IN SOCIOLOGY
Intensive study of selected topics in sociology. May be repeated as topics change to a maximum of 8 credits. Prerequisite: SOC 201. Occasionally.

SOC 427 SOCIOLOGICAL TOPICS IN GENOCIDE
This course involves intensive, sociological study of a particular genocide. The genocide to be studied can change in any given semester. Topics include application of the term genocide, historical, social, and cultural background, theoretical explanations for the genocide, and the extent of intervention to stop it. Prerequisite: IIHGS 255 or SOC 305, or permission of instructor. Cross-listed as HGS 427. Occasionally.

SOC 450 MIND, SELF, AND SOCIETY
This seminar discusses major theories, problems, and findings concerning the relationship between the individual and society. Topics include consciousness and the construction of meaning, self-concept, and social identity; socialization and interaction; and group behavior and group membership. Prerequisite: SOC 305. Occasionally.

SOC 455 THE BODY AND SEXUALITY IN SOCIETY
Seminar introduces students to social benefits and practices related to the human body with a focus on gender and sexuality. Topics include socialization, cultural constructions of masculinity and femininity, body image, aging bodies, sexual harassment, rape, pornography and sex work, and new reproductive technologies. Prerequisite: SOC 305 or permission of instructor. Occasionally.
SOC 461 WHITE-COLLAR CRIME
This seminar focuses on occupational, corporate, and government crime viewed using a sociological lens. This course will explore the causes, consequences, and criminal justice system response to white-collar crime. Prerequisites: SOC 305 and SOC 340, or permission of instructor. Occasionally.

SOC 472 SOCIOLOGY OF HEALTH AND MEDICINE
Seminar examining the contributions of sociological theory and research to understanding the social effects on health, illness, health care, the institution of medicine, and health policy. While the United States is a primary focus, global issues are included. Prerequisite: SOC 305 or permission of instructor. Occasionally.

SOC 475 SOCIAL STRATIFICATION
This seminar examines how the unequal distribution of wealth, power, and prestige among individuals and groups affects life chances. Emphasizes class, race, gender, and occupational divisions in the contemporary United States with some attention to global inequality. Prerequisite: SOC 305. Occasionally.

SOC 480 POLITICAL SOCIOLOGY
Seminar acquaints students with sociological approaches to the study of politics in world context. Attention is given to aspects of political culture, political theory, the media, international politics, political participation, social movements, political economy, and globalization. Prerequisite: SOC 305 or permission of instructor. Occasionally.

SOC 485 SCIENCE AND SOCIETY
This is a seminar course on the relationship between science and society. We will look at the historical development of science as a social institution and the institutional practices of modern science. We will also study the relations between science and other social institutions, including politics, culture, and the economy. Prerequisite: SOC 305.

SOC 490 ADVANCED SPECIAL TOPICS IN SOCIOLOGY
Advanced study of selected topics in sociology. May be repeated as topics change to a maximum of 8 credits. Prerequisite: SOC 305 or permission of instructor. Occasionally.

SOC 494 COOPERATIVE EDUCATION
1-4 credits
Work-learning experience for Sociology majors. Placement arranged by student, and approved, supervised, and evaluated by faculty member. Student spends 3-4 hours each week in work setting for each credit earned. Compensation possible. Does not count toward the major. May be repeated to a maximum of 4 credits. Graded Pass/Fail. Prerequisite: Permission of instructor. Fall, Spring.

SOC 498 INDEPENDENT STUDY
1-4 credits
Advanced independent study of a sociology/anthropology area not normally available in the curriculum. Requires written report. Prerequisite: written permission of the instructor. May be repeated to a total of 4 credits. Fall, Spring.

Spanish

IHSP 100 BASIC SPANISH LANGUAGE AND CULTURE
Introduction to basic skills to communicate about personal and everyday topics and exploration of cultural diversity within the contemporary Spanish-speaking world. For students with no prior knowledge of Spanish. Does satisfy the Arts and Humanities language requirement. Fall, Spring, Summer.

IHSP 101 ELEMENTARY SPANISH I
Introduction to basic skills to communicate about personal and everyday topics, including informal conversations with native speakers, finding and reading information in newspapers and Internet sites, and exploring the contemporary Spanish-speaking world. For students with little or no prior knowledge of Spanish.

IHSP 102 ELEMENTARY SPANISH II
Development of skills to communicate about personal and everyday topics, including informal conversations with native speakers, finding and reading information in newspapers and Internet sites, and exploring contemporary issues in the Spanish-speaking world. Students should have prior knowledge of basic Spanish.

IHSP 200 INTERMEDIATE READINGS IN SPANISH
Selected readings in Spanish from literary texts, scholarly journals, magazines, newspapers, and websites. Class discussions are mainly in English. This course meets the Arts and Humanities language requirement and does not count for the Spanish major. Students should have an elementary knowledge of Spanish. Fall, Spring, Summer.
IHSP 201 INTERMEDIATE SPANISH I
Development of skills to converse with native speakers, explore contemporary issues in the Spanish-speaking world, narrate events in present and past tenses, and to read newspapers, websites, and short fiction with a dictionary. Students should have prior knowledge of elementary Spanish.

SP 190 ELEMENTARY SPECIAL TOPICS IN SPANISH
Study of selected topics in Spanish. May be repeated as topics change. Occasionally.

SP 202 INTERMEDIATE SPANISH II
Continuation of the development of the four basic language skills. Fall, Spring.

SP 290 INTERMEDIATE SPECIAL TOPICS
Study of selected topics in Spanish. May be repeated as topics change. Occasionally.

SP 298 INDEPENDENT STUDY
1-4 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Consent required of the instructor who will supervise the independent study. May be repeated for a total of 8 credits.

SP 315 CONVERSATION IN SPANISH
The vocabulary of spoken Spanish and guided practice to increase oral proficiency. Prerequisite: SP 202 or permission of instructor. Fall, Spring.

SP 316 COMPOSITION IN SPANISH
Study and practice of Spanish writing styles for various purposes: journals, letters, essays, and creative pieces. Prerequisite: SP 315 or permission of instructor. Spring.

SP 325 INTRODUCTION TO SPANISH LITERATURE
Study of various critical approaches to Spanish literature. Conducted in Spanish. Prerequisite: SP 315 and SP316 or permission of instructor.

SP 330 LATINOS IN THE U.S.
The cultural backgrounds, literary contributions, and social struggle of Latino population in the U.S. Specific focus on Chicanos, Puerto Ricans, and Cubans. Readings in Spanish and English; class discussion in Spanish. Prerequisite: SP 315 or 316 or permission of instructor. Fall.

SP 350 STUDY IN SPAIN OR LATIN AMERICA
Maximum of 18 credits per semester.
Study in a College-approved program. May be used to meet the Arts and Humanities language requirement. Students must meet with Modern Languages faculty for preapproval of their program of study and for an exit interview upon their return. Fall, Spring.

SP 405 CONTEMPORARY SPANISH USAGE
Advanced study of syntax, semantics, and lexicon based on actual usage in the contemporary Hispanic world. Prerequisite: SP 315 or equivalent. Occasionally.

SP 410 ADVANCED SPANISH GRAMMAR
A study of contemporary Spanish grammar, and a treatment of the typical pitfalls for nonnative users of Spanish. Prerequisite: SP 405, or permission of instructor. Occasionally.

SP 495 SEMINAR
The capstone experience for Spanish majors. Topics based on needs and interests of the group. Prerequisites: SP 405 and senior status. Spring.

SP 498 INDEPENDENT STUDY
1-4 credits
Intensive study of some aspect of Spanish language, literature, or culture adapted to the student's needs. May be repeated to a total of 8 credits. Prerequisite: Permission of instructor.
Special Education

EDSP 202 DEVELOPMENT, EXCEPTIONALITY, AND LEARNING
Study of typical and atypical cognitive, language, physical, and social/emotional development; roles of general and special educators in educating all students; the special education process; collaborative approaches to team planning for inclusive school environments. Admission to Teacher Education or Physical Education Teacher Certification option or Music Education program required for enrollment. Prerequisite: EDUC 100. Fall, Spring, Summer.

EDSP 250 CONTEXT FOR SPECIAL EDUCATION
Historical perspectives, trends, impact of legislation, and school contexts on the evolving and changing field of special education; learning theory, styles, and differences – including language psychological processing; and underlying principles of curriculum accommodations and modifications. Prerequisite: EDSP 202 or EDSP 333.

EDSP 290 TOPICS IN SPECIAL EDUCATION
1-4 credits
Study of a selected topic in special education. May be repeated as topics change. Prerequisite: Permission of instructor. Occasionally.

EDSP 298 INDEPENDENT STUDY
1-4 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Consent is required from the instructor who will supervise the independent study. May be repeated for a total of 8 credits.

EDSP 333 SECONDARY SPECIAL EDUCATION ISSUES
2 credits
An examination of the roles and responsibilities of the secondary content teacher in the context of the special education process. Focus on inclusive teaching practices, social and academic supports, collaborative challenges, and current issues for teachers of individuals with disabilities. Prerequisite: EDUC 231 and Admission to Teacher Education. Fall, Spring.

EDSP 350 CURRICULUM DESIGN FOR STUDENTS WITH SPECIAL NEEDS
Curriculum design, instructional approaches and practices, and informal assessment and progress monitoring for addressing individual needs in the areas of reading, writing, and mathematics, plus strategies that support direct and differentiated instruction, adaptations and modifications, response to intervention, and access to general education. Prerequisite: EDSP 250. Fall, Spring.

EDSP 352 BEHAVIOR AND SOCIAL SUPPORTS
2 credits
Systematic assessment of student social, emotional, and behavioral competence; challenges; and needs as the basis for designing positive supports and interventions. Prerequisite: EDSP 202; EDUC 311 or EDUC 321. Fall, Spring.

EDSP 354 ASSESSMENT IN SPECIAL EDUCATION
2 credits
Examination of the role of formal testing in a collaborative special education process; planning, interpreting, and applying assessment results for prereferral teaming, eligibility decisions, and IEP development. Prerequisite: EDSP 350 or permission of instructor. Fall, Spring.

EDSP 356 PRACTICUM AND METHODS IN SPECIAL EDUCATION
8 credits
A course and field experience, where students engage in the range of assessment, planning, instruction, and teaming activities inherent in the role of the special educator. Prerequisite: EDSP 350, EDSP 352. Corequisite: EDSP 354, or permission of instructor. Fall, Spring.

EDSP 405 STUDENT TEACHING
Full-time placement in educational setting(s) appropriate to special education certification. Supervised intensive field-based experience provides an opportunity for the preservice professional to enhance competence of principles, attitudes, and techniques for effective assessment of student needs, planning differentiated instruction, teaching to accommodate the range of learners, and collaborating with colleagues and families. Graded Pass/Fail. Prerequisite: Permission of Teacher Education. Fall, Spring.

EDSP 450 SPED STUDENT TEACHING SEMINAR
Group study of the realities and challenges of serving in the role of the special educator, working with students who struggle academically, socially, and emotionally. Exploration of collaborative problem-solving and practices to support colleagues as they work to meet the needs of students, families, and other educators. Development of professional portfolios to showcase competence. Corequisite: Student teaching. Fall, Spring.
EDSP 490 ADVANCED SPECIAL TOPICS
1-4 credits
Study of a selected topic in special education at an advanced level. May be repeated as topics change. Prerequisite: Permission of instructor. Occasionally.

EDSP 495 SEMINAR
1-4 credits
Group study of the problems in educating exceptional children and the techniques and procedures by which comprehensive educational care can be provided. Research related to the development of Special Education programs. Fall, Spring, Summer.

EDSP 498 INDEPENDENT STUDY
1-4 credits
Intensive study of an educational problem encountered in a school or community. May be repeated for a total of 8 credits. Fall, Spring, Summer.

Sustainable Product Design and Innovation

SPDI 110 ELECTRICITY AND ELECTRONICS FUNDAMENTALS
An introductory course that examines topics from magnetism and electricity to electronics and microcomputers. A hands-on, experiential learning environment is used to stimulate creativity and understanding of the importance of electronics in today’s society. Two-hour lecture, three-hour lab. Fall, Spring.

SPDI 121 DRAFTING, SKETCHING, AND CADD
Introduction to the graphic language used in product design for students with little or no previous experience with drafting or CAD. Freehand sketching, instrumental expression, and the use of computer-assisted standard drafting techniques and practices are explored. Previous experience with Windows®-based operating systems. Two-hour lecture, three-hour lab. Fall, Spring.

SPDI 152 PRODUCT DESIGN I
Product design involves the integration of human and aesthetic aspects with technological and production aspects in the creation of manufactured products. This first in a series of courses in product design includes areas of human/object interface, product form, product innovation, and an introduction to eco-design. Prerequisite: IAART 103 or permission of instructor. Fall.

SPDI 170 INTRODUCTION TO WOODWORKING TECHNOLOGY
Focus on woodworking systems in mass production applications and one-of-a-kind manufacturing. Emphasis is on problem-solving and creativity in laboratory activities. Function, maintenance, safety, and use of tools, machinery, and materials, including supportive theory. Two-hour lecture, three-hour lab.

SPDI 180 METAL PROCESSES AND PROTOTYPING
Deals with the processes involved with machining, casting, and fabricating metal. Shop safety, proper use of hand and measuring tools, and the use of machine tools are covered. Valuable prototyping skills are covered. Two-hour lecture, three-hour lab. Fall, Spring.

SPDI 221 THREE-DIMENSIONAL CADD
Graphic representation of objects intended for manufacture using three-dimensional computer-aided drafting software. Parametric solid modeling of parts and assemblies and creating orthographic view drawings uses SolidWorks® software. Previous experience with Windows®, Orthographic Drawing, and 2D CAD is expected. SPDI 121 is recommended prior to this course or permission of instructor.

SPDI 252 PRODUCT DESIGN II
A continuation of Product Design I, emphasis is on rational methods for developing designs in team settings. Basic engineering methods of analysis are introduced to evaluate design structures and mechanisms. Alternative design options are evaluated using analytical techniques. Project planning fundamentals of time and budget emulate industrial development practices. Prerequisite: SPDI 152 or permission of instructor. Spring.

SPDI 253 MATERIALS: A LIFE CYCLE VIEW
Fundamental properties of a wide range of materials are covered emphasizing mechanical and physical properties and manufacturing processes. A material life-cycle view provides transparency to the human health and environmental effects. Lectures, labs, and field trips will be used. Two-hour lecture, three-hour lab. Spring.
SPDI 270 WOODWORKING PROCESSES
The design, production, and finishing of furniture, cabinets, and millwork. The historical development of cabinetry as well as contemporary material and processes are covered. Exploration of advanced woodworking processes in the laboratory. Two-hour lecture, three-hour lab. Prerequisite: SPDI 170 or permission of instructor. Fall, Spring.

SPDI 280 CAD/CAM USING MASTERCAM
Parts will be designed, programmed, and created using CAD and MasterCAM software and CNC mills. CNC machine set up and interface are covered. The class will consist of several projects over the semester combined with lab and lecture time. Two-hour lecture, three-hour lab. Prerequisite: SPDI 180 and SPDI 121 or 221, or permission of instructor. Spring.

SPDI 290 SPECIAL TOPICS
1-4 credits
Study of a selected topic in the Sustainable Product Design and Innovation program. May be repeated as topics change. Prerequisites vary with topics. Fall, Spring.

SPDI 294 COOPERATIVE EDUCATION
1-4 credits
Introductory work-learning experience related to career interests, for which compensation may be received. Positions arranged and by students with sponsorship, approval, and evaluation by full-time faculty. Elective credit only (normally 60 hours/credit) to maximum of 12 credits per degree program. Prerequisites: 24 total credits earned, 2.0 cumulative GPA, and permission of instructor. Graded Pass/Fail. Fall, Spring.

SPDI 298 INDEPENDENT STUDY
1-4 credits
An opportunity for a qualified student to explore work in an area of individual interest, selected and pursued in consultation with a faculty member. Consent is required from the instructor who will supervise the independent study. May be repeated for a total of 4 credits.

SPDI 352 PRODUCT DESIGN III
This course is the third in the product design series. Specific design projects are undertaken, which require an advanced knowledge of computer-aided design/manufacturing. Topics include initial product design, product specifications, prototype fabrication, and evaluation. Two-hour lecture, three-hour lab. Prerequisites: SPDI 252 and SPDI 221, or permission of instructor. Fall.

SPDI 400 MANUFACTURING ENTERPRISE
Organization and implementation of a student-managed industrial enterprise, including a general overview of economic systems and corporate structure. Emphasizes laboratory covering design, production and distribution of marketable consumer products. Two-hour lecture, three-hour lab. Prerequisite: Junior standing or above. Fall.

SPDI 490 ADVANCED SPECIAL TOPICS
1-4 credits
Study of a selected topic in the Sustainable Product Design and Innovation program at an advanced level. May be repeated as topics change. Prerequisites vary with topics. Fall, Spring.

SPDI 494 ADVANCED COOPERATIVE EDUCATION
1-4 credits
Sequential work-learning experience for which compensation may be received. Positions arranged by students with sponsorship, approval, and evaluation by full-time faculty. Elective credit only (normally 60 hours/credit) to maximum of 12 credits per program. Prerequisites: SPDI 294, 2.0 cumulative GPA, declaration of major, and permission of instructor. May be repeated for credit. Graded Pass/Fail. Fall, Spring.

SPDI 495 SEMINAR
1-4 credits
Small-group discussion of problems and issues in Sustainable Product Design and Innovation. May be repeated as topics change. Fall, Spring.

SPDI 498 INDEPENDENT STUDY
1-4 credits
Advanced independent study of various fields of Sustainable Product Design and Innovation through independent reading, writing, laboratory work, or field investigation. Requires a written report. Prerequisite: Permission of instructor. May be repeated for a total of 4 credits. Fall, Spring.
Theatre and Dance

IATAD 100 THEATER: THE ART OF IMAGINATION
We humans have an elemental need for make-believe. This course explores the use of imagination in the creation of theatrical events using hands-on creative projects and traditional lecture/discussion. Topics include historical and global perspectives, acting, designing, directing, and playwriting. Attendance at specific Redfern Arts Center productions is mandatory. Fall, Spring.

IATAD 102 ACTING: IDENTITY IN A DIVERSE SOCIETY
This experiential course explores how acting helps identify and understand the issues and perceptions that formulate personal identity and cultural diversity. Includes play/text analysis, exploration of identity and diversity through acting, and research into the issues and ideas that inform the dramatic point-of-view. Fall, Spring.

IATAD 113 DANCE AS A WAY OF KNOWING
This experiential dance course addresses issues of identity, culture, and ethics through personal movement exploration and analysis of master works from turning points in modern dance history. Includes dance technique, composition, and research methods from the field of performance studies. Fall, Spring.

IATAD 370 PLAYWRITING
The art and craft of the playwright. Students will be involved in the creation of a dialogue text using Dramatic Imagination. Students will study structure and techniques of writing for dramatic forms, primarily theatrical forms. Students will complete writing exercises as well as preliminary drafts and a completed script. Prerequisite: 24 credits in ISP, including ITW 101 and IQL 101. Spring.

TAD 101 ACTING I
A foundation course leading to a greater understanding and appreciation of the actor’s art and craft. Emphasis is on the development of the actor’s tools, and identification and exploration of given circumstances and intentions. Fall.

TAD 112 MODERN DANCE/COMPOSITION I
An introduction to modern dance, designed to enable students to experientially understand and appreciate this art form, its discipline and its creativity. Includes basic modern dance technique and movement principles, modern dance history, and fundamentals of dance composition. Fall, Spring.

TAD 121 INTRODUCTION TO TECHNICAL THEATRE
2 credits
Practical training in the following areas of technical theatre: tools and materials, scenic construction, lighting, stage facilities, and safety. Corequisite: TAD 123. Fall.

TAD 123 THEATRE LABORATORY I
1 credit
Production training in theatre. Students are assigned to either the costume shop or the scene shop. Projects are assigned according to theatre department production needs. Projects may cover such areas as: scenic construction, painting, lighting, rigging, sound, props, costume construction, and accessories. Corequisite: TAD 121. Fall.

TAD 124 THEATRE LABORATORY II
1 credit
Production training in theatre. Students are assigned to either the costume shop or the scene shop. Projects are assigned according to theatre department production needs. Projects may cover such areas as: scenic construction, painting, lighting, rigging, sound, props, costume construction, and accessories. Prerequisite: TAD 123, may be repeated for credit as topic changes. Spring.

TAD 162 DESIGN FOR THE PERFORMING ARTS
The elements of design used in the creation of a theatrical event. Exploration of the fundamental design elements and practical application of design theory through visual projects. Fall, Spring.

TAD 205 THEATRE MOVEMENT
Theatre Movement is designed to increase an actor’s physical, emotional, and spatial awareness. Emphasis is placed on understanding and developing movement potential as an individual and in physical interactions with others. Spring.

TAD 206 ACTING II
Building on the skills learned in Acting I, this course focuses on script analysis and its application to scene study. Through scene work, students explore the external stimuli that lead to specific acting choices. Auditioning for all KSC theatre productions required. Prerequisite: TAD 101, IATAD 102, or permission of instructor. Fall, Spring.
TAD 212 MODERN DANCE/COMPOSITION II
A continuation in the study and experience of modern dance as an art form through the development of dance technique and further exploration of movement, composition, and performance principles. Includes modern dance technique, partnering and contact improvisation, and development of the choreographic craft. May be repeated once for credit. Prerequisite: TAD 112 or IATAD 113, or permission of instructor. Fall, Spring.

TAD 216 JAZZ DANCE
An introductory course in jazz dance with emphasis placed on rhythm manipulation, jazz movement vocabulary, and stylistic contrasts encompassed by jazz. Background in modern dance technique recommended. Fall, Spring.

TAD 217 BALLET/EXPERIENTIAL ANATOMY
A basic course in ballet technique. Emphasis is placed on anatomic and kinesthetic principles, experiential anatomy, and competency in the ballet vocabulary. Prerequisite: TAD 112 and Theatre and Dance major or minor, or by permission of instructor. Spring.

TAD 223 THEATRE TECHNOLOGY WORKSHOP
2 credits
Basic principles and techniques in a specific theatre craft, e.g., rigging, scenic painting, properties, lighting technology, or sound editing. May be repeated for credit as topics change.

TAD 224 THEATRICAL DESIGN STUDIO
2 credits
Basic principles and techniques in a specific design area of theatre, e.g., puppetry, mask making, properties design, makeup, or sound design. May be repeated for credit as topics change.

TAD 227 STAGE MANAGEMENT
Theory and practice of stage management. Students study the operation and organization of both professional and amateur theatrical production from concept through closing. Course work culminates in close management of a Directing Workshop production. Prerequisite: TAD 121. Spring, odd years.

TAD 231 THEATRE HISTORY AND LITERATURE I
The history and literature of theatre are examined from Ancient Greece through the 18th century. We will explore great dramatic works and learn the contexts in which they were written through discussion, readings, videotapes, and lectures. Prerequisite: ITW 101. Fall.

TAD 232 THEATRE HISTORY AND LITERATURE II
The history and literature of theatre are examined from the 19th century to the present. We will explore great dramatic works and learn the contexts in which they were written through discussion, readings, videotapes, and lectures. Prerequisite: TAD 231. Spring.

TAD 235 DANCE HISTORY
The course examines choreography as a creative and evolutionary process. Through lectures, media presentations, readings, and discussions, the course surveys the history of western theatrical dance and explores the interrelationship of dance and world events. Fall.

TAD 265 RENDERING FOR THE THEATRE
A study of the major styles of architecture and clothing through the ages while exploring various media for rendering, including pencil, charcoal, pen and ink, watercolor, acrylic, and watercolor. Fall, odd years.

TAD 282 VOICE AND DICTION
Vocal production, use of the International Phonetic Alphabet for sound identification and articulation, and work in techniques of relaxation, alignment, breath and sound connection and centering, and resonation. Active participation required in warm-ups, articulation drills, memorization for presentations. Fall.

TAD 290 SPECIAL TOPICS
An exploration of areas not covered by the regular curriculum. Content and prerequisites depend on available faculty and resident artists. May be repeated for credit.

TAD 301 ACTING III
Advanced training in actor preparation and building a character, with emphasis on establishing character relationships. Auditioning for all KSC theatre productions required. Prerequisite: TAD 206 or permission of instructor. Fall.
TAD 303 DIRECTING
An introduction to techniques for director's play analysis and director/actor, as well as director/designer communication. Emphasis will be on visualizing and re-imagining the play from the director's perspective and translating interpretive ideas into production. Culminates in a hands-on directing project for the ten-minute play festival. Prerequisites: TAD 101, TAD 206, TAD 231, and TAD 232. Fall, even years.

TAD 311 MODERN DANCE/COMPOSITION III
Intensive work in movement principles, improvisation, and progressively more advanced dance technique. Creativity in movement invention and composition are emphasized and historically linked to the post-modern dance era. Includes performance critiques and text readings. May be repeated once for credit. Prerequisite: TAD 112 or IATAD 113, TAD 212, or permission of instructor. Fall.

TAD 312 MODERN DANCE/COMPOSITION IV
Intensive work in movement principles, body awareness, and progressively more advanced dance technique emphasizing recent developments in choreography and performance. May be repeated once for credit. Prerequisite: TAD 311 or permission of instructor. Spring.

TAD 318 RESEARCH IN CHOREOGRAPHY
Exploration of the craft of choreography through the application of compositional theories in dance. Studio exploration and research culminate in an end of term performance. Prerequisites: Two from TAD 212, TAD 216, TAD 235, TAD 311, TAD 312, or permission of instructor and concurrent enrollment in TAD 112, TAD 212, TAD 216, TAD 311, or TAD 411. May be repeated once for credit. Fall.

TAD 361 SCENIC DESIGN
How a designer analyzes a script and works with the director to create a design. Students study techniques of rendering, sketching, model building, and drafting. Prerequisites: TAD 121, TAD 231, TAD 162, and TAD 265, or permission of instructor. Spring, even years.

TAD 362 LIGHTING DESIGN
The lighting designer's role in the creation of a stage design. Lighting principles, instrumentation, color theory, script analysis, and light plots. Prerequisites: TAD 121, TAD 231, and TAD 162, or permission of instructor. Spring, odd years.

TAD 363 COSTUME DESIGN
The role of the costume designer in the theatrical process. Students study basic costume history, principles of design, script analysis and rendering techniques. Prerequisites: TAD 121, TAD 231, and TAD 162, or permission of instructor. Spring, odd years.

TAD 397 PRODUCTION PROCESS
1–4 credits
With the approval of the faculty member concerned, a student may earn credit for fulfilling a position of responsibility on a faculty-directed production. May be repeated for credit. Fall, Spring.

TAD 398 PERFORMANCE PROCESS
1–4 credits
This lecture/laboratory course in theatre or dance examines the performance process from audition through conceptual analysis, rehearsal, and ensemble development to the critical stage experience. May be repeated for credit for a maximum of 6 credits. Prerequisite: Permission of instructor. Fall, Spring.

TAD 411 MODERN DANCE/COMPOSITION V
Advanced work in modern dance technique and performance. Primary focus is to clarify and articulate technical ability as a means to help illustrate choreographic intention. Composition work emphasizes the use of choreographic collaboration reflecting themes in cultural issues, music analysis, or topics of contemporary concern. May be repeated once for credit. Prerequisites: TAD 311-312 or permission of instructor. Fall.

TAD 412 MODERN DANCE/COMPOSITION VI
This capstone course continues advanced work in modern dance through the investigation of the technique/performance interrelationship. Research and choreography explore original creative voice in preparation for professional dance and/or graduate school. May be repeated once for credit. Prerequisites: TAD 318 and 411 or permission of instructor. Spring.

TAD 490 ADVANCED SPECIAL TOPICS
An exploration of areas not covered by the regular curriculum. Content and prerequisites depend on available faculty and resident artists. May be repeated for credit.
TAD 491 ADVANCED ACTING/DIRECTING PERFORMANCE PROCESS
Using the one-act play format, actors and directors practice and hone skills already learned as they collaborate, analyze, conceptualize, rehearse, and perform one-act plays, chosen because they challenge and expand their capabilities and further define their identities as theatre artists. Course may be repeated once for elective credit. Prerequisite: TAD 301. Spring, odd years.

TAD 493 DESIGN/TECH PORTFOLIO
Students will learn the effective and professional techniques on how to showcase their work. The course will cover résumé, curriculum vitae, cover letter, presentation techniques, and digital portfolio. Students will complete a design or technical project to complement their body of work. Junior or senior standing. Spring, odd years.

TAD 495 MODERN DANCE SEMINAR
The course examines the evolution of artistic ideas in contemporary dance. Through the analysis of the modern dance art form and the examination of 20th-century choreographers and dancers, students will contextualize the work of 21st-century dance artists. Prerequisite: TAD 235 or permission of instructor. Fall, odd years.

TAD 496 DANCE EDUCATION INTERNSHIP I
2 credits
A practicum in developing curriculum and teaching dance in public and non-traditional school programs. The course content addresses standards and assessment in the New Hampshire Frameworks for Arts Curriculum. Prerequisite: Permission of instructor. Fall.

TAD 497 DANCE EDUCATION INTERNSHIP II
2 credits
A continued practicum in developing curriculum and teaching dance in public and nontraditional school programs. The course content addresses standards and assessment in the New Hampshire Frameworks for Arts Curriculum. Prerequisite: TAD 496. Spring.

TAD 498 INDEPENDENT STUDY
1-4 credits
Intensive study of an issue, problem, or topic related to theatre arts or dance. May be repeated. Prerequisites: Junior standing and permission of instructor. Fall, Spring.

Women’s and Gender Studies

IIWGS 101 INTRODUCTION TO WOMEN’S AND GENDER STUDIES
This course is designed to introduce students to the key issues, questions, and debates in the interdisciplinary field of Women’s and Gender Studies. Central to the course will be a focus on the social construction of identity and the myriad ways in which gender, race, class, sexuality, and nationality work to constitute people’s experiences. Fall, Spring.

IIWGS 210 ABORTION
An interdisciplinary examination of the issue of abortion in the United States. Can one be a feminist and oppose legal access to abortion? Students will explore the legal, theological, and social history informing the abortion debate, with an aim to appreciate why resistance to reproductive choice exists and persists. Prerequisites: ITW 101 and IQL 101. Spring, alternate years.

IIWGS 220 STARVED OR STUFFED
When the body is read as text, eating disorders are manifestations of cultural ideas that communicate to the self and the masses. This interdisciplinary course examines eating disorders through the optic of feminism, taking into consideration feminist discourse, theories of consumption and subjectivity formation, psychology, sociology, and literary analyses. Prerequisites: ITW 101 and IQL 101. Fall.

IIWGS 230 SPIRITUALITY AND SEXUALITY
An interdisciplinary exploration of spirituality and sexuality, drawing from history, religion, as well as women’s and gender studies. Key questions: How are institutions of religion socially constructed? How do they affect women’s ways of knowing, women’s spirituality, and women’s sexuality? What are new ways of representing spirituality as social inquiry? Prerequisites: ITW 101 and IQL 101. Fall, alternate years.

IIWGS 240 GENDER AND MEDIA
This course will employ an interdisciplinary approach to studying representations of gender (as well as class, race, and sexuality) in the mass media and popular culture. Using scholarship from cultural studies, communication, sociology, and other disciplines, we explore dominant ideologies and how they are perpetuated (or not) in media products. Prerequisites: ITW 101 and IQL 101. Spring.
IIWGS 254 WOMEN IN THE HOLOCAUST
How did women's Holocaust experiences differ from those of men? An interdisciplinary exploration of gender in Central European families, in ghettos, camps, and resistance, this course examines connections between the Holocaust and present day manifestations of anti-Semitism, sexism, homophobia, and nationalism. Readings are drawn from history, women's studies, and Holocaust memoirs. Cross-listed as IIHGS 254. Occasionally.

IIWS 290 TOPICS IN WOMEN’S AND GENDER STUDIES
Interdisciplinary study of a specific issue or topic within the field of Women's and Gender Studies. Students will develop skills in critical reading and critical thinking. May be repeated for credit as topics change. Prerequisites: ITW 101 and IQL 101. Offered occasionally.

IIWGS 300 WOMEN OF COLOR
This interdisciplinary course explores the experiences of women of color using feminist scholarship from literature, sociology, history, and women's studies. Analyzes the history of social movements that have influenced the construction of the category "women of color" and articulates a critique of the category of "whiteness." Prerequisites: 24 credits in ISP, including ITW 101 and IQL 101. Occasionally.

WGS 201 FEMINIST PRACTICES
This course considers the theoretical and historical contexts of how social change happens from a feminist perspective. Students will engage in an experiential learning project that requires them to make connections between feminist theory, the history of liberatory social movements, and the need for engaged citizenship. Prerequisite: IIWGS 101. Fall, Spring.

WGS 298 INDEPENDENT STUDY
1-4 credits
An opportunity for a qualified student to develop and complete an innovative project under the supervision of a Women's and Gender Studies faculty member on a topic not currently offered. Proposals must be submitted to the Women's and Gender Studies Department by the student for review before the start of the course.

WGS 301 FEMINIST THEORIES
This course investigates and interrogates key theoretical debates within the feminist movement and women's and gender studies. Central to this course is the idea that understanding significant categories such as race, class, gender, sexuality, and nationality is an interpretive, theoretical, and political act. Prerequisite: WGS 201. Fall, Spring.

WGS 302 QUEER THEORIES
Queer studies provide a range of theoretical approaches that challenge fixed, essentialist identities, drawing attention to incoherencies in the allegedly stable sex/gender system. Placing a variety of queer theories in their historical context, this interdisciplinary course will provide a survey of contemporary arguments and critical terms used in the field. Prerequisite: WGS 201. Spring.

WGS 303 BORDERLANDS: LATINA FEMINIST THEORIES
This class is an interdisciplinary examination of Latina feminist theories, drawing from history, epistemology, third-world feminisms, creative nonfiction literature, and art performances. The course is organized around the following issues: colonization, immigration, globalization, critical race theory, sexism, and Latina image representation. Prerequisites: IIWS 101. Offered every other fall.

WGS 490 ADVANCE TOPICS IN WOMEN’S AND GENDER STUDIES
Advanced interdisciplinary study of theoretical perspectives within Women's and Gender Studies. Students will develop skills in critical reading and critical thinking. May be repeated for credit as topics change. Prerequisites: One 300-level WGS course or permission of instructor.

WGS 495 CAPSTONE IN WOMEN’S AND GENDER STUDIES
Students will explore the relationship between knowledge and power as they research the question, What is activism? Students will read both historical and theoretical accounts of activism, which will inform their work as they design and implement a feminist and/or queer social change project and write a research paper. Prerequisite: WGS 301, WGS 302, or WGS 303, or permission of instructor. Spring.

WGS 498 ADVANCED INDEPENDENT STUDY
1-4 credits
Independent reading and writing on an approved topic under direction of a Women's and Gender Studies faculty member. Prerequisite: Permission of instructor.