



# **UNIVERSITY OF NORTHERN COLORADO**

**UNDERGRADUATE AND GRADUATE CATALOG**

**GREELEY, COLORADO**

**EFFECTIVE DATES**

**AUGUST 15, 2003**

**TO**

**AUGUST 14, 2004**

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# CALENDAR

FALL	2003	2004
Residence Halls Open	Aug. 21, Thurs	Aug. 19, Thurs
Classes Begin	Aug. 25, Mon	Aug. 23, Mon
Labor Day Holiday (UNC Closed)	<b>Sept. 1, Mon</b>	<b>Sept. 6, Mon</b>
Thanksgiving Holiday (UNC Closed)	<b>Nov. 27-28 Thurs, Fri</b>	<b>Nov. 25-26 Thurs, Fri</b>
Final Exam Week	Dec. 8-12 Mon-Fri	Dec. 6-10, Mon-Fri
Commencement Graduate	Dec. 12, Fri (7:00 pm)	Dec. 10, Fri (7:00 pm)
Commencement Undergraduate	Dec. 13, Sat (10:00 am)	Dec. 11, Sat (10:00 am)
Christmas Holiday (UNC Closed)	<b>Dec. 24 - 26 Wed-Fri</b>	TBD
New Years Eve (Open) New Years Day (Closed)	<b>Jan. 1 Thurs</b>	TBD

SPRING	2004	2005
Residence Halls Open	Jan. 9, Fri	Jan. 7, Fri
Classes Begin	Jan. 12, Mon	Jan. 10, Mon
Martin Luther King Day (UNC Closed)	<b>Jan. 19, Mon</b>	<b>Jan. 17, Mon</b>
Spring Break (No Classes - Open)	Mar. 15-19 Mon-Fri	Mar. 14-18 Mon-Fri
Final Exam Week	May 3-7 Mon-Fri	May 2-6 Mon-Fri
Commencement, Graduate	May 7, Fri (7:00 pm)	May 6, Fri (7:00 pm)
Commencement, Undergraduate	May 8, Sat (10:00 am)	May 7, Sat (10:00 am)

SUMMER	2003	2004	2005
Residence Halls Open	May 18 Sun	May 16 Sun	May 15 Sun
12-wk Session Begins	May 19 Mon	May 17 Mon	May 16 Mon
1st 6-wk Session Begins	May 19 Mon	May 17 Mon	May 16 Mon
Memorial Day Holiday (UNC Closed)	<b>May 26 Mon</b>	<b>May 31 Mon</b>	<b>May 30 Mon</b>
8-wk Session Begins	June 9 Mon	June 7 Mon	June 6 Mon
1st 6-wk Session Ends	June 27 Fri	June 25 Fri	June 24 Fri
2nd 6-wk Session Begins	June 30 Mon	June 28 Mon	June 27 Mon
July 4th Holiday (UNC Closed)	<b>July 4 Fri</b>	<b>July 2 or 5 TBA</b>	<b>July 4 Mon</b>
8-wk Session Ends	Aug. 1 Fri	July 30 Fri	July 29 Fri
2nd 6-wk Session Ends	Aug. 8 Fri	Aug. 6 Fri	Aug. 5 Fri
12-wk Session Ends	Aug. 8 Fri	Aug. 6 Fri	Aug. 5 Fri
Commencement Graduate	Aug. 8, Fri (7:00 pm)	Aug. 6, Fri (7:00 pm)	Aug. 5, Fri (7:00 pm)

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implemented without prior notice, without obligation and, unless specified otherwise, are effective when made.

The calendar is a projection of the course of events for the 2003-2004 academic years and represents the best judgment of the administration and staff. It is subject to change due to forces beyond the control of University employees or as deemed necessary by the University staff in order to fulfill educational objectives.

The faculty and staff of the University of Northern Colorado reserve the right to terminate or modify program requirements, content, and the sequence of the program offerings from semester to semester for educational, operational or financial reasons that are deemed sufficient to warrant such actions.

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# PRESIDENT'S WELCOME

## WELCOME TO THE UNIVERSITY OF NORTHERN COLORADO

We invite you to peruse the Catalog and discover the wealth of programs offered. The requirements and program options are not the core of our University – its people are. The University faculty, staff and administration are committed to your success. Our faculty are active professors, scholars and researchers who bring to their classrooms the latest information and practices from their field. Faculty-student interaction is the hallmark of a UNC education. You will find faculty who are dedicated to teaching excellence. Pursuing a university education will be one of the most important and rewarding endeavors of your life. Whatever your chosen field, your efforts will be rewarded, both during your time at UNC and over the rest of your life. We invite you to join our community and allow us to assist you with this exciting journey.



*President Kay Norton*

## DESCRIPTION OF THE UNIVERSITY

The University of Northern Colorado is a multipurpose institution offering a wide range of graduate and undergraduate degree programs in five academic colleges: Arts and Sciences, Business Administration, Education, Health and Human Sciences, and Performing and Visual Arts.

The University offers more than 2,000 academic courses annually and enrolls approximately 11,000 students.

UNC is located in Greeley, Colorado, about one hour north of Denver and one hour east of Rocky Mountain National Park. Greeley is a city of 76,930.

The 236-acre UNC campus has two distinct, adjacent parts. Both have residence halls and classroom buildings. The central campus features tree-lined, older buildings while the west campus is distinguished by modern buildings.

## A SHORT HISTORY

On April 1, 1889, the governor of Colorado signed the bill creating the State Normal School to train qualified teachers for the state's public schools. Greeley citizens raised the necessary money for the first building, and the cornerstone was laid on June 13, 1890. The school opened its doors on October 6 with a staff of four instructors and 96 students. Certificates were granted upon the completion of a two-year course.

In 1911 the school's name was changed to Colorado State Teachers College by the state legislature. The college was then offering four years of undergraduate work and granting the Bachelor of Arts degree.

In 1935 the name of Colorado State College of Education was adopted to recognize the fully developed graduate program, which was started in 1913. Early in 1957 the state legislature approved shortening the name to Colorado State College. Again, to recognize the further growth of programs and offerings, in 1970 the name was changed once more, this time to the University of Northern Colorado.

## ACCREDITATION AND AFFILIATION

Since 1916, the University has been fully accredited by the North Central Association of Colleges and Schools.

Various academic programs currently have special accreditation by the following:

- American Assembly of Collegiate Schools of Business
- National University Continuing Education Association
- American Chemical Society
- American Psychological Association
- American Speech-Language-Hearing Association
- Colorado Department of Education
- Colorado State Board of Accountancy
- Colorado State Board of Nursing
- Commission on Allied Health Education and Accreditation for Athletic Training
- Council for Accreditation of Counseling and Related Educational Programs
- Council for Education of the Deaf
- Council on Education for Public Health
- Council on Rehabilitation Education
- National Association of Schools of Music
- National Association of School Psychologists
- National Association for Sport and Physical Education/ North American Society for Sport Management
- National Council for Accreditation of Teacher Education
- The American Dietetic Association
- The National League for Nursing
- Society for Public Health Education.

The institution currently holds membership in the American Association of State Colleges and Universities, American Council on Education, American Association of Colleges for Teacher Education, Teacher Education Council of State Colleges and Universities, the Council of Graduate Schools in the United States, Project 30 Alliance, the Western Association of Graduate Schools, the American Assembly of Collegiate Schools of Business, Colorado Thirty Group and other educational organizations.

# MISSION, UNIVERSITY OF NORTHERN COLORADO

## MISSION STATEMENT

The University of Northern Colorado shall be a comprehensive baccalaureate and specialized graduate research university with selective admission standards. The University shall offer a comprehensive array of baccalaureate programs and master's and doctoral degrees, primarily in the field of education. The University of Northern Colorado has statewide authority to offer graduate programs for the preparation of education personnel. The commission shall include in its funding recommendations a level of general fund support for these programs.

## VISION STATEMENT

The University of Northern Colorado strives to be a leading student-centered university that promotes effective teaching, lifelong learning, the advancement of knowledge, research, and a commitment to service. Graduates are educated in the liberal arts and professionally prepared to live and contribute effectively in a rapidly changing, technologically advanced society.

**Description.** The University of Northern Colorado is a comprehensive baccalaureate and specialized graduate research university with a continuing commitment to its historical role in the preparation of educators. The University offers a broad range of undergraduate and graduate programs in the arts, sciences, humanities, business, human sciences, and education. The array and quality of UNC programs provides a unique resource to Colorado. All students are required to study in the liberal arts tradition, which prepares them to think and act responsibly in a dynamic, diverse and global society. Multicultural content and interdisciplinary programs enrich academic experiences. University curricula are designed to improve students' competencies in critical thinking, communication, problem solving, leadership, and technological applications.

As a Carnegie Research Intensive Institution, the University of Northern Colorado's graduate programs emphasize advanced scholarship within a discipline and acquisition of professional abilities for career advancement. Graduate education includes a variety of master's degrees that complement the University's mission and purposes and a select number of doctoral programs that emphasize scholarship and research, clinical practice, pedagogy, or performance.

The University provides a full range of student support services and recreational opportunities. The James A. Michener Library and the Music Library provide information resources through sophisticated technology and established collections.

## VALUES, PURPOSES AND GOALS

The University provides services that support equal learning opportunities for all students. Learning occurs in an environment characterized by small classes taught by full-time faculty. UNC faculty, at both the graduate and undergraduate levels, subscribe to a teacher/scholar model in which excellence in instruction is complemented by activities in scholarship and service. Support for the continuous improvement of teaching, learning, scholarship, and service is provided through University programs, policies and practices.

**Values.** The University of Northern Colorado believes that its distinctive service to society can only be offered in a student-centered atmosphere of integrity that is grounded in honesty, trust, fairness, respect, and responsibility. For this reason, the University is committed to promoting an environment in which:

- academic integrity is valued and expected;
- excellence is sought and rewarded;
- teaching and learning flourish;
- diversity of thought and culture is respected;
- intellectual freedom is preserved; and,
- equal opportunity is afforded.

**Purposes and Goals.** The University of Northern Colorado is committed to the following purposes and goals:

*To prepare a well educated citizenry whose understanding of issues enables them to be contributing members of a rapidly changing, technologically advanced, diverse society.*

*To prepare undergraduate students.*

1. Students will acquire a solid foundation of general knowledge in the liberal arts and sciences.
2. Students will develop a variety of competencies in critical thinking, communication, problem-solving, and current technologies.
3. Students will develop an appreciation for diversity, citizenship, artistic expression and a positive, healthy lifestyle through educational, cultural, social, and recreational programs.
4. Students will develop a life-long commitment to scholarship and service.
5. Students will acquire depth of knowledge in a specialized scholarly discipline.
6. Students will acquire the knowledge and skills that prepare them for careers and/or advanced scholarly work.
7. Students will master methods of inquiry to acquire deeper understanding of their discipline.
8. Students will demonstrate knowledge of professional standards and practice.

*To prepare graduate students in specialized fields of study.*

1. Students will acquire an appreciation for and ability to work in an increasingly diverse population.
2. Students will engage in scholarly activity, research, and creative endeavors to advance the knowledge and practices of the discipline.
3. Students will acquire advanced knowledge and skills consistent with the professional preparation and standards of the discipline.
4. Students will develop a commitment to scholarship and life-long learning.
5. Students will develop those competencies essential to assuming leadership positions in their professional fields.



# COLLEGE OF ARTS AND SCIENCES



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## OFFICE OF THE DEAN

**Location:** Candelaria 0215    **Telephone:** 970.351.2707  
**Dean:** Sandra M. Flake, Ph.D.  
**Associate Deans:** Richard G. Trahan, Ph.D.; Curt M. Peterson, Ph.D. (Interim)

## INTRODUCTION

The College of Arts and Sciences provides the foundation for a liberal arts education through studies intended to impart general knowledge and to develop the intellectual capacities of reason and judgment. The broad areas included are the humanities, natural sciences and social sciences.

General Education courses, predominantly offered by disciplines in this college, give UNC graduates a background in the liberal arts and sciences to better prepare them for living in our complex society.

The College of Arts and Sciences at UNC is committed to serious scholarly work, superior instruction and research. The knowledge, understanding and perceptions that lead to critical and independent thought are fostered by the faculty and administration of the college, and these qualities serve to enrich the lives and careers of its graduates.

Arts and Sciences majors are broadly educated and well prepared to enter a wide variety of occupations. Many areas prepare students specifically for positions in industry and government. Pre-professional studies in law, medicine, dentistry, engineering and education are all based on a liberal arts foundation and many businesses today prefer their employees to have a liberal arts background to support on-the-job training. As Americans change jobs more and more frequently, a broad liberal arts background makes these changes possible and successful.

The college maintains a number of specialized facilities used by many departments. They include: the foreign language lab, a television studio, the English writing lab, the animal care facility, the greenhouse, an herbarium, a microscopy imaging suite, a natural history museum, computer facilities in Ross and Candelaria Halls and Michener Library, a computerized news-writing lab, the math lab and the psychology lab.

Performance based standards for degree programs in the College of Arts and Sciences are available online at [http://asweb.unco.edu/prog\\_rev.htm](http://asweb.unco.edu/prog_rev.htm).

## ARTS AND SCIENCES ADVISING CENTER AND SUPPLEMENTAL INSTRUCTION

**Location:** Candelaria 1281    **Telephone:** 970.351.2751

**Director:** Phyllis S. Endicott

**Assistant Director:** Teresa Sellmer

The Arts and Sciences Advising Center provides information and support for students, faculty and staff interested in Arts and Sciences majors and minors, general education programs and teacher education programs, as well as information on University services, policies and procedures. In addition this office and the Arts and Sciences Learning Communities Office coordinate several learning communities for entering students. These programs are designed to help new students with their transition into the university community by connecting them with faculty, peers, academic areas, and/or pre-professional fields. Most Arts and Sciences learning communities involve cohorts of students in general education coursework, new student seminars (ID 108), and the preparation of four-year graduation plans. These efforts combine with other Arts and Sciences Academic initiatives to support student satisfaction, retention and success.

## DEPARTMENTS AND PROGRAMS

### AFRICANA STUDIES

**Location:** Candelaria 0140    **Telephone:** 970.351.2685

**Chair:** George H. Junne, Jr., Ph.D.

**Professors:** Hermon George, Jr., Ph.D.; Anthonia C. Kalu, Ph.D.

**Associate Professor:** George H. Junne, Jr., Ph.D.

The Department of Africana Studies offers an interdisciplinary curriculum that promotes the study of the history, culture, philosophy, economy and political experience of people of African descent, especially those living in the United States, on the African continent itself, in Latin America and in the Caribbean. The curriculum is based on the assumption that there exists a substantive, intrinsically valuable body of knowledge that expresses the black experience.

As an academic discipline, the Africana Studies curriculum is divided into two foci: social and behavioral studies and cultural studies. Coursework in the social and behavioral studies focus includes such topics as history of African descended people, nationalism, cultural heritage, the effects of racism and the social scientific study of African American communities. The cultural studies focus emphasizes literature by authors of African descent, music, religion, identity and the family.

[Africana Studies Minor on page 203](#)

[Africana Studies, B.A. on page 149](#)

#### Africana Studies (B.A.) Requirements

Electives are chosen with the approval of the chair.

AFS 395, Aspects of the African American Experience, is a variable subtitle course, which may be taken more than once, each time with materials applicable to a different program focus. Students may not repeat the same subtitle course in a program focus for credit.

Majors in Africana Studies must choose at least one elective at the 300-level and one elective at the 400-level. AFS 399 must always be taken at 3 semester hours.

### ANTHROPOLOGY

**Location:** Candelaria 0190    **Telephone:** 970.351.2021

**Chair:** James A. Wanner, Ph.D.

**Professors:** Robert Brunswig, Ph.D.; Sally McBeth, Ph.D.; James A. Wanner, Ph.D.

**Lecturer:** Deeksha Nagar, Ph.D.

Anthropology is the study of the nature of humans and of human relations, both within one's own society and in other societies. It helps one to think internationally and interculturally. It teaches one to evaluate current developments and trends in a global perspective.

The discipline of anthropology is subdivided into cultural/social anthropology, archaeology, physical anthropology and anthropological linguistics. Cultural/social anthropology, archaeology and physical anthropology are stressed at UNC.

Laboratories in physical anthropology, archaeology, ethnology and media are utilized in the instructional program. Ethnology and archaeology courses include all areas of the world, but focus on peoples of the New World. Social processes such as culture change, acquiring culture, ethnicity, urban anthropology, the biological basis for culture and society and current problems are stressed.

Students in Anthropology will gain the following skills in the specific subfields:

- Cultural Anthropology — Cultural awareness, participant observation, interviewing, listening, and ethnographic description, interpretation, and comparison in the development of ethnographic assessments.
- Physical Anthropology — Techniques of paleoanthropology, microevolutionary analysis, forensic anthropology, and statistical methods in applied settings.
- Archaeology — Field and laboratory techniques, interpreting site and survey data, report writing, interdisciplinary approaches, integration of subfields in cultural resource management and heritage preservation.
- Multicultural Studies — Multicultural awareness, critical thinking, empathy for others, ability to conceive and apply alternative interpretations to the contemporary problems of culturally diverse societies.

[Anthropology Minor on page 203](#)

[Anthropology/Multi-cultural Anthropology Minor on page 203](#)

[Interdisciplinary Studies, B.A. on page 171](#)

[Anthropology Emphasis](#)

### BIOLOGICAL SCIENCES

**Location:** Ross Hall 2480    **Telephone:** 970.351.2921

**Interim Chair:** Catherine S. Gardiner, Ph.D.

**Professors:** Warren R. Buss, Ph.D.; Jennifer A. Clarke, Ph.D.; Catherine S. Gardiner, Ph.D.; Margaret E. Heimbrook, Ph.D.; Stephen P. Mackessy, Ph.D.; John C. Moore, Ph.D.; Charles E. Olmsted, III, Ph.D.; Curt M. Peterson, Ph.D.

**Associate Professors:** Rick Adams, Ph.D.; Gerald W. Saunders, Ph.D.

**Assistant Professors:** Marilyn Banta, Ph.D.; Gregory K. DeKrey, Ph.D.; Teresa Higgins, Ph.D.; Richard Robert Jurin, Ph.D.; Neil Snow, Ph.D.

**Lecturers:** Kathleen S. Jones, Ph.D.; Gregory Mullen, B.A.

The biological sciences study the diverse forms of life ranging from microorganisms and mammals to fungi and vascular plants. Study of these organisms includes how they interact with each other and with their environment, their strategies for obtaining energy and maintaining themselves, and the impact they have on our society.

All undergraduate programs require a core of common courses with a varied emphasis on development, structure and function, heredity and diversity among organisms. These emphases provide students opportunity for preparation in organismal biology, biomedical sciences, cellular and molecular biology and secondary teaching in biology. Graduate programs are designed to meet the unique needs of students, enhancing their understanding of the biological sciences for teaching or for research.

Students are encouraged to participate on independent research projects or internships with both faculty members and agencies outside the University to gain experience not available in the classroom.



Animal maintenance facilities, a microscopy imaging suite, a museum, herbarium and greenhouses are available for laboratory support and research. Field studies are encouraged, since there is ready access to both prairie and mountain habitats. Expertise and research interests of the faculty include taxonomy of plants, animals and microorganisms; genetics; molecular biology; animal behavior; reproductive biology; plant and animal ecology; community and ecosystem structure; mammalogy; ornithology; plant and mammalian physiology; anatomy; and biology and science education.

**Biological Sciences Minor on page 204**

**Biology Concentration on page 174**

**Biological Sciences, B.S. on page 150**

**Biomedical Sciences Emphasis**

**Cell and Molecular Biology Emphasis**

**Organismal Biology Emphasis**

### **Biological Sciences (B.S.) Requirements**

The State of Colorado has mandated that institutions of higher education assess student outcomes resulting from their college education. The Department of Biological Sciences requires that all undergraduate students entering under this Catalog meet the following conditions in addition to meeting the general graduation requirements of the University:

- In the senior year of study all undergraduates will take the Educational Testing Service's nationally standardized exam in Biology.
- All departmental majors are required to have a minimum of a 2.0 GPA in all BIO prefix courses taken to meet their major requirements. Students receiving "D" or "F" grades in BIO courses taken to meet their major requirements must repeat the courses or take suitable alternate courses approved by their major advisor.

**Biological Sciences, M.S. on page 123**

**Non-Thesis Emphasis**

**Thesis Emphasis**

### **Biological Sciences (M.S.) Requirements**

Students should have completed a minimum of one year of biological science and one year of chemistry before admission to the program. In addition to the application form and transcripts that are sent to the Graduate School, applicants must also include the following:

- a letter of intent including research/teaching interests and goals;
- three letters of recommendation;
- GRE scores and biology subject scores.

Results of the thesis problem (Thesis Emphasis) or graduate research project (Non-Thesis Emphasis) must be presented orally to the biological sciences faculty during the last semester prior to graduation.

The student must meet with a graduate advisor and graduate committee during the first semester of the program to determine a course of study. Electives must be selected to insure background and experience in the fundamental areas of biological sciences.

Students must complete a minimum of 50 semester hours in biological science of combined undergraduate and graduate courses.

**Biological Education, Ph.D. on page 96**

### **Biological Education (Ph.D.) Requirements**

Students must have completed 30 semester hours in the biological sciences and one year of chemistry and college algebra. A master's content thesis may be required for students entering the program with a master's degree. This requirement may be met as a deficiency within the doctoral program. Students entering the program with only a baccalaureate degree will be required to complete a master's thesis equivalent research problem. In addition to the

application form and transcripts that are sent to the Graduate School, applicants must also include:

- a letter of intent including research/teaching interest and goals;
- GRE and biology subject scores.

The student must meet with a graduate advisor and graduate committee no later than the second semester of the program to determine a course of study. Electives must be selected to insure background and experience in the fundamental areas of research, pedagogy and content biology.

SRM 502 and SRM 700 may be waived depending on course background of the student.

To meet the student's professional goals, courses may be selected from graduate courses in other sciences, science education, educational technology, educational management and computer science with the approval of the advisory committee.

Written and oral comprehensive examinations and defense of the dissertation are required.

## **CHEMISTRY/BIOCHEMISTRY**

**Location:** Ross Hall 1380      **Telephone:** 970.351.2559

**Chair:** Richard M. Hyslop, Ph.D.

**Professors:** Clark L. Fields, Ph.D.; Richard M. Hyslop, Ph.D.; Loretta L. Jones, Ph.D.; Marcus K. Meilahn, Ph.D.; David L. Pringle, Ph.D.; James O. Schreck, Ph.D.; Richard W. Schwenz, Ph.D.

**Associate Professor:** Aichun Dong, Ph.D.

**Assistant Professor:** Jerry Suits, Ph.D.

**Lecturer:** Kimberly A. Operman Pacheco, Ph.D.

The goal of the Department of Chemistry is to provide a high-quality education in chemistry for several different groups of students:

- Those individuals who wish to become chemists or to pursue professional programs that may build on a strong background in chemistry, such as health-related careers, etc.
- Those individuals whose career choices require a background in chemistry, such as nursing, dietetics and nutrition, biology, etc.
- Those individuals who elect to study chemistry as a part of their General Education program.
- Those students with a background in chemistry who wish to undertake advanced or graduate studies.

The chemistry faculty is committed to the attainment of this goal and has set excellence in instruction as its highest priority. Relatively small classes and dedicated teachers help accomplish this goal. Students and faculty have the opportunity to know each other very well. This facilitates obtaining help on an individual basis when it is needed for coursework and for program planning.

We are proud of the fact that our undergraduate degree has been approved by the American Chemical Society since 1968 and that our recently revised program was accepted.

Graduates who elect to follow the approved program receive certification for this accomplishment.

Although the Chemistry Department is not formally divided, the areas of analytical, biological, inorganic, organic and physical chemistry and chemical education are well represented in the backgrounds of our faculty. This enables us to offer a well-balanced program.

Laboratory facilities are available and the experimental aspects of chemistry are included as an integral part of all chemistry programs. Modern chemical instrumentation is available for student use. Students are taught how to operate these instruments and how to interpret and apply the results. They are encouraged to use as much of this instrumentation as possible in their programs.

Access to microcomputers and to terminals of the large campus computers makes use of computers within chemistry courses possible.

Research opportunities are available to chemistry students in all programs. Students can work with faculty who are involved in research selected from most of the basic areas of chemistry, including chemical education.

At the undergraduate level, students are encouraged to work on independent research problems in their junior and senior years and to present the results of their work in departmental seminars and at the regional meeting of the affiliates of the American Chemical Society and the Colorado-Wyoming Academy of Science.

At the graduate level, most degree programs require research. The results of a graduate student's efforts are reported in a dissertation or thesis and may be presented at meetings and submitted for publication.

**Health Sciences (Pre-Professional Studies)**

**Chemistry/Liberal Arts Minor on page 205**

**Chemistry/Teaching Minor on page 205**

**Chemistry Concentration on page 174**

**Chemistry, B.S. on page 154**

**Biochemistry Emphasis (ACS Certified)**

**Chemistry Emphasis (ACS Certified)**

**Industrial Chemistry Emphasis**

**Secondary Teaching Emphasis (ACS Certified)**

### **Chemistry (B.S.) Requirements**

#### **Assessment**

All students in the program must take an assessment examination before graduation.

#### **B.S./M.S. Degree**

Qualifying students may be eligible for a five-year program resulting in a B.S./M.S. degree. Consult your advisor early in your program for details.

#### **Courses**

Chemistry majors, minors and other well-qualified students are recommended to take CHEM 114 and CHEM 115.

#### **Electives**

It is recommended that students consider electives in public speaking (SPCO 100/SPCO 103) and for those students planning to go to graduate school, a foreign language (GER 100 or GER 101 and GER 102). Additional elective coursework in chemistry, mathematics, statistics and/or physics is desirable as time permits. Graduate level CHEM courses are recommended.

#### **Electives, Other**

Other recommended electives are MATH 221, MATH 335, STAT 150, PHYS 321 and PHYS 343.

#### **Grades**

Students majoring in chemistry must earn a grade of "C" or better in all courses having a CHEM and CHED prefix which count toward the major.

#### **Honors Program**

Students wishing to participate in the Honor's Program should consult their advisors about general education selections and other requirements.

#### **Research**

Juniors and seniors are expected to participate in the Department's undergraduate research program.

##### **Pre-Health Emphasis**

**Option A:** Pre-Medical, Pre-Dental, Pre-Optometry, Pre-Veterinary, Pre-Podiatry and Pre-Pharmacy

**Option B:** Pre-Medical Technology

**Notes:** Students completing biology courses and the elective will be eligible for a biology minor.

Prior to enrolling in MTEC courses, students must complete all other required courses, maintain a minimum 2.7 GPA and be admitted to an ASCP accredited hospital program.

**Chemistry, M.S. on page 124**

### **Chemistry (M.S.) Requirements**

#### **Education Emphasis**

**Admission.** In addition to meeting the admission requirements of the Graduate School, the student should have completed chemistry courses comparable to those required in the B.S. degree in chemistry including courses in organic, inorganic and analytical chemistry. If these requirements are not met, a candidate may be admitted to the program on a provisional basis.

**Prerequisites.** Qualifier Examinations — Each student must pass qualifying examinations in three of five areas selected from chemistry content (analytical, biological, inorganic, organic or physical chemistry). Students will have two opportunities to pass each area exam. Qualifier examinations are scheduled during the week preceding the beginning of classes each semester. If an examination is failed, the requirement may be satisfied by completing designated undergraduate coursework in the appropriate subdiscipline with a minimum grade of "B."

#### **Research Emphasis**

**Admission.** In addition to meeting the admission requirements of the Graduate School, the student should have completed a program equivalent to the Bachelor of Science degree in Chemistry (ACS Certified) including courses in organic, inorganic, analytical (quantitative and instrumental analysis) and physical chemistry plus college mathematics through differential and integral calculus and one year of physics.

**Prerequisites.** Students must complete one year of calculus-based, physical chemistry with laboratory if not previously taken. CHEM 551, CHEM 552, CHEM 453 and CHEM 454 may be taken to meet this requirement.

Qualifier Examinations — Each student must pass qualifying examinations in three of five areas selected from chemistry content (analytical, biological, inorganic, organic or physical chemistry). Students will have two opportunities to pass each area exam. Qualifier examinations are scheduled during the week preceding the beginning of classes each semester. If an examination is failed, the requirement may be satisfied by completing designated undergraduate coursework in the appropriate subdiscipline with a minimum grade of "B."

**Chemical Education, Ph.D. on page 97**

### **Chemical Education (Ph.D.) Requirements**

**Admission.** In addition to meeting the admission requirements of the Graduate School, students should have completed requirements of an ACS-certified baccalaureate degree in chemistry.

**General Requirements.** Qualifier Examinations — Each student must pass qualifying examinations in three of five areas selected from chemistry content (analytical, biological, inorganic, organic or physical chemistry). Students will have two opportunities to pass each area exam. Qualifier examinations are scheduled during the week preceding the beginning of classes each semester. If an examination is failed, the requirement may be satisfied by completing designated undergraduate coursework in the appropriate subdiscipline with a minimum grade of "B."

## **CRIMINAL JUSTICE**

**Location:** Candelaria 2200C **Telephone:** TBD

**Chair:** Philip L. Reichel, Ph.D.

**Professor:** Philip L. Reichel, Ph.D.

**Associate Professor:** Colleen Fitzpatrick, Ph.D.

**Assistant Professor:** Robert Dunkley, Ph.D.

**Criminal Justice Minor on page 206**

**Criminal Justice, B.A. on page 158**

### **Criminal Justice (B.A.) Requirements**

All students meeting UNC admission requirements are eligible for admission to the Criminal Justice degree program.

Currently enrolled UNC students changing their major from undeclared or from another major qualify for admission provided they are not on academic probation.

The Criminal Justice degree requires a grade of "C" or better for all courses (regardless of prefix) counting toward the major.

Students must provide a written rationale for their selection of elective courses for content (9 hrs) and skills (9 hrs) and receive written approval from their advisors for the courses. Modifications to the selection are permissible but must be documented. All written rationales and approvals will be held in the student's file in the Criminal Justice department office.

## EARTH SCIENCES

**Location:** Ross Hall 3235      **Telephone:** 970.351.2647

**Chair:** William H. Hoyt, Ph.D.

**Professors:** Richard D. Dietz, Ph.D.; Kenneth D. Hopkins, Ph.D.; William H. Hoyt, Ph.D.; William D. Nesse, Ph.D.

**Associate Professors:** Catherine A. Finley, Ph.D.; Bruce D. Lee, Ph.D.; Jared R. Morrow, Ph.D.

**Assistant Professors:** Gary Huffines, Ph.D.; Michael R. Taber, Ph.D.

**Instructor:** Rita Leafgren, M.A.

The Department of Earth Sciences includes the disciplines of geology, meteorology, oceanography and astronomy. Geology is the study of the earth, its structure, composition and history. Meteorology is the study of the atmosphere and the weather phenomena that affect our daily lives. Oceanography is the study of the physical, chemical and biologic characteristics of the world's oceans. Astronomy is the study of the planets, stars and galaxies that make up our universe.

The undergraduate program in the earth sciences provides preparation for professional careers in geology, meteorology, secondary-level earth science teaching, and the environmental industry. The general earth sciences program is appropriate for individuals seeking a broad background in the sciences. The major allows students to create programs of studies that are tailored to individual interests and goals. The graduate program is designed to meet the needs and interests of individuals who wish to expand their knowledge of the earth sciences as science teachers or in other careers that require a knowledge of the earth sciences.

The Department of Earth Sciences emphasizes the integration of field and laboratory study and students are encouraged to undertake independent research projects and internships.

[Earth Sciences Minor on page 207](#)

[Earth Science Concentration on page 174](#)

[Earth Sciences, B.S. on page 160](#)

### Earth Sciences (B.S.) Requirements

A 2.0 grade point average in the courses taken as part of this major is required for graduation. (Secondary Teaching Emphasis: a 2.5 GPA is required in all major courses.)

[Environmental Earth Sciences Emphasis](#)

[General Earth Sciences Emphasis](#)

The course of study for this major, including both required and elective courses, must total at least 60 credit hours and must be developed in consultation with and be approved by the student's departmental advisor.

At least one half of the credit hours in AST, ESCI, GEOL, MET and OCN courses must be numbered 300 or above. No more than 8 credit hours of AST, ESCI, GEOL, MET and OCN courses numbered below 200 may be counted toward the major.

Science and mathematics courses approved for General Education that are taken as part of this major may also be used to satisfy General Education requirements.

[Geology Emphasis](#)

[Meteorology Emphasis](#)

[Secondary Teaching Emphasis](#)

[Earth Sciences, M.A. on page 127](#)

### Earth Sciences (M.A.) Requirements

A 3.0 GPA in the courses taken as part of this major is required for graduation. A "C" or higher is required for all courses taken as part of the program.

## ECONOMICS

**Location:** Michener L130      **Telephone:** 970.351.2739

**Chair:** Patricia E. Graham, Ph.D.

**Professor:** Marie L. Livingston, Ph.D.

**Associate Professors:** David R. Aske, Ph.D.; Laura S. Connolly, Ph.D.; Patricia E. Graham, Ph.D.; Kelfala M. Kallon, Ph.D.; Bruce A. McDaniel, Ph.D.

**Lecturers:** Rhonda R. Corman, M.A.; Christine E. Marston, Ph.D.

The economics discipline provides a logical, orderly way of describing, analyzing and finding solutions to the numerous diverse economic problems and issues that people and societies face.

Topics in economics have a broad range, including how individuals and businesses make intelligent economic decisions to how governments deal with vital current problems like unemployment, inflation, international trade and economic growth.

As a discipline, economics is attractive to students and commands prestige because it is challenging, has a wide focus and is not static; the discipline contains theory, mathematics, models and scientific method.

The Economics Department takes part, with other College of Arts and Sciences departments and programs, in offering quality liberal arts education, but the department also has close ties with the Monfort College of Business and several interdisciplinary programs, including the International Studies program and Life of the Mind.

The department concentrates on teaching core courses commonly taught at major universities and requires students to complete supporting courses in mathematics, statistics and information systems.

Students graduating with an Economics-Business Economics emphasis will also have demonstrated knowledge of the basic elements of business activity, including accounting, management, and marketing.

Economics major and minor students usually take other social science courses such as political science and sociology, and supporting and elective courses in business, mathematics and computer science.

The department participates in the Honors program and arranges limited internships.

[Economics Minor on page 207](#)

[Economics Concentration on page 174](#)

[Economics, B.A. on page 162](#)

[Economics](#)

[Business Economics Emphasis](#)

### Economics (B.A.) Requirements

Economics majors and minors learn the traditional tools and concepts of economics, theories and quantitative procedures applicable to economics and related disciplines and techniques and methodologies employed by economic practitioners.

To qualify for graduation, economics majors must earn a "C" or better in each economics course taken at UNC.

A maximum of six directed study credits in Economics may be taken.

For purposes of required supporting credits and minimum grades MIND 286 and ENST 335 will be counted as ECON courses.

## ENGLISH

**Location:** Michener L50      **Telephone:** 970.351.2971

**Chair:** Joonok Huh, Ph.D.

**Professors:** Barbara A. Dickinson, Ph.D.; Sandra M. Flake, Ph.D.; Emily B. Golson, Ph.D.; Joonok Huh, Ph.D.; John E. Loftis, III, Ph.D.; Norman L. Percy, Ph.D.; Tomas N. Santos, Ph.D.; Leo Ben Varner, Ph.D.; Sharon R. Wilson, Ph.D.; Lloyd D. Worley, Ph.D.

**Associate Professors:** Thomas A. Bredehoft, Ph.D.; Marcus E. Embry, Ph.D.; Lahcen E. Ezzaher, Ph.D.; Tracey A. Sedinger, Ph.D.

**Assistant Professors:** Mark Berrettini, Ph.D.; Julie Garbus, Ph.D.; Rosemary V. Hathaway, Ph.D.; D. Michael Kramp, Ph.D.; Jeraldine Kraver, Ph.D.; Jeffrey Ethan Lee, Ph.D.; Julie Robinson, Ph.D.

**Instructor:** Mark H. Leichliter, M.A.

**Lecturers:** Elizabeth A. Wolf, Ph.D.; Lisa Horton Zimmerman, M.F.A.

The discipline of English deals with literature and language and other related subjects such as creative writing, film, folklore and myth. Creative artists refuse to be limited in their subjects or approaches.

Literature, as one writer has said, is "an eloquent artistic document, infinitely varied, of mankind's journey; the autobiography of the race's soul." The questions we ask in studying literature are as "infinitely varied" as those asked by poets, playwrights and novelists: What does it mean to be human? How is the individual related to society? By what values should one lead his or her life?

The study of literature and language requires rigorous discipline and sensitivity, a strict adherence to the highest standards of logic, evidence and argumentation, as well as creative response to language and form. One learns to think, research and write critically, while simultaneously developing sensitivity to language and to the complexities of people and situations.

[Asian Studies Minor on page 204](#)

[Cultural Studies Minor on page 206](#)

[English Minor on page 207](#)

[Film Studies Minor on page 208](#)

[Writing Minor on page 215](#)

[English Concentration on page 174](#)

[ESL Concentration on page 175](#)

[English, B.A. on page 163](#)

[Liberal Arts Emphasis](#)

[Middle Grades and Secondary Teaching Emphasis](#)

### English (B.A.) Requirements

ENG 122, ENG 123, ENG 223, ENG 225, and ENG 227 may NOT be counted toward the English major. All other courses with an ENG prefix may be counted for elective credit. Qualified students may be exempted by examination from ENG 131.

[English, M.A. on page 131](#)

## FOREIGN LANGUAGES

**Location:** Candelaria 0190      **Telephone:** 970.351.2221

**Chair:** Peter Kastner, Ph.D.

**Professors:** David Caldwell, Ph.D.; Peter Kastner, Ph.D.

**Lecturers:** Lorie Sauble-Otto, Ph.D.; Helen Kathleen Ulrich, M.A.

The undergraduate program in French or German offers the student the opportunity to acquire the four language skills—speaking, listening, reading and writing and to study the culture and literature of the country.

Because it is necessary to attain a high level of skills for all careers in the field of foreign languages, our classes are performance-oriented. Conversational abilities are stressed at all levels and a number of advanced level skill-building courses are offered to promote the greatest possible fluency.

In addition, courses are conducted almost exclusively in the target language. The department also provides a cutting edge computer language laboratory for individual work.

We hope it is possible for many of our majors and minors to study in their target countries as a normal part of their professional development. There is an exchange program with the Université de Tours in France, as well as three exchange programs with German universities.

In addition to our conventional classroom program, we offer a number of extracurricular programs and activities for our students. Conversation hours are regularly held on various parts of the campus to give the students opportunities to practice their foreign language. There is also a German Club and a French Club whose activities are open to all students studying the language.

[French Minor on page 208](#)

[French Concentration on page 175](#)

[German Minor on page 209](#)

[German Concentration on page 176](#)

[Foreign Language, B.A. on page 164](#)

[French Liberal Arts Emphasis and German Liberal Arts Emphasis](#)

[French Secondary Teaching Emphasis](#)

[German Secondary Teaching Emphasis](#)

### Foreign Language (B.A.) Requirements

All work to be counted toward the degree must be beyond the first year level.

Advising and advisor's signature are required each semester before registration.

Unless otherwise noted, all courses with the FR prefix are conducted in French and all courses with the GER prefix are conducted in German.

Students must demonstrate competency in certain areas of language activity: oral and written proficiency in French or German, ability to apply one's knowledge of the culture to appropriate situations in a French or German language environment. Consult department advisor.

Students must complete a minor approved by the department.

To graduate with a Foreign Language degree (French or German Emphasis) students must have a 2.5 grade point average in those courses that count toward the major and that were taken at UNC.

## GEOGRAPHY

**Location:** Candelaria 2200      **Telephone:** 970.351.2715

**Chair:** James P. Doerner, Ph.D.

**Professors:** Charles O. Collins, Ph.D.; Charles "Gil" Schmidt, Ph.D.

**Associate Professors:** James P. Doerner, Ph.D.; Philip A. Klein, Ph.D.

**Assistant Professors:** David M. Diggs, Ph.D.; Katherine M. Johnson, Ph.D.

**Lecturers:** Siaw Akwawua, Ph.D.; James M. Dunn, Ph.D.

Geography is the study of the social, environmental and locational processes that create diversity from place to place on the earth's surface. The geographic perspective helps to explain the reasons for and the significance of local, regional and world patterns and analyzes the role of locational factors in human affairs.

All programs provide the opportunity for directed independent study and actual experience as interns.

Geography department facilities include a geographic information science laboratory. A large, well-organized map collection is available in Michener Library.

Geography Minor on page 208

Geography Concentration on page 175

Geography, B.A. on page 166

Geographic Information Science Emphasis

Liberal Arts Emphasis

Secondary Teaching Emphasis

## HISPANIC STUDIES

**Location:** Candelaria 0295    **Telephone:** 970.351.2811

**Chair:** Jose I. Suarez, Ph.D.

**Professors:** Elizabeth Anne Franklin, Ph.D.; Ester M. Gimbernat de Gonzalez, Ph.D.; Maria E. Lopez, Ph.D.; Alfonso Rodriguez, Ph.D.; Teresa Bolet Rodriguez, Ph.D.; Jose I. Suarez, Ph.D.

**Associate Professors:** Genevieve Canales, Ph.D.; Priscilla L. Falcon, Ph.D.

**Assistant Professor:** Marta Ortega-Liebaria, Ph.D.

**Lecturers:** Barbara Avila-Shah, Ph.D.; Joy Landeira, Ph.D.; Yusetty Spicer, M.A.

The Department of Hispanic Studies offers courses in Spanish language and literature, Peninsular and Latin American civilization and culture, Mexican-American studies, bilingual/bicultural education, and teaching English as a second language. All areas of Hispanic language, literature and culture are taught in the same department in order to offer students degree programs that integrate related areas of study and to maximize faculty expertise.

Departmental resources include a student resource library and student conversation and study lounges. Faculty are readily available for advising and consultation. Study-abroad programs have been established and majors and minors are encouraged to participate in one of these spring semester intensive programs in which they may earn 9 or more credit hours. Freshman and sophomore students may take part in this program and may take some courses for General Education credit.

Current research interests of the department faculty include:

- Mexican American art
- Hispanic music and culture
- Latin American short story
- Foreign language teaching methodology
- 20th century Spanish theatre
- Colorado Chicano history
- Southwest linguistics
- Bilingual educational materials
- Contemporary women Hispanic authors.

Mexican/American Studies Minor on page 210

Spanish Minor on page 212

Bilingual/Bicultural Concentration on page 173

Mexican American Studies, B.A. on page 180

Spanish Concentration on page 176

Spanish, B.A. on page 193

### Spanish (B.A.) Requirements

Bilingual Bicultural Middle Grades Teaching Emphasis

Liberal Arts Emphasis

It is recommended that Spanish majors take HIST 118 and either HIST 314 or HIST 315.

All Spanish language courses to be counted for the major and minor must be beyond the first year level.

Courses with the SPAN prefix are taught in Spanish and courses with the HISP prefix are taught in English.

In order to gain permission to apply for graduation, a Spanish major must successfully pass the department's oral proficiency interview.

Secondary Teaching Emphasis

Foreign Languages, M.A. on page 131

Spanish Teaching Emphasis

### Spanish Teaching Emphasis Requirements

In addition to meeting the admission requirements of the Graduate School, the student must possess a B.A. in Spanish or the equivalent and must have completed one year of teaching experience in foreign language at the secondary level.

Students may complete the M.A. degree:

- in summers only or
- by combining summer work with regular academic year program offerings.

Students are required to complete 27 hours of coursework within the Department of Hispanic Studies in Spanish and pedagogy. SRM 600 Introduction to Graduate Research (3) is also required.

## HISTORY

**Location:** Ross Hall 3270    **Telephone:** 970.351.2905

**Chair:** Barry Rothaus, Ph.D.

**Professors:** Marshall S. Clough, Ph.D.; Matthew T. Downey, Ph.D.; Ronald K. Edgerton, Ph.D.; Barry Rothaus, Ph.D.; Michael Welsh, Ph.D.; Janet E. Worrall, Ph.D.

**Associate Professors:** Joan L. Clinefelter, Ph.D.; Fritz Fischer, Ph.D.; Alexander W. Knott, Ph.D.; Joan K. Pratt, Ph.D.

**Assistant Professor:** Erin L. Jordan, Ph.D.

**Lecturers:** Mary Green Borg, M.A.; Kenneth Nivison, Ph.D.; Donald R. Shaffer, Ph.D.

The discipline of history concerns itself with the record of the human past, thereby forming an indispensable background for all other areas of knowledge, whether in the humanities, social sciences or sciences.

It is the role of the history department at UNC to offer a series of courses that address the significant events in the human past for the purpose of liberally educating students from all areas of the University. The department has a second, but no less important, role in training teachers at both the graduate and undergraduate levels.

### Center of Excellence (Department and Teaching)

The University has designated the Department of History as a Center of Excellence. In 2002, the department was given a University award for "Departmental Excellence in Teaching."

History Minor on page 209

History Concentration on page 176

History, B.A. on page 169

Liberal Arts Emphasis

Secondary Teaching Emphasis

History, M.A. on page 133

## JOURNALISM AND MASS COMMUNICATIONS

**Location:** Candelaria 1265    **Telephone:** 970.351.2726

**Chair:** Charles H. Ingold, Ph.D.

**Professor:** Charles H. Ingold, Ph.D.

**Hansen Professor:** Alice Klement, J.D.

**Associate Professor:** Wayne W. Melanson, Ph.D.

**Assistant Professors:** Richard Gross, M.A. Lynn Klyde-Silverstein, Ph.D.; Lee Anne Peck, M.S.

Career preparation and understanding of the mass communications media are two significant benefits of majoring in this discipline. Undergraduates are able to choose from among three emphases: news-editorial, telecommunications, and public relations and advertising media. Professionally-experienced, academically-qualified faculty members in each emphasis provide opportunities for instruction and skills enhancement. Modern facilities include a color TV studio and a computerized news writing lab.

**Media Studies Minor on page 210**

**Journalism, B.A. on page 177**

### **Journalism and Mass Communications (B.A.) Requirements**

To become a major in the Department of Journalism and Mass Communications, you first become a pre-JMC major. This is done by filling out a "Change of Major/Minor" form, available from the department. The pre-major should be declared in the freshman or sophomore year.

Application for admission to full JMC-major status should take place during the sophomore year. It is important to note that the JMC major is a two-year program beyond the time at which a pre-major is admitted with full JMC major status. Whether admitted as a sophomore, junior or senior, the newly admitted JMC major will often need two full academic years to complete the major course requirements. In particular, seniors and transfer students who are considering applying to become JMC majors are advised that it is not usually possible to complete the process of application to the major and all the required coursework in fewer than four regular semesters.

To apply to become a JMC major, students must meet all of the following requirements:

- Completed 30 hours of undergraduate semester credit;
- Received a "C" or better in ENG 122;
- Received a "C" or better in JMC 100.

**Application.** Complete and submit an "Application for Admission to Journalism and Mass Communications Major" form, available from the department three weeks before each deadline:

Submit official transcripts from all colleges and universities attended other than UNC, if any, with the form noted above; Submit an essay of 250-350 words, typewritten and double-spaced, explaining why you want to be a journalism major. Essays will be judged on the quality of content and mechanics.

Mail or deliver the materials noted above to the Department of Journalism and Mass Communications, Box 114 University of Northern Colorado, Greeley, CO 80639.

Your application must reach the department office by the deadlines indicated below:

- Fall semester admission: February 15
- Spring semester admission: October 15
- No admission decisions are made during the summer.

Students are permitted to apply to the major only once a semester, for only one emphasis per semester.

Should the number of qualified applicants exceed space available in required courses, the department will admit only those students ranking highest in cumulative grade point averages.

JMC majors may not take the Media Studies minor. Students cannot declare a minor until they have been admitted to the major.

JMC majors must complete courses for only one JMC emphasis, and changing from one emphasis to another after admission to the major may be prohibited by the department.

The JMC department is committed to liberal arts education. For this reason, students majoring in JMC are not permitted to apply more than 36 hours with a JMC prefix toward meeting the required of 120 semester hours for graduation.

Students taking more than 36 hours in JMC will need 84 hours outside of JMC in order to graduate, making the total number of hours needed for graduation in excess of 120. JMC majors are also required to take 65 hours of the total 120 needed for graduation in liberal arts courses outside the JMC department.

To graduate with a B.A. in Journalism, all students must receive a "C" or higher in all courses in the major.

## **MATHEMATICAL SCIENCES**

**Location:** Ross Hall 2239      **Telephone:** 970.351.2820

**Chair:** Richard M. Grassl, Ph.D.

**Professors:** William L. Blubaugh, Ph.D.; Ricardo L. Diaz, Ph.D.; Richard M. Grassl, Ph.D.; Robert L. Heiny, Ph.D.; Steven C. Leth, Ph.D.; Igor N. Szczyrba, Ph.D.

**Associate Professors:** Dean E. Allison, Ph.D.; Jeffrey D. Farmer, Ph.D.; Peter C. Isaacson, Ph.D.; Jodie Dawn Novak, Ph.D.; Terry A. Scott, Ph.D.

**Assistant Professors:** Michelle Chamberlin, Ph.D.; Helen Gerretson, Ph.D.; Shandy Hauk, Ph.D.; Nathaniel G. Miller, Ph.D.; Robert A. Powers, Ed.D.

**Lecturers:** Michael K. Petrie, M.A.; John D. Putnam, M.A.; Mark R. Schultz, B.A.

Mathematics and related areas have been important human endeavors since ancient times. Mathematics is a discipline with its own questions, methods and content. It has also been used as a tool to explain the natural world for centuries. Mathematics, statistics and computer science have become essential to almost every other discipline such as business, economics, psychology and the social sciences.

Mathematics, statistics and computer science reflect the dual nature of these programs. Undergraduate courses, minors, and majors from these areas can be used as important components within a variety of other programs.

**Applied Statistics Minor on page 204**

**Computer Science Minor on page 206**

**Mathematics/Liberal Arts Minor on page 210**

**Mathematics/Secondary Mathematics Teaching, Grades 7-12 Minor on page 210**

**Mathematics Concentration on page 176**

**Mathematics, B.S. on page 178**

**Applied Statistics Emphasis**

**Liberal Arts Emphasis**

**Middle Grades Teaching Emphasis**

**Secondary Teaching Emphasis**

**Mathematics, M.A. on page 134**

**Liberal Arts Emphasis**

### **Mathematics (M.S.) Requirements**

In addition to meeting the admission requirements of the Graduate School, students must have:

- an undergraduate major in mathematics
- an essay of approximately 500 words addressing their interest in the Master of Arts in Mathematics: Emphasis in Liberal Arts degree program and their educational goals.

#### **Teaching Emphasis Requirements**

Generally a B.S. in mathematics or mathematics education with strong mathematics courses is required for admission to this program. Students without the B.S. in mathematics are advised to consult the department for a list of recommended undergraduate courses they should take before entering the program.

Students must submit an essay of approximately 500 words addressing their interest in the Master of Arts: Emphasis in Teaching Program and their educational goals.

**Educational Mathematics, Ph.D. on page 102****Educational Mathematics (Ph.D.) Requirements**

**Admission.** Applicants should possess a master's degree in mathematics or mathematics education, or a strong bachelor's degree in mathematics. It is expected that students will have had a senior level or beginning graduate level course in each of abstract algebra, linear algebra, point-set topology, and real or complex analysis. Applicants not having this preparation may be required to take additional courses to prepare them for the coursework in the program. Also required is an essay of approximately 500 words addressing the applicant's interest in the Doctor of Philosophy in the Educational Mathematics program and the applicant's educational goals.

**PHILOSOPHY**

**Location:** Weber House      **Telephone:** 970.351.2572

**Chair:** Jack Temkin, Ph.D.

**Professors:** Paul F. Hodapp, Ph.D.; Jack Temkin, Ph.D.

**Associate Professors:** Richard A. Blanke, Ph.D.; Thomas K. Trelogan, B.A.

**Lecturer:** Lisa A. King, Ph.D.

Philosophy is the ongoing attempt to remain true to the spirit of the Socratic dictum: "The unexamined life is not worth living." As such, it entails serious reflection on all of our fundamental convictions and beliefs, with an eye in particular to the clarification of the concepts that these involve and the discovery of reasons for regarding these convictions and beliefs as either true or false. The Department of Philosophy places special emphasis on helping its students to become capable of such serious reflection and it does so not only in the courses it offers primarily for its majors and minors, but in those it offers primarily as service courses for students of other disciplines as well.

**Legal Studies Minor on page 209**

**Philosophy Minor on page 211**

**Philosophy, B.A. on page 184**

**PHYSICS**

**Location:** Ross Hall 0232      **Telephone:** 970.351.2961

**Chair:** Cynthia S. Galovich, Ph.D.

**Professors:** Richard D. Dietz, Ph.D.; Cynthia S. Galovich, Ph.D.; Robert A. Walch, Ph.D.; Courtney W. Willis, Ph.D.

**Associate Professors:** Kendall E. Mallory, Ph.D.; Ruwang Sung, Ph.D.

**Lecturer:** Wendy Adams, M.S.

Small, personalized classes are a hallmark of all the programs offered by the Physics Department. The student is assured of consideration and expert guidance, with excellent opportunities to thoroughly develop personal skills at a pace compatible with needs. From the earliest to the most advanced physics courses, the student has direct contact with faculty members. Junior and senior laboratories, in which students work on sophisticated experiments extending over several weeks, are common. Students are encouraged to become involved in their own research projects under faculty guidance. These investigations often extend over several semesters or are pursued through cooperative internships in government laboratories or industry.

The Physics department has a well-equipped electronics lab. A lab with high-speed personal computers is adjacent to the Physics Office. Computer use is thoroughly integrated into physics classes and curricula. The department has developed award-winning computer software to enhance the first-year laboratories. A well-equipped nuclear laboratory features a neutron howitzer, radioactive materials, various detectors

and multichannel analyzer equipment. A General Electric X-Ray diffraction unit is available for studying the structure of minerals. Spectrophotometers, a Bausch and Lomb spectrometer, a mass spectrometer and a Varian nuclear magnetic resonance instrument are available in cooperation with the Chemistry department. The optics laboratory includes facilities for holography, gas and organic dye lasers and a photographic darkroom.

In addition to degree programs, the Department of Physics offers a selection of general education courses concerned with energy problems, space travel, the cosmos, science and society, scientific revolutions and a survey course in physical science.

**Engineering Program (Pre-Engineering) on page 216**

**Physics Minor on page 211**

**Physics Concentration on page 176**

**Physics, B.S. on page 185**

**Physics (B.S.) Requirements**

A "C" average or better is required in PHYS prefix courses for graduation. Students planning to enter graduate school in physics are strongly advised to take **PHYS 449 Advanced Quantum Mechanics (3)**.

**Engineering Physics Emphasis**

Completion of a research project, as part of PHYS 470, is required for this emphasis. HON 451 may be substituted for PHYS 470. In either case, a research advisor from the Physics department is required.

**Computer Science Emphasis**

Completion of a research project, as part of PHYS 470, is required for this emphasis. HON 451 may be substituted for PHYS 470. In either case, a research advisor from the Physics department is required. CS 101 is waived as a prerequisite to CS 102 if the student takes an advisor approved CG course before CS 102.

**Liberal Arts Emphasis****Mathematical Physics Emphasis**

Completion of a research project, within PHYS 301, PHYS 422, PHYS 470 or HON 451, is required for these emphases.

**Physical Science Middle Grades and Secondary Teaching Emphasis****Secondary Teaching Emphasis**

A research project is required. It could be completed as part of PHYS 301, or by taking HON 451 or PHYS 470.

**POLITICAL SCIENCE**

**Location:** Weber House      **Telephone:** 970.351.2058

**Chair:** Stan Luger, Ph.D.

**Professors:** Stan Luger, Ph.D.; Steve J. Mazurana, M.A.

**Associate Professor:** Kelechi A. Kalu, Ph.D.

**Lecturers:** Brook Blair, Ph.D.; Christiane Olivo, Ph.D.

The Department of Political Science labors in the cause of citizenship through the systematic exploration of how societies are organized and how they change. Instruction and research opportunities are offered in the art and science of politics and policymaking. Undergraduate research and instruction is conducted within four basic fields in political science:

- American government, politics and policy
- International relations, organizations and law
- Comparative politics and policy
- Political philosophy.

The department emphasizes the development of writing and research skills, and analytical skills necessary to think critically and reflect upon political values. The department also offers qualified students opportunities to complete an internship in public organizations such as Weld County government, the U.S. Congress and Colorado legislature, and the Governor's Office. The department participates in the General Education program, the Center for Teaching History and Social Science, Life of the Mind, the Honors Program, Women's Studies, Environmental Studies, and International Trade and Relations.

[Political Science Minor on page 211](#)

[Law Program \(Pre-Law\) on page 216](#)

[Civics \(Political Science\) Concentration on page 174](#)

[Political Science, B.A. on page 188](#)

### **Political Science (B.A.) Requirements**

The Department of Political Science labors in the cause of citizenship by providing a foundation of information upon which informed judgments can be made by developing the analytical skills necessary to think critically and by promoting reflection about values. The department also seeks to prepare students in this way for professional success in local, state and federal government, the law, journalism, public relations, teaching and business. Graduates of the program are also qualified for graduate work in various emphases of political science.

## **PSYCHOLOGY**

**Location:** McKee Hall 0014    **Telephone:** 970.351.2957

**Chair:** Mark B. Alcorn, Ph.D.

**Professors:** Theodore R. Bashore, Ph.D.; David M. Gilliam, Ph.D.; Charles S. L. Poston, Ph.D.; Paul D. Retzlaff, Ph.D.; Eugene P. Sheehan, Ph.D. Marilyn C. Welsh, Ph.D.

**Associate Professors:** Mark B. Alcorn, Ph.D.; Carl E. Granrud, Ph.D.; Nancy J. Karlin, Ph.D.

**Assistant Professors:** Michael Todd Allen, Ph.D.; Lisa K. Comer, Ph.D.; Thomas N. Dunn, Ph.D.; Lora D. Schlewitt-Haynes, Ph.D.; William Douglas Woody, Ph.D.

**Lecturer:** Rosann Ross, M.A.

The goal of psychology is to understand behavior. A psychologist seeks to predict behavior and to apply that knowledge for the benefit of people with a variety of needs. A psychologist may strive to assist people in realizing their full potential or help those experiencing problems in living.

[Psychology Minor on page 211](#)

[Psychology, B.A. on page 189](#)

### **Psychology (B.A.) Requirements**

The Department of Psychology offers a quality, comprehensive, and coherent program. Students learn the research methods and core theories employed by psychologists. Students are also exposed to the diversity of psychology through a range of elective courses. The variety of courses offered permits students to choose a set of psychology courses that are related to their interests and career goals. All psychology students are given the opportunity to design, conduct, and write up their own research project. Students also participate in a field experience in which they work in a supervised psychology-related setting.

Psychology majors must receive a grade of "C" or better (or S) in all REQUIRED courses in psychology (i.e., PSY 120, PSY 200, PSY 400, PSY 480 and PSY 491). Students receiving a grade of "D" or lower in a course must retake the course.

Students with a grade point average of 3.25 or better are invited to enroll in the Honors program in psychology. MIND courses may count for General Education. Consult the director of the Honors program in psychology. Qualified students are invited to apply for membership in PSI CHI, the national psychology honor society. Applications and qualifications are posted outside the PSI CHI office.

A maximum of 24 semester hours may be transferred to the major from other institutions.

Psychology students must have a minimum of 9 upper division credits (300-400 level) while in residence in order to graduate.

[Psychology, M.A. on page 138](#)

[General Psychology Emphasis](#)

[Human Neuropsychology Emphasis](#)

### **Psychology (M.A.) Requirements**

In addition to meeting the admission requirements of the Graduate School, the student must complete the Graduate Record Examination and submit the scores before admission into the program.

## **SOCIAL SCIENCE PROGRAM**

**Location:** McKee Hall 318    **Telephone:** 970.351.2929

**Director:** Matthew T. Downey, Ph.D.

**Professor:** Matthew T. Downey, Ph.D.

**Associate Professor:** David R. Aske, Ph.D.

**Instructors:** Mary Green Borg, M.A.; Christine E. Marston, Ph.D.

This multidisciplinary Bachelor of Arts program provides a general, theoretical and applied background in the social sciences and selected areas of the humanities. In particular the curriculum gives students a basis for thinking analytically about human behavior and the social environment with a broad introduction to the social sciences.

Students may elect to emphasize in one of three areas: Liberal Arts, Middle School Education or Social Studies - Secondary Licensure Program.

The Liberal Arts emphasis prepares students for careers in human services, research, program planning, graduate school and law school. Examples of human services careers include positions such as agency management, probation counseling, environmental and social impact analysis, city planning and local, state and federal government positions.

The Middle School Education emphasis specifically prepares students for careers in teaching in middle schools. These students also must complete the Professional Teacher Education Program and meet all the requirements described in the Middle Grades Certification program sections of this Catalog.

The Social Studies - Secondary Licensure Program emphasis provides students with the academic subject content background necessary for teaching social studies at the secondary (grades 7-12) level in Colorado. Upon successful completion of this program and the requirements of the Professional Teacher Education Program, students will qualify to be licensed to teach social studies at the secondary level.

[Interdisciplinary Studies, B.A.](#)

[Social Science, B.A. on page 191](#)

[Liberal Arts Emphasis](#)

[Social Studies Middle Grades and Secondary Grades Teaching Emphasis](#)

## **SOCIOLOGY**

**Location:** Candelaria 2285    **Telephone:** 970.351.2315

**Chair:** Karen M. Jennison, Ph.D.

### **Family Studies Office**

**Location:** Candelaria 2286    **Telephone:** 970.351.2315

**Director:** Pamela G. Hewitt, Ph.D.

### **Sociology of Education Office**

**Location:** Candelaria 2285B    **Telephone:** 970.351.2315

**Director:** Karen M. Jennison, Ph.D.



## Social Issues Office

**Location:** Candelaria 2048    **Telephone:** 970.351.2315  
**Director:** TBD

## Applied Sociology Office

**Location:** Candelaria 2064    **Telephone:** 970.351.2315  
**Director:** James P. Marshall, Ph.D.

**Professors:** John W. Fox, Ph.D.; Pamela G. Hewitt, Ph.D.;  
 Karen M. Jennison, Ph.D.; James P. Marshall, Ph.D.;  
 Melanie Moore, Ph.D.; David W. Musick, Ph.D.; Jacqueline  
 B. Stanfield, Ph.D.; Richard G. Trahan, Ph.D.; John A.  
 Vonk, Ph.D.

**Associate Professor:** Hedy Red Dexter, Ph.D.

**Lecturers:** Diane L. Schott, M.A.; Patricia D. Wilkins-Wells,  
 Ph.D.

Sociology is the study of social life. It is the scientific investigation of human society and the social interactions that emerge among people. The main focus of sociology is the group rather than the individual. Sociologists attempt to understand the social and cultural forces that operate throughout society and the forces that mold individuals, shape their behavior and thus determine social events.

Sociologists attempt to understand the world of human relations. In order to carry out their investigations, sociologists employ methods of gathering data from the social world. Generally, methods are either quantitative (e.g., survey) or qualitative (e.g., participant observation). Sociological theories accompany methods in enabling us to understand the social world. Social theories are explanations offered to account for a set of social phenomena. Together, methods and theory provide the foundation for the science of sociology.

**Change of Major/Minor Requirements.** UNC students may change their major to sociology or may change from one sociology emphasis area to another provided that they have completed 30 semester hours of university level coursework with at least 15 semester hours at UNC. Students must meet the Change of Major and Minor requirements established by the department emphasis area in which they wish to take their sociology emphasis. Copies of these requirements are available in the Department of Sociology.

Students enrolled in the Fresh Start Program should contact the Department of Sociology for information on program-specific policies regarding admission. The Department of Sociology uses grades from all classes taken at UNC when computing the student's GPA.

UNC students with less than 30 semester hours of university level coursework may change to a Sociology major provided that they had met the first year student entry requirement specified above for admission and are in good academic standing at UNC.

Students must meet all departmental entrance requirements in effect at the time they apply for their major.

**Program Assessments.** The State of Colorado has mandated that institutions of higher education undertake assessment of students and their programs. It is the responsibility of students to participate in any assessment activities that are determined by the department and the University to meet this state mandate.

[Sociology Minor on page 212](#)

[Sociology/Social Inequality Minor on page 212](#)

[Sociology/Urban Education Minor on page 212](#)

[Sociology, B.A. on page 192](#)

### Sociology (B.A.) Requirements

Include no more than two Sociology elective courses (6 hours) at the 100 or 200 level. Further, SOC 302, SOC 422 and SOC 490 can be repeated for credit but no more than three hours of each course will be counted toward electives in the major.

At least 50 percent of the courses taken to complete the major must be upper division, 300-400 level.

All emphasis areas provide a foundation for graduate work in sociology.

A grade of "C" or better is required for all Sociology classes that count toward the major.

Students may select only ONE emphasis area.

Sociology emphasis areas do not lead to licensure in elementary education at UNC. Only students admitted prior to fall 2000 can gain teacher certification.

### Applied Sociology Emphasis Additional Requirements

Computer literacy recommended, competence in word processing, spreadsheets and data base programs.

### Family Studies Emphasis Additional Requirements

Students should purchase a Family Studies Handbook upon their entry into the program.

Students need to attend a required practicum meeting during the fall before their spring senior year practicum and subsequently need to set up their research projects with the agencies before the spring semester begins. Missing the required fall orientation meeting for the subsequent spring practicum (SOC 493) is equivalent to missing the first two class periods and sufficient cause to be dropped from the course, unless other arrangements are made prior to this meeting.

### Social Issues Emphasis Additional Requirements

Students need to receive approval of their internship proposal from the Social Issues Emphasis Coordinator during the semester prior to taking SOC 491, Internship in Social Issues.

### Sociology of Education Emphasis

[Social Science, M.A. on page 140](#)

### Clinical Sociology Emphasis

### Social Science (M.A.) Requirements

In addition to meeting the requirements of the Graduate School students must submit a letter of application outlining their educational and career goals. They must also provide two letters of recommendation. Sociologists perform a wide variety of tasks. Most are employed as teachers, researchers, administrators, counselors or policy consultants. One area in which sociologists receive training is statistical techniques and analysis, which are useful in a wide variety of careers. Many sociologists are engaged in basic research, the acquisition of knowledge for its own sake, while others are involved in applied research that provides directives, suggestions or answers related to a particular problem. An increasing number of sociologists are electing to apply their skills to the government, business and industry, health services and welfare as well as other nonprofit agencies (e.g., family planning, youth counseling, city planning). According to the American Sociological Association, "sociology's career potential is just beginning to be tapped" and "many sociologists predict that the next quarter century will be the most exciting and most critical period in the field's 150 year history."

## SPEECH COMMUNICATION

**Location:** Candelaria 1265    **Telephone:** 970.351.2045

**Interim Chair:** Charles H. Ingold, Ph.D.

**Professor:** Thomas Endres, Ph.D.; James A. Keaten, Ph.D.

**Associate Professors:** Linda S. Allen, Ph.D.; Sherilyn R. Marrow, Ph.D.; Cheryl Pawlowski, Ph.D.

**Assistant Professors:** David L. Palmer, Ph.D.; Charles E. Soukup, Ph.D.

**Lecturer:** Heidi Muller, Ph.D.;

The focus of the speech communication discipline is on the process of human communication. Classes in speech communication emphasize the examination of theories and research relevant to the field of speech communication and personal improvement in communication ability.

A Bachelor of Arts in Communication prepares students with the knowledge and skills to be effective communicators in personal and professional settings. Coursework focuses on theoretical, analytic, and practical aspects of human interaction.

To become a major in the Department of Speech Communication, the student must complete a "Change of Major/Minor" form, available from the department office. Students may do this any time during the freshman, sophomore, or junior year.

Students may elect to emphasize the study of communication in interpersonal, small group, educational, organizational and intercultural contexts. Practical skills may be obtained in professional presentation, persuasion, leadership, and communication in the classroom. Students completing this program may elect to apply for graduate study in the field of speech communication, to apply to law or other professional schools, or to begin a career in business or education.

A major in Speech Communication is well-suited for students desiring a career in education. This degree will prepare future educators for effective communication with students, parents, and other school professionals. Students preparing for careers in Secondary Education must select the Emphasis in Secondary Education. All requirements for the Professional Teacher Education Program, as described in the UNC Catalog, must be met.

[Speech Communication Minor on page 213](#)

[Communication, B.A. on page 156](#)

[Human Communication Emphasis](#)

[Secondary Teaching Emphasis](#)

#### **Speech Communication (B.A.) Requirements**

**Courses.** Complete a minimum of 18 semester hours in 300- and 400-level SPCO courses, with a minimum of 6 semester hours at the 400-level. A maximum of 3 semester hours of credits from SPCO 422 and/or SPCO 480 may count toward the major requirements.

**Electives.** Majors may count one course in a related discipline toward their speech communication electives. This course must be approved by their major advisor.

**General Education Requirements.** The department expects its new majors to have already made significant progress toward completion of the General Education requirements.

**Grades.** A grade point average of 2.5 for SPCO courses is required for graduation.

**Honors Program.** Students in the Honors Program may count HON 351 and HON 451 as electives in Speech Communication.

**Internships.** \*\*Students who are not eligible for an internship are required to complete six additional credits of Speech Communication electives.

[Communication, M.A. on page 125](#)

## **WOMEN'S STUDIES PROGRAM**

**Location:** Candelaria 0140    **Telephone:** 970.351.2607

**Coordinator:** Tracey A. Sedinger, Ph.D.

**Associate Professors:** Hedy Red Dexter, Ph.D.; Tracey A. Sedinger, Ph.D.

**Lecturer:** Lisa A. King, Ph.D.

The basic goals of the Women's Studies Program and course offerings are to understand and overcome social myths about women and sex role stereotypes of women and men in order to enhance the dignity of all human beings and to provide unique opportunities for knowledge and understanding for all students.

[Women's Studies Minor on page 215](#)

## FACULTY, ARTS AND SCIENCES

- Rick Adams, Ph.D.
- Wendy Adams, M.S.
- Siaw Akwawua, Ph.D.
- Mark B. Alcorn, Ph.D.
- Linda S. Allen, Ph.D.
- Michael Todd Allen, Ph.D.
- Dean E. Allison, Ph.D.
- David R. Aske, Ph.D.
- Barbara Avila-Shah, Ph.D.
- Marilyn Banta, Ph.D.
- Theodore R. Bashore, Ph.D.
- Mark Berrettini, Ph.D.
- Brook Blair, Ph.D.
- Richard A. Blanck, Ph.D.
- William L. Blubaugh, Ph.D.
- Mary Green Borg, M.A.
- Thomas A. Bredehoft, Ph.D.
- Robert Brunswig, Ph.D.
- Warren R. Buss, Ph.D.
- David Caldwell, Ph.D.
- Genevieve Canales, Ph.D.
- Michelle Chamberlin, Ph.D.
- Jennifer A. Clarke, Ph.D.
- Joan L. Clinefelter, Ph.D.
- Marshall S. Clough, Ph.D.
- Charles O. Collins, Ph.D.
- Lisa K. Comer, Ph.D.
- Laura S. Connolly, Ph.D.
- Rhonda R. Corman, M.A.
- Gregory K. DeKrey, Ph.D.
- Hedy Red Dexter, Ph.D.
- Ricardo L. Diaz, Ph.D.
- Barbara A. Dickinson, Ph.D.
- Richard D. Dietz, Ph.D.
- David M. Diggs, Ph.D.
- James P. Doerner, Ph.D.
- Aichun Dong, Ph.D.
- Matthew T. Downey, Ph.D.
- Robert Dunkley, Ph.D.
- James M. Dunn, Ph.D.
- Thomas N. Dunn, Ph.D.
- Ronald K. Edgerton, Ph.D.
- Marcus E. Embry, Ph.D.
- Thomas Endres, Ph.D.
- Lahcen E. Ezzaher, Ph.D.
- Kathleen R. Fahey, Ph.D.
- Priscilla L. Falcon, Ph.D.
- Jeffrey D. Farmer, Ph.D.
- Clark L. Fields, Ph.D.
- Catherine A. Finley, Ph.D.
- Fritz Fischer, Ph.D.
- Colleen Fitzpatrick, Ph.D.
- Sandra M. Flake, Ph.D.
- John W. Fox, Ph.D.
- Elizabeth Anne Franklin, Ph.D.
- Cynthia S. Galovich, Ph.D.
- Julie Garbus, Ph.D.
- Catherine S. Gardiner, Ph.D.
- Hermon George, Jr., Ph.D.
- Helen Gerretson, Ph.D.
- David M. Gilliam, Ph.D.
- Emily B. Golson, Ph.D.
- Ester M. Gimbernat de Gonzalez, Ph.D.
- Patricia E. Graham, Ph.D.
- Carl E. Granrud, Ph.D.
- Richard M. Grassl, Ph.D.
- Richard Gross, M.A.
- Rosemary V. Hathaway, Ph.D.
- Shandy Hauk, Ph.D.
- Margaret E. Heimbrook, Ph.D.
- Robert L. Heiny, Ph.D.
- Pamela G. Hewitt, Ph.D.
- Teresa Higgins, Ph.D.
- Paul F. Hodapp, Ph.D.
- Kenneth D. Hopkins, Ph.D.
- William H. Hoyt, Ph.D.
- Gary Huffines, Ph.D.
- Joonok Huh, Ph.D.
- Richard M. Hyslop, Ph.D.
- Charles H. Ingold, Ph.D.
- Peter C. Isaacson, Ph.D.
- Karen M. Jennison, Ph.D.
- Katherine M. Johnson, Ph.D.
- Kathleen S. Jones, Ph.D.
- Loretta L. Jones, Ph.D.
- Erin L. Jordan, Ph.D.
- George H. Junne, Jr., Ph.D.
- Richard Robert Jurin, Ph.D.
- Kelfala M. Kallon, Ph.D.
- Anthonia C. Kalu, Ph.D.
- Kelechi A. Kalu, Ph.D.
- Nancy J. Karlin, Ph.D.
- Peter Kastner, Ph.D.
- James A. Keaten, Ph.D.
- Lisa A. King, Ph.D.
- Alice Klement, J.D.
- Philip A. Klein, Ph.D.
- Lynn Klyde-Silverstein, Ph.D.
- Alexander W. Knott, Ph.D.
- D. Michael Kramp, Ph.D.
- Jeraldine Kraver, Ph.D.
- Joy Landeira, Ph.D.
- Rita Leafgren, M.A.
- Bruce D. Lee, Ph.D.
- Jeffrey Ethan Lee, Ph.D.
- Mark H. Leichliter, M.A.
- Steven C. Leth, Ph.D.
- Marie L. Livingston, Ph.D.
- John E. Loftis, III, Ph.D.
- Maria E. Lopez, Ph.D.
- Stan Luger, Ph.D.
- Stephen P. Mackessy, Ph.D.
- Kendall E. Mallory, Ph.D.
- Sherilyn R. Marrow, Ph.D.
- Christine E. Marston, Ph.D.
- James P. Marshall, Ph.D.
- Steve J. Mazurana, M.A.
- Sally McBeth, Ph.D.
- Bruce A. McDaniel, Ph.D.
- Marcus K. Meilahn, Ph.D.
- Wayne W. Melanson, Ph.D.
- Nathaniel G. Miller, Ph.D.
- John C. Moore, Ph.D.
- Melanie Moore, Ph.D.
- Jared R. Morrow, Ph.D.
- Gregory Mullen, B.A.
- Heidi Muller, Ph.D.
- David W. Musick, Ph.D.
- Deeksha Nagar, Ph.D.
- William D. Nesse, Ph.D.
- Kenneth Nivison, Ph.D.
- Jodie Dawn Novak, Ph.D.
- Christiane Olivo, Ph.D.
- Charles E. Olmsted, III, Ph.D.
- Kimberly A. Operman Pacheco, Ph.D.
- Marta Ortega-Liebaria, Ph.D.
- David L. Palmer, Ph.D.
- Cheryl Pawlowski, Ph.D.
- Lee Anne Peck, M.S.
- Norman L. Peercy, Ph.D.
- Curt M. Peterson, Ph.D.
- Michael K. Petrie, M.A.
- Charles S. L. Poston, Ph.D.
- Robert A. Powers, Ed.D.
- Joan K. Pratt, Ph.D.
- David L. Pringle, Ph.D.
- John D. Putnam, M.A.
- Philip L. Reichel, Ph.D.
- Paul D. Retzlaff, Ph.D.
- Julie Robinson, Ph.D.
- Alfonso Rodriguez, Ph.D.
- Teresa Bolet Rodriguez, Ph.D.
- Rosann Ross, M.A.
- Barry Rothaus, Ph.D.
- Tomas N. Santos, Ph.D.
- Lorie Sauble-Otto, Ph.D.
- Gerald W. Saunders, Ph.D.
- Lora D. Schlewitt-Haynes, Ph.D.
- Charles "Gil" Schmidt, Ph.D.
- Diane L. Schott, M.A.
- James O. Schreck, Ph.D.
- Mark R. Schultz, B.A.
- Richard W. Schwenz, Ph.D.
- Terry A. Scott, Ph.D.
- Tracey A. Sedinger, Ph.D.
- Donald R. Shaffer, Ph.D.
- Eugene P. Sheehan, Ph.D.
- Neil Snow, Ph.D.
- Charles E. Soukup, Ph.D.
- Yusetty Spicer, M.A.
- Jacqueline B. Stanfield, Ph.D.
- Jose I. Suarez, Ph.D.
- Jerry Suits, Ph.D.
- Ruwang Sung, Ph.D.
- Igor N. Szczyrba, Ph.D.
- Michael R. Taber, Ph.D.
- Jack Temkin, Ph.D.
- Thomas K. Trelogan, B.A.
- Helen Kathleen Ulrich, M.A.
- Leo Ben Varner, Ph.D.
- Robert A. Walch, Ph.D.
- James A. Wanner, Ph.D.
- Marilyn C. Welsh, Ph.D.
- Michael Welsh, Ph.D.
- Patricia D. Wilkins-Wells, Ph.D.
- Courtney W. Willis, Ph.D.
- Sharon R. Wilson, Ph.D.
- Elizabeth A. Wolf, Ph.D.
- William Douglas Woody, Ph.D.
- Lloyd D. Worley, Ph.D.
- Janet E. Worrall, Ph.D.
- Lisa Horton Zimmerman, M.F.A.





# THE KENNETH W. MONFORT COLLEGE OF BUSINESS



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## UNIVERSITY PROGRAMS

- Business Administration, B.S. on page 151**
- Graduate Programs, 2003-2004 on page 93**
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## OFFICE OF THE DEAN

Location: Kepner 2053 Telephone: 970.351.2764  
Dean: Joe F. Alexander, D.B.A.  
Associate Dean: Gerald Shadwick, B.S., J.D.  
Assistant Dean: Timothy E. Jares, Ph.D.

The Kenneth W. Monfort College of Business offers a Bachelor of Science Degree in Business Administration with opportunities for students to pursue specialized study in the emphasis areas of Accounting, Computer Information Systems, Finance, Management, Marketing and General Business. The College also offers Minors in Business Administration and Computer Information Systems and provides administrative support for the Interdisciplinary Studies: Nonprofit Administration Emphasis.

The College of Business was established in the summer of 1968 as an autonomous degree-recommending unit, with a primary mission to provide education for business administration.

Recognized in 2000 by CCHE as a Colorado Program of Excellence, the College has become an integral part of the University and is committed to advancing the Mission, Goals and Values of UNC (as specified in earlier pages of this Catalog). The College's own mission statement has been developed to support that of the University.

Performance based standards for degree programs in the Kenneth W. Monfort College of Business are available online at <http://www.mcb.unco.edu>.

## INTRODUCTION: MONFORT COLLEGE OF BUSINESS

As an undergraduate-only college, MCB focuses its resources on a Bachelor of Science Degree in Business Administration. Highly-qualified faculty teach in reasonable class sizes (average of 30) in a technology-rich environment. The program is complemented by state-of-the-art learning facilities, an executive professor program, and an approach to learning that links theory with practice. MCB remains as the only business program in the state to earn the Colorado Commission on Higher Education's Program of Excellence Award.

## MISSION STATEMENT

Our mission is to deliver excellent undergraduate business programs that prepare students for successful careers and responsible leadership in business.

## AACSB ACCREDITATION

The Monfort College is one of just five undergraduate-only programs in the U.S. to hold AACSB-accredited status in business administration and accounting. AACSB International (The Association to Advance Collegiate Schools of Business) is the premier accrediting agency for business school quality in the U.S. According to a recent Business Week article, "Today, just having the degree isn't as important as where you get it...As corporations become savvier buyers of...talent, they are giving more weight to the AACSB seal...Accreditation shows that a business school cares about the quality of its program." The Monfort College's programs have been AACSB-accredited since 1992.

## MCB ADVISING CENTER

**Location:** Kepner 1055      **Telephone:** 970.351.1233  
**Student Specialist:** Mary Graves

The College of Business Advising Center provides admission and academic advising services to all General Business majors and Business Administration minors, as well as supplementary services for all other MCB academic programs and departments. The Advising Center monitors all admissions, transfer credits and continuation requirements.

The advising center administers the MCB Honors Programs for the College and also provides students with information on graduate study in Business Administration.

## DEPARTMENTS AND PROGRAMS

### ACCOUNTING

**Location:** Kepner 2090      **Telephone:** 970.351.2855  
**Chair:** John R. Stewart, Ph.D., C.P.A.

**Professors:** John E. Elsea, Ph.D., C.P.A.; Theresa K. Gutierrez, Ph.D., C.P.A.; Allen W. McConnell, M.S., C.P.A.; Ronald O. Reed, Ph.D., C.P.A.; John R. Stewart, Ph.D., C.P.A.

**Associate Professor:** Bill D. Cox, Ph.D., C.P.A.;

**Assistant Professor:** Richard I. Newmark, Ph.D., C.P.A.

**Accounting Emphasis on page 151**

#### Additional Requirements

The emphasis in accounting and the Accounting Department are approved under the State Accounting Law of Colorado. Upon completion of the accounting emphasis, the student qualifies to write the CPA and other professional examinations.

Students completing the program are able to qualify for a broad range of opportunities including public accounting, industrial accounting, governmental and other not-for-profit accounting, as well as entrance to graduate programs.

In addition to meeting these requirements, one-half of the 60 business credits must be in non-accounting credits. The total number of hours in accounting coursework cannot exceed 30 hours of 300 and 400 level accounting courses.

Students interested in taking the CPA exam should consider taking six hours of their business electives in accounting courses, such as BAAC 326, 426, or 429. Students interested in taking other professional exams, such as the CMA, CFP, CFM, CISA, should consult their advisor for suggested electives.

In addition to fulfilling the basic requirements for the Bachelor of Science degree in Business Administration, a graduation requirement is the achievement of a grade point

average of 2.00 for all upper division (300/400-level) accounting (BAAC) courses completed at the University of Northern Colorado.

BAAC 220 and BAAC 221 will not count toward the satisfaction of the grade point requirement, and the "C" or better course prerequisites (as indicated in the upper-division accounting course descriptions) must be satisfied. Students will be dropped from any class at any time during the semester if it is found they do not meet the prerequisites in the course descriptions.

Credit hours for courses that are retaken do not count more than once toward the 120 credit hour requirement for graduation. However, if a student receives a final grade each time he or she has enrolled in a course, both grades are used in calculating the student's cumulative, business and accounting grade point averages.

## COMPUTER INFORMATION SYSTEMS

**Location:** Kepner 1095      **Telephone:** 970.351.2089

**Chair:** Jay M. Lightfoot, Ph.D.

**Professors:** Charmayne B. Cullom, Ph.D.; William L. Duff, Jr., Ph.D.; Jay M. Lightfoot, Ph.D.; Robert M. Lynch, Ph.D.; Tod A. Sedbrook, Ph.D.

**Assistant Professors:** Rutilio Martinez, Ph.D.; Richard T. Turley, Ph.D.

**Computer Information Systems Minor on page 205**

**Computer Information Systems Emphasis on page 152**

#### Additional Requirements

BACS 495 Special Topics in CIS may be repeated. A maximum of 6 credits may be applied to the student's degree program. With the written approval of the CIS department chair, an Executive Professor Special Topics course may be substituted for BACS 495 Special Topics in CIS.

In addition to the basic requirements listed for the Bachelor of Science in Business Administration at the beginning of this section, a grade of "C" or better must be earned in each course in the Business Administration Core and all *Required Emphasis Credits* and *Elective Emphasis Credits* listed in the CIS Emphasis for the courses to count toward graduation.

## FINANCE

**Location:** Kepner 1090      **Telephone:** 970.351.2275

**Chair:** Garth H. Allen, B.B.A, J.D.

**Professor:** John M. Clinebell, D.B.A.

**Associate Professors:** Garth H. Allen, B.B.A, J.D.; Christine A. McClatchey, Ph.D.

**Assistant Professors:** Cris de la Torre, Ph.D., J.D.; Timothy E. Jares, Ph.D.; Kenneth P. Moon, Ph.D., C.C.M.

**Monfort Executive Professors:** Leopold "Lee" Korins, B.S.; Junius W. Peake

**Finance Emphasis on page 152**

#### Additional Requirements

Students interested in the field of Financial Planning and/or who want to sit for the CFP<sup>TM</sup> Certification Exam should take the following elective courses: BAFN 340, BAFN 441, BAFN 442, BAFN 479, BAAC 320 and BAAC 428.

Students interested in the field of investments and/or who want to prepare for the CFA exam should take the following courses as their *Elective Emphasis Credits*: BAFN 479, BAFN 478, BAAC 320, and one other course from the list of *Elective Emphasis Credits*.

Students interested in the field of corporate financial management and/or who want to prepare for the CFM exam should take the following courses as their *Required Emphasis Credits* and *Elective Emphasis Credits*: BAFN 475, BAAC 320, BAAC 323 and BAFN 479.

Students interested in the field of banking should take the following courses as their *Required Elective Emphasis Credits*:

BAFN 473, BAFN 479 and two other courses from the list of *Elective Emphasis Credits*.

BAFN 495 Special Topics or any Executive Professor class may be substituted for a finance elective with the approval of the Finance Department chair.

In addition to fulfilling the basic requirements for the Bachelor of Science degree in Business Administration, a grade of "C" or better must be earned in the *Required Emphasis Credits and Elective Emphasis Credits* categories in order for the courses to count toward graduation.

## GENERAL BUSINESS

**Location:** Kepner 1055      **Telephone:** 970.351.1233  
**Assistant Professors:** Keiko Krahnke, Ph.D.; Michael R. Leonard, J.D.

**Business Administration Minor on page 204**

**General Business Emphasis on page 152**

### Additional Requirements

With the written approval of the General Business chair, students may make the following course substitutions:

1. Students may substitute a senior-level Special Topics course for a required emphasis course with the same departmental prefix.
2. Students with a 3.0 or higher grade point average may substitute BAMG 407/BAMK 407 Small Business Counseling for any approved BAMG or BAMK required emphasis course.

## MANAGEMENT

**Location:** Kepner 1090      **Telephone:** 970.351.2088  
**Chair:** Daniel James Rowley, Ph.D.  
**Professors:** Sharon K. Clinebell, D.B.A.; Karen L. Fowler, Ph.D.; D. Lynn Hoffman, Ph.D.; Daniel James Rowley, Ph.D.  
**Assistant Professors:** Joseph R. Bell, M.S., J.D.; Terry Stecher, Ph.D.

**Monfort Executive Professor:** Gerald Shadwick, B.S., J.D.

**Management Emphasis on page 153**

### Additional Requirements

In addition to the basic requirements listed for the Bachelor of Science in Business Administration at the beginning of this section, a grade of "C" or better must be earned for any of the courses listed in the above two categories, *Required Emphasis Credits and Elective Emphasis Credits*, in order for the courses to count toward graduation.

BAMG 453 and BAMG 455 are not offered on a regular basis.

## MARKETING

**Location:** Kepner 2090      **Telephone:** 970.351.2366  
**Chair:** R. "Vish" Vishwanathan Iyer, Ph.D.

**Professors:** Joe F. Alexander, D.B.A.; Nathan D. Kling, Ph.D.; James Reardon, Ph.D.; R. "Vish" Vishwanathan Iyer, Ph.D.

**Assistant Professor:** Janice M. Payan, Ph.D.

**Tointon Distinguished Professor:** John A. Boose, M.B.A.

**Marketing Emphasis on page 153**

### Additional Requirements

Students may substitute a BA 495 Executive Professor Special Topics II course for an *Elective Emphasis Credit* course with prior written permission from the Marketing Department chair.

Students are reminded that to graduate with a Business Administration degree, a student must attain a 2.00 or greater cumulative Business GPA and attain at least a "C" grade in each course in the Business Administration Core.

In addition to fulfilling the basic requirements for the Bachelor of Science degree in Business Administration, a grade of "C" or better must be earned in the *Required Emphasis Credits and Elective Emphasis Credits* categories in order for the courses to count toward graduation.

# BUSINESS REQUIREMENTS

## Academic Honesty

MCB students are expected to conduct themselves in accordance with the highest standards of academic honesty. Cheating, plagiarism, illegitimate possession and disposition of examinations, alteration, forgery, or falsification of official records or documents and similar acts or the attempt to engage in such acts are grounds for disciplinary action.

This action can include any of the following, in addition to any University disciplinary action:

- A failing grade for an assignment.
- A failing grade for a class.
- Suspension from MCB
- Expulsion from MCB

Students are referred to the UNC Student Handbook as to details of "University Standards of Conduct" and "Academic Expectations."

## Admission Requirements

Freshman students are admitted to the College of Business major and minors if they unconditionally meet the Colorado Commission of Higher Education (CCHÉ) requirement for admission to a level II Colorado institution. At the time of publication, the admission requirement was set at a CCHÉ composite index of 98.

The CCHÉ composite index is a sliding scale based on achievement test score and high school rank. A 98 index score centers on an ACT score of 24 or SAT of 1070 and a high school GPA of 3.0. A 98 index score is maintained at lower test scores or high school GPA provided that the candidate

has offset a lower qualification on one measure with a higher qualification on the other. High school students who score 570 or higher on their GED may be admitted.

Transfer students are admitted to the College of Business major and minors provided that they meet the admission requirements in place at the time of application. Students who transfer with less than 30 semester hours of college level coursework may qualify for admission to the College of Business provided they meet the freshman admission requirements specified above.

International students are admitted to the College of Business if they meet the University admission requirements noted above and score 550 or higher on the TOEFL. International students can obtain additional information about admissions from the MCB Advising Center, 970.351.1233.

## Change of Major/Minor Requirements

UNC students may change their major to business or may change from one business emphasis area to another provided that:

1. They have completed 30 semester hours of university level coursework with at least 15 semester hours at UNC. UNC students with less than 30 semester hours of university level coursework may change to a business major or minor provided that they have met the freshman entry requirement specified above for admission to MCB and are in good academic standing at UNC.
2. They meet the Change of Major and Minor requirements established by the department in which they wish to take their business emphasis. Copies of these requirements are

available in MCB department offices and at MCB's Advising Center. Students must meet all departmental entrance requirements in effect at the time they apply for their business major or minor.

Students enrolled in the Fresh Start Program should contact MCB's Advising Center for information on program-specific policies regarding admission to MCB. The College of Business uses grades from all classes taken at UNC when computing the student's GPA.

### Computing Proficiency

The College maintains a computing proficiency requirement as a prerequisite to certain business courses. It is expected that most students will demonstrate this proficiency as they enter the program by passing a proficiency exam. Students may also meet the proficiency requirement by substituting a satisfactory grade in **BA 101 Business Computing (3)** or its equivalent from another institution. Students should note, however, that the credits from BA 101 or its equivalent will not count toward the minimum of 120 credits needed for graduation.

### Continuation Requirements

A student who has attempted at least nine UNC credits in Business Administration courses must maintain a 2.00 grade point average in all business core and emphasis courses.

After attempting at least nine business core and emphasis credits at UNC, if a student's cumulative business grade point average falls below 2.00, the student will be placed on academic suspension and his/her business administration major terminated. The student immediately becomes an undeclared major, and his/her business class registration options are limited. A student may be reinstated if he/she raises his/her cumulative GPA to 2.00 or better within the next 9 business credit hours or one year, whichever comes first. Suspended students may retake business courses in which they previously earned less than a grade of "C."

If a student's cumulative business GPA remains below a 2.00 after completing their next semester in residence (or their next nine or more business hours), the student will be denied automatic readmission. Such students may then appeal for readmission to the Dean through the MCB Advising Center. Readmission is not automatic, and the decision of the Dean is final.

### Course Prerequisites

The student is held responsible for having met the current UNC Catalog prerequisites in all business courses for which he or she has registered. Students who register for business classes in which they do not have the prerequisites listed in the current UNC Catalog may be dropped from the class at any time by the instructor, department chair, or dean.

Students will be dropped from all upper division (300 or 400 level) business courses if they have not reached junior standing (at least 60 semester credits) before the first class meeting.

### Coursework Requirements

The College enforces prerequisites for enrollment in its business courses. Students should check the most current UNC Catalog for a list of course prerequisites being enforced.

The following business courses will not count toward the minimum of 120 credits needed for graduation: BA 100, BA 101, BA 251, BAFN 240 and BAMK 260.

### Enrollment in Business Courses

Only students who have a declared major in business may count more than 30 semester credits in business (courses with a BA\_ \_ prefix) toward their graduation. For more information, please contact the MCB Advising Center, Kepner 1055, phone 970.351.1233.

### Evening Program

Business courses required to complete the Business Core, the Business Minor and the emphasis in General Business are offered at night. All courses required within the Business Core and the Business Minor are offered once each year. Courses required for the emphasis in General Business are offered once every three semesters (excluding the summer

terms). Students may obtain a schedule of MCB's evening classes at the MCB Advising Center, Kepner 1055, phone 970.351.1233.

### General Education Program Requirements

The General Education Program at UNC requires a minimum of 40 semester credit hours selected from three skill areas and four content areas. At least 30 credit hours of these shall be taken in content areas (Categories 4-7).

### Graduation Requirements

To graduate with a baccalaureate degree in Business Administration a student must:

1. Complete a minimum of 120 semester hours of University coursework.
2. Satisfy the following requirements:
  - a. University requirements (e.g., General Education, etc.)  
*and;*
  - b. Monfort College of Business requirements (e.g., Required Major Credits, Elective Major Credits, Required Supporting Credits, etc.)  
*and;*
  - c. elective coursework to bring the total to at least 120 semester hours.
3. Meet the following course distribution requirements: MCB requires that the 120 credits required of a Business major's coursework be split evenly between business and non-business courses (courses with and without a BA\_ \_ prefix). To comply, a student must have completed a minimum of 60 business credits and 60 non-business credits in order to be eligible for graduation.
4. At least 50 percent of the credit hours in Business Administration required for the degree must be earned at UNC.
5. Attain a 2.0 or greater cumulative Business GPA and attain at least a "C" grade in each course in the Business Administration Core. To graduate with a Business minor, a student must attain a 2.0 or greater cumulative business GPA or attain a grade of "C" or better in every course required for the minor. To graduate with a Computer Information Systems minor, a student must attain at least a "C" grade in each course required for the minor.

These requirements apply to the total credits required to complete a business degree, regardless of whether the courses were taken at UNC or in transfer.

### Incomplete Grades

A grade of "I" is assigned when coursework is incomplete at the end of the semester and is used only when a student cannot fulfill his or her academic responsibilities during the last week of a semester or because he or she missed the final examination due to sickness, emergency in the family, or other serious emergency.

### Second Bachelor's Degree

Students who have previously earned a Bachelor's Degree and seek to earn a second Bachelor's Degree in Business Administration must complete a minimum of 30 semester hours at UNC. Individuals should contact the MCB Advising Center for more information on the Second Bachelor's Degree option.

### Time Limitation on Credit Earned Toward a Bachelor's Degree

Coursework completed by a student within the preceding 10 years may apply as credit toward a bachelor's degree. However, coursework taken before the 10-year limit will not count as credit toward the bachelor's degree.

### Transfer Credit

Credit from other Colorado institutions as specified in the UNC Transfer Guides may be transferred at the time of admission to the College of Business. Transfer credit from other institutions will be evaluated for acceptance towards a UNC degree on an individual basis.



Each emphasis notes the limits on transfer credit. The College requires that at least 50 percent of the business credit hours required for the degree in Business Administration must be earned at UNC. In addition, no more than 12 semester hours of the Business Administration Core may be transferred in toward a Business Administration major or minor.

A maximum of 9 semester credits in 300/400-level *Required Emphasis Credits and Elective Emphasis Credits* can be transferred from other four-year institutions.

UNC Business majors who plan to earn credit toward their degree from another institution must obtain **prior** written approval from their department chair and the MCB Advising Center, Kepner 1055, 970.351.1233.

The College offers business students a number of options for participating in an international student exchange program. Participation will require prior approval and may, in some instances, involve validation of courses taken at the foreign institution. All students interested in such programs should contact the MCB Advising Center for more information.

## STUDENT ORGANIZATIONS

Students enrolled in the Monfort College of Business have the opportunity to join a number of business clubs and organizations. Each of the organizations listed below is chartered by the College to assist students to prepare for careers in their discipline areas. Beyond this, business clubs provide hubs for student social activities within the College.

Student Club	Faculty Advisor	Department Affiliation	National Affiliation
Professional Accounting Association of UNC	Professor Allen McConnell	Accounting	–
Computer Management Association		CIS	Data Processing Management Association
Financial Management Association of UNC	Dr. Ken Moon	Finance	Financial Management Association
UNC Management Club	Dr. Terry Stecher	Management	Society for Advancement of Management
UNC Marketing Association	Dr. James Reardon	Marketing	American Marketing Association
Delta Sigma Pi	Dr. Keiko Krahnke	Kenneth W. Monfort College of Business	National Chapter
Beta Alpha Psi	Professor Allen McConnell	Accounting Chapter	National Chapter
Beta Gamma Sigma	Dr. Bill Cox	Kenneth W. Monfort College of Business	National Chapter
Alpha Kappa Psi	Dr. Vish Iyer	Kenneth W. Monfort College of Business	National Chapter
INROADS	Dr. Vish Iyer	Kenneth W. Monfort College of Business	–
In addition, the Monfort College of Business Student Representative Council (MCB/SRC) advises the Dean on matters of student concern and schedules college-wide events. This council is comprised of the presidents of the student clubs listed above and at-large representatives from the business student body.			

## FACULTY, MONFORT COLLEGE OF BUSINESS

- Joe F. Alexander, D.B.A.
- Garth H. Allen, B.B.A, J.D.
- Joseph R. Bell, M.S., J.D.
- John A. Boose, M.B.A.
- John M. Clinebell, D.B.A.
- Sharon K. Clinebell, D.B.A.
- Bill D. Cox, Ph.D., C.P.A.
- Charmayne B. Cullom, Ph.D.
- Cris de la Torre, Ph.D., J.D.
- William L. Duff, Jr., Ph.D.
- John E. Elsea, Ph.D., C.P.A.
- Karen L. Fowler, Ph.D.
- Theresa K. Gutierrez, Ph.D., C.P.A.
- D. Lynn Hoffman, Ph.D.
- R. "Vish" Vishwanathan Iyer, Ph.D.
- Timothy E. Jares, Ph.D.
- Nathan D. Kling, Ph.D.
- Leopold "Lee" Korins, B.S.
- Keiko Krahnke, Ph.D.
- Michael R. Leonard, J.D.
- Jay M. Lightfoot, Ph.D.
- Robert M. Lynch, Ph.D.
- Rutilio Martinez, Ph.D.
- Christine A. McClatchey, Ph.D.
- Allen W. McConnell, M.S., C.P.A.
- Kenneth P. Moon, Ph.D., C.C.M.
- Richard I. Newmark, Ph.D., C.P.A.
- Janice M. Payan, Ph.D.
- Junius W. Peake
- James Reardon, Ph.D.
- Ronald O. Reed, Ph.D., C.P.A.
- Daniel James Rowley, Ph.D.
- Tod A. Sedbrook, Ph.D.
- Gerald Shadwick, B.S., J.D.
- Terry Stecher, Ph.D.
- John R. Stewart, Ph.D., C.P.A.
- Richard T. Turley, Ph.D.





# COLLEGE OF EDUCATION



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## UNIVERSITY PROGRAMS

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## OFFICE OF THE DEAN

**Location:** McKee 125      **Telephone:** 970.351.2817

**Dean:** Eugene P. Sheehan, Ph.D.

**Assistant Dean:** Phillip M. Wishon, Ph.D.

The College of Education is a professional college offering specialized undergraduate licensure and graduate degree programs in education and related areas to prepare elementary and middle school teachers, special education teachers, early childhood specialists, educational technology personnel and other educational specialists. In addition, the professional

education programs are offered for students in secondary and K-12 teacher education programs. Graduate programs are also offered to prepare school administrators, counselors and counseling psychologists for mental health agencies and private practice and to prepare college and university faculty and administrators in a wide range of programs.

The faculty of the College of Education is committed to the serious study of education and the promotion of professional standards to foster innovation in professional preparation. This commitment also encompasses social issues, such as multicultural and ethnic education and increasing public awareness of education in general. The faculty, staff and administration are fully committed to equal opportunity and affirmative action. Multicultural education for all educators is a high priority.

The College of Education is accredited by the National Council for the Accreditation of Teacher Education (NCATE) and all educator preparation programs are approved for licensure by the Colorado State Board of Education. The College is composed of the following academic units: Department of Elementary Education and the Department of Educational Foundations and Curriculum Studies in McKee, Division of Professional Psychology, Division of Educational Leadership and Policy Studies, Division of Exceptionalities and Bilingual/ESL Education, Department of Educational Psychology, Department of Applied Statistics and Research Methods, and Department of Educational Technology.

In addition, the Department of Elementary Education and the Department of Educational Foundations and Curriculum Studies provides support to the University-wide professional teacher education programs. Other major units in the College are the Center for Applied Research, the Center for Educator Induction, the Center for Educational Leadership, the Bresnahan-Halstead Center on Mental Retardation and Developmental Disabilities, and the Kephart Memorial Child Study Center.

Performance based standards for degree programs in the College of Education are available online at [http://www.unco.edu/coe/annual\\_assessment.htm](http://www.unco.edu/coe/annual_assessment.htm).

## DEPARTMENTS, DIVISIONS, SCHOOLS AND PROGRAMS

### APPLIED STATISTICS AND RESEARCH METHODS

**Location:** McKee 518      **Telephone:** 970.351.2807

**Department Chair:** Daniel J. Mundfrom, Ph.D.

**Professors:** Daniel J. Mundfrom, Ph.D.; Dale Shaw, Ph.D.;  
Ann M. Thomas, Ph.D.

**Associate Professor:** Susan R. Hutchinson, Ph.D.

**Assistant Professors:** Maria K. E. Lahman, Ph.D.; Jay R.  
Schaffer, Ph.D.

The master's and doctoral programs in Applied Statistics and Research Methods are designed to prepare graduates in statistics and education who make important contributions to educational practice. Through the programs, great emphasis is placed on how research design and statistics can be applied to educational issues and problems. Service courses are offered by the department to support other university programs at the graduate level.

**Applied Statistics and Research Methods, M.S. on  
page 122**

#### **Applied Statistics and Research Methods (M.S.) Requirements**

Complete Graduate School admission requirements; and, students planning on concentrating on research methods need a working knowledge of basic statistics from descriptive techniques through analysis of variance, and students planning on concentrating on applied statistics need a working knowledge of calculus and linear algebra. Students must also provide a written statement regarding the relationship of the masters program to the student's professional goals.

**Applied Statistics and Research Methods Doctoral  
Minor on page 113**

**Applied Statistics and Research Methods, Ph.D. on  
page 96**

#### **Applied Statistics and Research Methods (Ph.D.) Requirements**

Complete Graduate School admission requirements and provide the ASRM department chair with a written statement regarding the relationship of the doctoral program to the student's professional goals. It is expected that the student possesses the knowledge, skills and competencies equivalent to those of a graduate from our M.S. degree program. Should it be necessary, a student may use elective credits to make up deficiencies.

### EDUCATIONAL FOUNDATIONS AND CURRICULUM STUDIES

**Location:** McKee 216      **Telephone:** 970.351.2703

**Department Chair:** Michael L. Jacobs, Ed.D.

**Professor:** Michael L. Jacobs, Ed.D.

**Associate Professors:** Frederick J. Bartelheim, Ed.D.; Adele  
Sanders, Ph.D.; Barbara L. Whinery, Ph.D.

**Assistant Professor:** Thomas A. Griggs, Ph.D.

The academic and professional purpose that unifies the various approaches to foundations of education is the development of interpretive, normative and critical perspectives on education. Foundational study within education relies heavily on the resources and methodologies of the humanities and the social and behavioral sciences.

The primary objectives of foundational studies at UNC are to provide experiences and perspectives that allow students to explain and evaluate educational issues, practices and policies in a manner that leads to the development of a disciplined sense of professional responsibility.

Foundations courses are a major component in the undergraduate professional education core and in many graduate programs. Courses are open to all undergraduate and graduate students. A student pursuing a doctoral degree in any area may take support courses in Foundations of Education.

**Graduate Interdisciplinary Degree Program, M.A. on  
page 132**

**Teacher Education Emphasis**

#### **Graduate Interdisciplinary: Teacher Education Emphasis (M.A.) Requirements**

Applicants must follow the admission procedures outlined under "Graduate School: Policies and Procedures" and must meet the minimum admission requirements for the master's degree. Applications meeting minimum Graduate School admission requirements will be forwarded to the Department of Elementary Education or the Department of Educational Foundations and Curriculum Studies in McKee for review and recommendation regarding admission by the Graduate School. In addition to the basic application requirements, applicants are required to document successful teaching experiences, possess or be eligible for a Colorado teaching license, and develop an application portfolio which demonstrates the congruence between their professional background and the program outcomes.

All Graduate School requirements for the interdisciplinary master's degree must be met. The degree awarded will be a Master of Arts degree in Interdisciplinary Studies: Education.

Students pursuing a course concentration for added endorsement to a Colorado teaching license must take and successfully complete the appropriate Program for Licensing Assessments for Colorado Educators (PLACE) examination.

#### **Middle Grades Education Program**

**Location:** McKee 216      **Telephone:** 970.351.2703

**Associate Professors:** Adele Sanders, Ph.D.; Barbara L.  
Whinery, Ph.D.

Note: This program is currently under review. Students interested in this program should contact Dr. Barbara Whinery, 970.351.1605 (July, 2003)

The Middle Grades Education program is designed to prepare educators at the Undergraduate and Graduate levels to teach young adolescents, ages ten to fifteen, in middle school grades five through nine. The content of the programs include understanding of human growth and development, effective teaching strategies appropriate for young adolescents, and middle level curriculum that is responsive to the developmental characteristics of young adolescents. The knowledge base of the programs integrates the academic, professional and personal development domains of learners.

**Middle Grades Professional Teacher Education  
Program on page 221**

**Elementary Education, M.A.T. on page 129**

**Middle School Emphasis on page 129**

#### **Middle School Emphasis (M.A.T.) Requirements**

Students may petition for course equivalence consideration for a maximum of two classes in electives and required courses except where otherwise noted.

Applicants must have an overall 3.0 GPA on the last 60 semester hours for full admission to this program.

#### **Secondary Education Program**

**Location:** McKee 216      **Telephone:** 970.351.2703

**Professor:** Michael L. Jacobs, Ed.D.

**Associate Professor:** Frederick J. Bartelheim, Ed.D.

The Secondary Professional Teacher Education Program (PTEP) is designed to prepare students to teach at the 7-12 grade levels within a special content area. Students selecting this program will work with their major advisor to enter the Secondary PTEP Phase One where they will be introduced to program standards and Phases Two, Three and Four to complete their program.

**Secondary Professional Teacher Education Program on page 222**

**K-12 Professional Teacher Education Program on page 225**

## EDUCATIONAL LEADERSHIP AND POLICY STUDIES

**Location:** McKee 418      **Telephone:** 970.351.2861  
**Director:** Richard A. King, Ph.D.

The mission of the Division is to develop educators who have the vision and the ability to lead educational organizations by providing needed services to learners in educational settings, creating effective learning environments, effecting policies that govern educational organizations, and modeling continuous learning with and for the citizens of the community. To achieve this mission, ELPS faculty incorporate innovative teaching practices; engage in inquiry about leaders and leadership; and demonstrate leadership at the local, regional, national and international levels.

The underlying philosophy of the ELPS Division is that educational leaders possess knowledge of self, others, organizations, learning and society necessary to perform creatively and effectively in diverse environments. They engage people in identifying and working toward the accomplishment of a shared vision for the organization. Leaders incorporate the ideas, values and experiences reflective of a pluralistic society and promote continual learning.

The ELPS Division programs are exemplified by the following beliefs:

- Human growth and development are lifelong pursuits;
- Organizations are artifacts of a larger society;
- Learning, teaching, and collegiality are fundamental activities of educational organizations;
- Validated knowledge and active inquiry form the basis of practice;
- Moral and ethical imperatives drive leadership behavior;
- Leadership encompasses a learned set of knowledge, skills, and attitudes;
- Effective leadership in educational organizations depends on individual and team efforts;
- Leaders' behavior and actions model their beliefs and values;
- Leaders effect positive change in individuals and organizations.

The ELPS programs and the scholarship of its faculty and students emphasize:

- Formal and informal roles and strategies of educational leaders in P-12 schools and post-secondary settings
- Fiscal, legal and personnel aspects of schools and higher education
- Innovative practices in leadership preparation
- Understanding, facilitating and evaluating the change process
- Innovation and restructuring of schools
- Collaboration in teaching, learning and scholarship
- Adult learning and development and staff development
- Policy development, analysis and implementation
- Service to schools, higher education and policy makers
- Identification of multicultural and gender-based needs

## Educational Leadership Program

**Location:** McKee 418      **Telephone:** 970.351.2861  
**Professors:** Michael J. Gimmestad, Ph.D.; Richard A. King, Ph.D.; Kathryn S. Whitaker, Ph.D.  
**Associate Professor:** Florence Guido-DiBrito, Ph.D.  
**Assistant Professors:** Thomas J. Gavin, Ph.D.; Gardiner L. Tucker, Jr., M.Ed.; Linda R. Vogel, M.A.

**Administrators' Licensure: District Level Leadership (Non-Degree) on page 118**

### Administrators' Licensure (Non-Degree) Requirements

Applicants for licensure programs must submit an application form, official transcripts, and processing fee directly to the Graduate School. In addition, an application packet available through the Division Office (McKee 418) describes materials for admission review by the faculty: current resume, goals statement, essay regarding an educational issue, and Professional Assessment Forms. Admission decisions are made throughout the year.

**Principals' Licensure (Non-Degree) on page 119**

### Principals' Licensure (Non-Degree) Requirements

Students may work concurrently on the principal's license and a Master of Arts degree (M.A.) or an Educational Specialist degree (Ed.S.) in Educational Leadership. To obtain a professional license, students must have a master's degree, complete a principal license program, and satisfactorily pass the PLACE exam. Students must also complete an induction program. Students desiring a principal's license must submit an application to the Graduate School. In addition, an application packet available through the Division Office (McKee Hall) describes materials for admission review by the faculty: current resume, goals statement, essay regarding an educational issue, and Professional Assessment Forms. Admission decisions are made throughout the year.

**Educational Leadership, M.A. on page 128**

### Educational Leadership (M.A.) Requirements

Applicants for the master's program must submit an application form, official transcripts, and processing fee directly to the Graduate School. In addition, an application packet available through the division office (McKee 418) describes materials for admission review by the faculty: current resume, goals statement, essay regarding an educational issue, and Professional Assessment Forms. Admission decisions are made throughout the year.

One set of materials maybe submitted for review for admission to the M.A. and either the Colorado Principal or Administrator Licensure program. This intent should be clearly described in the statement of goals and noted on the application form.

The master's degree requires a minimum of 36 semester hours of graduate study, of which 12 hours are core learning experiences. Depending on career goals, students may choose from four concentration areas in the master's program: P-12 education, higher education and student affairs leadership, adult and continuing education, or an individualized program. Students may obtain the master's degree while also working concurrently on a principal or administrator license.

**Educational Leadership, Ed.S. on page 115**

### Educational Leadership (Ed.S.) Requirements

Ed.S. program applicants must submit an application form, official transcripts, three letters of recommendation, and processing fee directly to the Graduate School. In addition, an application packet available through the Division Office (McKee 418) describes materials for admission review by the faculty: current resume, goals statement, an essay regarding an educational issue and Professional Assessment Forms.

One set of materials may be submitted for review for admission to the Ed.S. and either the Colorado Principal or Administrator Licensure program; this intent should be clearly described in the student's statement of goals and noted on the application form. Admission decisions are made throughout the year.

## Educational Leadership, Ed.D. on page 101

### Educational Leadership (Ed.D.) Requirements

The purpose of the Ed.D. program is to engage educators in P-12 and other education-related settings in the advanced study of educational leadership so they can critique and improve their own practice. The program focuses on problems of practice - studying practice, engaging in constructive critique of practice, and improving one's practice. Coursework in the program is designed to be highly relevant to the participants' jobs and careers.

Features that make this program attractive to current and aspiring educational leaders:

- Collaborative and collegial learning community;
- Challenging, provocative, research-based knowledge;
- Cohort approach to learning for 3 semesters of enrollment;
- Instructional techniques emphasizing practices of adult learning;
- Emphasis on problems of practice;
- Professional networking with area P-12 educational leaders;
- National and internationally recognized university faculty and affiliates;
- Faculty and cohort commitment that all participants successfully complete the program.

**Admission.** Ed.D. program applicants must submit an application form, official transcripts, three letters of recommendation, Graduate Record Examination General Test Scores and processing fee directly to the Graduate School. In addition, an application packet available through the Division Office (McKee 418) describes materials required for admissions by the Educational Leadership Program: a resume, a written statement of goals, an essay on a current problem of practice, and Professional Assessment Forms. Applicants complete an interview with the Educational Leadership program faculty.

For students who live out-of-state, the interview may be conducted by a conference call. Although admissions decisions are made throughout the year, students who complete the application process by February 15, including the interview, are given priority screening for Fall admissions of that year and have increased opportunities for financial assistance. The application process, including interview, is typically completed by May 1.

The doctoral program expands upon the foundation gained in study for the master's, specialist, and/or licensure programs. It provides opportunities for candidates to develop breadth in understanding leadership, policy, and research methodologies, and also depth in one or more areas of specialization. The focus of this program is the refinement of students' understandings of leadership and policy development and analysis, ultimately culminating in the dissertation. The dissertation is meant to address a problem of practice in educational leadership.

Entering doctoral students who already possess a Master's Degree in Educational Leadership or a related field complete a minimum of 64 semester hours of graduate credit beyond the master's degree. Students with an Educational Specialist's degree enroll in a minimum of 42 semester hours beyond the specialist's degree. These semester hour requirements are minimum expectations for students' performance. Credit requirements are a function of the types of learning experiences needed by students to achieve their goals.

**Program of Study.** The nature of doctoral studies implies a blend of required learning experiences and individualized program development to reflect the personal, professional, and academic goals of each student. Each doctoral student admitted to the program works with an advisor and a program planning committee to develop a plan of study.

## Higher Education and Student Affairs Leadership Program

**Location:** McKee 418      **Telephone:** 970.351.2861

**Professor:** Michael J. Gimmestad, Ph.D.

**Associate Professor:** Florence Guido-DiBrito, Ph.D.

**Assistant Professor:** Gardiner L. Tucker, Jr., M.Ed.

### Higher Education and Student Affairs Leadership, Ph.D. on page 106

#### Higher Education/Student Affairs Leadership (Ph.D.) Requirements

**Program Approach to Doctoral Study.** The division of Educational Leadership and Policy Studies uses a community-of-scholars model of interaction among students and faculty. The students are viewed as colleagues with progressively higher levels of responsibility and expertise. Cooperative research and other scholarly projects are encouraged among faculty members and students.

**Admission.** In addition to meeting the admission requirements of the Graduate School, the student must have a master's degree in higher education, student affairs or a related field from an accredited institution, at least two years of successful experience in higher education or student affairs work and an acceptable personal interview with the program admissions committee.

**Commitment to Diversity.** The Higher Education and Student Affairs Leadership program recognizes the importance of addressing the needs of an increasingly diverse society. To that end, the program strives to increase the educational opportunities of diverse student populations, as well as create an atmosphere where the values and concerns of diverse populations receive attention and respect. Issues of diversity are integrated into core courses and are explored more fully through special topics courses.

**Prerequisites.** SRM 600 or the equivalent in an introductory statistics and research coursework is required for admission. If this was not a part of the master's degree curriculum, the deficiency may be made up by taking this course at UNC. When such deficiencies are made up, the courses taken do NOT count as degree credit toward the Ph.D.

## EDUCATIONAL PSYCHOLOGY

**Location:** McKee 518      **Telephone:** 970.351.2808

**Department Chair:** Randy J. Lennon, Ph.D.

**Professors:** Kathryn F. Cochran, Ph.D.; John B. Cooney, Ph.D.; Randy J. Lennon, Ph.D.; Teresa M. McDevitt, Ph.D.; Steven M. Pulos, Ph.D.; Phillip M. Wishon, Ph.D.

**Associate Professor:** Fong-Yun Lee, Ph.D.

**Assistant Professor:** Jennifer K. Geringer, Ph.D.

Educational Psychology offers programs and service courses at both the graduate and undergraduate levels. The program faculty provide courses on psychological principles and theories and research methodologies as applied to the educational process. These applications range from everyday concerns in the public school classroom to basic research on learning and human development.

The master's and doctoral programs are designed to prepare individuals for educational activities such as classroom teaching, evaluation, test construction, educational research, educational consulting to business and public schools and university teaching. Faculty and students have access to mainframe computers with remote terminals, a complete set of statistical packages and a microcomputer laboratory. These facilities are available for both teaching and research purposes. Service courses are offered by the department to support other university programs at both the undergraduate and graduate levels.

### Educational Psychology, M.A. on page 129

#### Educational Psychology (M.A.) Requirements

Admission to the M.A. degree program is a two-step process. First, the applicant must apply to the UNC Graduate School.

Upon meeting the admission criteria for the Graduate School, the candidate's application is forwarded to the program area faculty for review. All complete applications received by midterm are processed that term. Decisions regarding admission are communicated to the applicant before the beginning of the next semester. Although students may enroll any semester following admission, they are strongly encouraged to begin their program in either the summer or fall term in order to enter the proper sequencing of courses. Applications require a description of educationally-related work experience, statement of career goals, three letters of reference, and GRE scores.

Minimum criteria for acceptance include:

- GRE combined score of 1,500 on the verbal, quantitative and analytical sections with no section falling below 450. The GRE must have been taken within the last five years.
- GPA of 3.0 in the last 60 semester hours of academic work.
- Three letters of recommendation indicating a high potential for academic success and interpersonal competency.
- Congruency between the applicant's career goals and the purpose of the M.A. program.
- Educationally-related work experience is desirable, but not required.

In the case of GRE scores and GPA, exceptions may be considered if warranted by special circumstances and individual situations.

**Educational Psychology Doctoral Minor on page 113**

**Educational Psychology, Ph.D. on page 103**

### **Educational Psychology (Ph.D.) Requirements**

Admission to the Ph.D. degree program is a two-step process. First, the applicant must apply to the UNC Graduate School. Upon meeting the admission criteria for the Graduate School, the candidate's application is forwarded to the program area faculty for review. Reviews by the program area faculty are typically conducted within four weeks of receipt of the application. All complete applications received by midterm are processed that term. Decisions regarding admission are communicated to the applicant before the beginning of the next semester. Although students may enroll any semester following admission, they are strongly encouraged to begin their program in either the summer or fall term in order to enter the proper sequencing of courses. Minimum criteria for acceptance include:

- GRE combined score of 1,650 on the verbal, quantitative and analytic sections, with a minimum verbal score of 500.
- GPA of 3.5 (4.0 scale) in the last 60 semester hours of academic work.
- Three letters of recommendation indicating a high potential for success in a doctoral research program.
- A written statement of career goals and a resume.
- Congruency between the applicant's career goals and the purpose of the Ph.D. program.

The doctoral program contains a common core of courses and three areas of concentration: Learning and Cognitive Processes, Human Development, and Research, Statistics and Measurement. All students must take the common core and then specialize in one of the emphasis areas. Depending upon the concentration area chosen, students must take a minimum of 66 hours to graduate.

### **Early Childhood Education Programs**

Early Childhood Education offers a graduate program at the master's level. The character of the program and the efforts of the faculty are guided by the perception of young learners and the early childhood profession through developmentally appropriate practices. The program is based on an interdisciplinary focus which emphasizes fundamental as well as current educational issues, research competencies, professional skills development, and field-based studies.

**Early Childhood Minor on page 207**

**Early Childhood Professional Teacher Education Program on page 218**

**Early Childhood Education, Post-Baccalaureate Licensure on page 118**

**Elementary Education: Early Childhood Education, M.A. on page 130**

### **Elementary Education: Early Childhood (M.A.) Requirements**

Applicants must apply through the Graduate School and have an overall 3.0 GPA on the last 60 semester hours for full admission to this program.

Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the Department of Elementary Education in McKee for information.

**Prerequisites.** Students who are not licensed in elementary education must have their transcript evaluated by the Department of Elementary Education. This program does not lead to initial licensure. Licensure in elementary education is not a prerequisite for students for whom one or more of the following conditions applies: a) the student is licensed K-2 or K-3 or some other designation embracing a licensure that covers a similar portion of the current K-6 Colorado licensure; b) the student plans to work only with preschool-age children or otherwise work in settings that elementary licensure is not required; or c) the student is not a United States citizen and plans to return to a situation separate from any direct association with United States schools.

Two years of experience with young children or the equivalent is expected. Students without prior experience with young children in an educational setting must successfully complete the following program prerequisites: EDEC 601 or equivalent and a course in child development. Credits earned in prerequisite coursework may not be counted toward the 33-35 credit hours required in the M.A. program.

Demonstration of appropriate literacy and competency in computer applications is part of this program. ET 503 or the equivalent may be used to meet this requirement.

The successful completion of an exit experience is required before fulfillment of all program requirements will be acknowledged.

## **EDUCATIONAL TECHNOLOGY**

**Location:** McKee 518

**Telephone:** 970.351.2816

**Chair:** TBD

**Associate Professors:** Jeffrey W. Bauer, Ph.D.; Linda L. Lohr, Ed.D.;

**Assistant Professors:** David A. Falvo, Ed.D.; James E. Gall, Ph.D.; Heng-Yu Ku, Ph.D.

The Educational Technology faculty administer graduate degree programs in Educational Technology and Educational Media, as well as graduate non-degree programs leading to a School Library Media endorsement by the State of Colorado Department of Education. In addition, the department offers a Master of Arts Degree in Educational Media.

At the master's level these programs of study are designed to develop knowledge and skills in instructional systems analysis and design, computer applications, media design and information management. Application is focused upon improving human performance in applied learning settings.

At the doctoral level students are provided with advanced opportunities to develop knowledge and skills in the area of instructional system design, analysis and evaluation. Emphasis is placed upon the generation of empirically derived strategies to promote instructional practice based upon learning and instructional theory. Service courses are offered by the department to support other university programs at both the undergraduate and graduate levels.

### **Western Regional Graduate Program**

The Ph.D. program in educational technology is a member of the Western Regional Graduate Program. Under this program any Ph.D. student in educational technology, who is a

resident of selected western states pays in-state tuition rather than out-of-state tuition. The selected states include: North Dakota, South Dakota, Montana, Wyoming, Colorado, New Mexico, Idaho, Utah, Nevada, Arizona, Washington, Oregon, Alaska and Hawaii.

**Educational Technology Doctoral Minor on page 113**

**Educational Technology, M.A. on page 129**

### **Educational Technology (M.A.) Requirements**

Admission to the M.A. degree program is a two-step process. First, the applicant must apply to the UNC Graduate School. Upon meeting the admission criteria for the Graduate School, the candidate's application is forwarded to the program area faculty for review. Reviews by the program area faculty are held each semester (including summer). Decisions regarding admission are communicated to the applicant before the beginning of the next semester. Although students may enroll any semester following admission, they are strongly encouraged to begin their program in either the summer or fall semester in order to enter the proper sequencing of courses.

Applications require a description of educationally-related work experience, statement of career goals, three letters of reference, GRE scores and transcripts from previous undergraduate work.

Multiple criteria for admission are considered, including:

- GRE combined score of 1,500 on the verbal, quantitative and analytical sections. The GRE must have been taken within the last five years.
- GPA of 3.0 in the last 60 semester hours of academic work.
- Three letters of recommendation indicating a high potential for academic success and interpersonal competency.
- Congruency between the applicant's career goals and the purpose of the M.A. program.

Educationally-related work experience is desirable, but not required.

**Educational Media, M.A. on page 128**

### **Educational Media (M.A.) Requirements**

Admission to the M.A. degree program is a two-step process. First, the applicant must apply to the UNC Graduate School. Upon meeting the admission criteria for the Graduate School, the candidate's application is forwarded to the program area faculty for review. Reviews by the program area faculty are held each semester (including summer). Decisions regarding admission are communicated to the applicant before the beginning of the semester. Although students may enroll any semester following admission, they are strongly encouraged to begin their program in either the summer or fall semester in order to enter the proper sequencing of courses.

Applications require a description of educationally-related work experience, statement of career goals, three letters of reference, and GRE scores.

Multiple criteria for acceptance are considered, including:

- GRE combined score of 1,500 on the verbal, quantitative and analytical sections. The GRE must have been taken within the last five years.
- Three letters of recommendation indicating a high potential for academic success and interpersonal competency.
- Congruency between the applicant's career goals and the purpose of the M.A. program.
- Educationally-related work experience is required.

Note that applicants must also complete the Notification of Intent to Seek Endorsement (institutional recommendation).

**Educational Technology, Ph.D. on page 104**

### **Educational Technology (Ph.D.) Requirements**

The doctoral program is specifically designed to increase the levels of competence achieved in the master's degree program

in educational technology. Students entering the doctoral program must have a master's degree in educational technology or a related field. Students in the educational technology program master a set of common program objectives and a set of objectives specific to an emphasis area in instructional development/design, interactive technologies, technology integration or distance education.

The program is designed to be rigorous but practical, encouraging the serious, mature, motivated and competent student to apply for admission. Applications are reviewed by the educational technology faculty during the middle of each semester. Although the students may enroll any semester following admission, they are strongly encouraged to begin their program in either the summer or fall semester in order to enter the proper sequencing of courses.

All applications must include the following items:

- Two page statement of career goals
- Description of previous teaching and other work experience
- In addition, an interview will be arranged with the faculty.

Minimum criteria for acceptance include:

- Minimum combined verbal, quantitative and analytical score of 1,650 on the Graduate Record Examination taken within the last five years with individual verbal, quantitative and analytical scores above 500.
- Grade point average of 3.2 on the most recent 60 semester hours of coursework.
- Congruency between the applicant's career goals and the goals of the doctoral program.
- Letters of reference indicating a strong potential for academic success, interpersonal competency and growth of the individual as a designer, producer, implementor, teacher, scholar, evaluator and researcher in educational technology.
- Relevant work experience is desirable.
- Successful interview with the faculty.

## **ELEMENTARY EDUCATION**

**Location:** McKee 216      **Telephone:** 970.351.2908

**Co-Chairs:** Linda J. Button, Ed.D.; Fredrick L. Silverman, Ed.D.

**Professor:** Fredrick L. Silverman, Ed.D.

**Associate Professors:** Gary Fertig, Ph.D.; Susan A. Thompson, Ed.D.

**Assistant Professors:** Linda J. Button, Ed.D.; Kevin M. Laxalt, Ed.D.; Carol A. Picard, Ph.D.

Elementary Education offers programs at the undergraduate and graduate levels. These programs provide opportunities for students to become teachers and for experienced teachers to enhance their professional expertise. Faculty in these programs are committed to delivering individualized instruction for students in the degree and/or licensure programs. The philosophy of the programs is based on the premise that learning must be efficiently directed to meet pupils' individual needs through varied teaching modes.

**Elementary Professional Teacher Education Program on page 219**

**Elementary Education Post-Baccalaureate Licensure on page 119**

**Elementary Education, M.A.T. on page 129**  
**Middle School Emphasis**

**Educational Studies, Ed.D. on page 105**

### **Elementary Education (Ed.D.) Requirements**

Must apply through the Graduate School.



## EXCEPTIONALITIES AND BILINGUAL/ESL EDUCATION

**Location:** McKee 29      **Telephone:** 970.351.2691

**Director:** Barbara G. Rhine, Ed.D.

**Professors:** Diane Bassett, Ph.D.; George T. Betts, Ed.D.; Antonio L. Carvajal, Ed.D.; Kay A. Ferrell, Ph.D.; Allen Huang, Ed.D.; Lewis B. Jackson, Ed.D.; J. Melvin Lane, Ed.D.; John L. Luckner, Ed.D.; Madeline Milian, Ed.D.; Harvey Rude, Ed.D.

**Associate Professors:** Sandra K. Bowen, Ph.D.; Francie R. Murry, Ph.D.; Stuart N. Omdal, Ph.D.; Barbara G. Rhine, Ed.D.; Debora L. Scheffel, Ph.D.

**Assistant Professors:** Robin D. Brewer, Ed.D.; Paula W. Conroy, Ed.D.; Thomas A. Griggs, Ph.D.

The Division of Exceptionalities and Bilingual/ESL Education offers one of the most comprehensive training programs for special educators (undergraduate, master's, doctoral) in the nation. UNC is the only institution in a six-state region that offers degree programs in special education in all areas of exceptionality. Special programs associated with special education include the Summer Enrichment Program for the Gifted and Talented, the Bresnahan-Halstead Center on Mental Retardation and Developmental Disabilities, and the Kephart Memorial Child Study Center and an annual symposium in Vail, Colorado featuring renowned speakers. Faculty in Exceptionalities and Bilingual/ESL Education are nationally recognized, have published in their respective areas, presented papers at prestigious conferences and have many of their publications translated into several foreign languages. Numerous program and research grants provide support for professional development and student scholarships at the graduate level.

Special Education Minor on page 213

Special Education, B.A. on page 195

Special Education, B.A. — PTEP Program on page 225

Special Education, M.A. on page 141

Early Childhood Special Education Emphasis

Moderate Needs Emphasis

Profound Needs Emphasis

Severe Needs: Affective Emphasis

Severe Needs: Cognitive Emphasis

Severe Needs: Hearing Emphasis

Severe Needs: Vision Emphasis

Teaching the Gifted and Talented Emphasis

### Special Education (M.A.) Requirements

**Admission.** In addition to meeting the admission requirements of the Graduate School, the student must possess a grade point average on the last 60 semester hours of at least 3.0 on a 4.0 scale, provide a minimum of two letters of recommendation from previous employers or academic professors, provide a statement of philosophy and goals of application in relation to the needs in the field and, if possible, arrange for a personal interview.

**Additional Admission Requirements for Teaching the Gifted and Talented Emphasis.** In addition to meeting the admission requirements of the Graduate School, the student must possess a current teaching license, must have at least two years teaching experience and must have a grade point average from the baccalaureate degree of at least 3.0 on a 4.0 scale. Three written references from the most recent or current employer or immediate supervisor must be submitted along with a goal statement of educational plans. A personal interview may be required. Acceptance or rejection of an applicant will be made after an evaluation of all of the above requirements is made.

**Comprehensive Examination:** In addition to admission to the program and satisfactory completion of all coursework, each student must pass a written comprehensive examination before she or he is allowed to graduate.

**Evaluation.** Evaluation of the student's professional potential will be an ongoing process throughout the program. Continuation/exit requirements will be based on multiple criteria such as faculty interview, professional recommendations, recommendations of the advisor or other program faculty, academic ethics, successful completion of the comprehensive examination and potential for teaching handicapped infants and adults. The multiple criteria approach does not assume that each of these factors carry equal weights; any one factor might well outweigh all others.

**Licensure.** Students who seek Colorado licensure in an area of Special Education or request an institutional recommendation for licensure from UNC must meet Colorado teacher licensure requirements.

Students wishing to obtain Colorado licensure are required to pass proficiency examination(s). Students should contact the division of Exceptionalities and Bilingual/ESL Education in McKee for information.

A master's degree or a department approved licensure program is required before the University of Northern Colorado will recommend the student for endorsement.

Students entering the licensure program must meet the same entrance requirements as the Master's degree students. They must also demonstrate achievement of all program standards through a combination of UNC coursework, prior coursework, or other departmentally approved documentation and completion of a licensure examination. However, a minimum of 15 semester hours must be taken at UNC.

Special Education Administration, Post- Master's Licensure Program on page 121

Special Education Doctoral Minor on page 114

Special Education, Ed.D. on page 110

### Special Education (Ed.D.) Requirements

In addition to meeting the admission requirements of the Graduate School, the student must receive a positive recommendation by the Division of Exceptionalities and Bilingual/ESL Education's Doctoral Admissions and Review Committee. When a prospective student has met general University requirements for admission, his or her application is submitted to the Division for evaluation. In addition to an interview with members of the faculty, the Division of Exceptionalities and Bilingual/ESL Education requires the submission of:

1. a resume;
2. a written statement of academic and professional goals;
3. a published or professional writing sample.

The Committee reviews each application for admission to determine evidence of:

- potential for scholarship;
- relevant formal training at the undergraduate and/or graduate level;
- evidence of successful teaching or clinical experience with persons who have exceptionalities for a minimum of two years;
- potential for leadership;
- professional commitment;
- clarity and rationality of professional and personal goals;
- potential for effective university teaching; potential for conceptualization of and reporting research.

Each applicant must receive a positive recommendation from a majority of the Doctoral Admissions and Review Committee members to be recommended for admission to the Graduate School.

The philosophy of the doctoral program is based on the concept that learning is an active, self-regulated process. Therefore, doctoral programs are individually tailored through interactive planning that involves the student, the advisor, the doctoral committee, other students and people from outside the University.

Students are expected to enter the program with a clear sense of personal direction and a set of learning goals. In this context, a personalized program is developed in which the focus is on finding innovative and flexible ways to meet the needs of each student while insuring that the student develops advanced skills and knowledge. The overall goal of each student's program is to develop leadership abilities in five major themes in relation to special education, namely: theory, effective teaching, inquiry, scholarly production and intra-interpersonal skills.

Upon admission to the doctoral program, each student will be assigned an advisor. In consultation with this advisor, she or he should determine courses for the first semester.

In joint planning sessions the student and advisor, in consultation with the doctoral committee, other students and people from outside the University, should establish a tentative doctoral program during the first and second semesters on campus.

This program should be based on past experience and training and on student interests and goals. The program must include an emphasis on critical thinking, breadth and depth of theoretical understanding, apprenticeships that lead to scholarly production before completion of the program, methods of inquiry in education and direct experiences in schools with diverse populations. The program plan must include a statement of goals and rationale for proposed coursework and educational experiences. The program and rationale must then be submitted to the Division of Exceptionalities and Bilingual/ESL Education Doctoral Admissions and Review Committee for approval. If the Committee is concerned with elements of the plan, they will make recommendations for revisions or additions. Enrollment in third semester courses without an approved program may lead to the inclusion of courses not ultimately approved as part of the doctoral plan.

## PROFESSIONAL PSYCHOLOGY

**Location:** McKee 248      **Telephone:** 970.351.2731  
**Director:** David M. Gonzalez, Ph.D.

Professional Psychology offers graduate programs in counselor education, professional counseling, counseling psychology and school psychology, which prepare students for careers in schools, community agencies, industry, higher education and private practice. Service courses are offered for other programs at both graduate and undergraduate levels.

In addition, the Division of Professional Psychology offers services to the University and the local community through its clinic, a research and training facility. The master's programs in School Counseling and Community Counseling, the emphasis area in Marriage and Family Therapy and the doctoral program in Counselor Education are accredited by the Council for Accreditation of Counseling and Related Educational Programs.

The doctoral program in school psychology is accredited by the American Psychological Association and the National Association of School Psychologists. The educational specialist degree program in school psychology is also accredited by the National Association of School Psychologists. The doctoral program in Counseling Psychology is accredited by the American Psychological Association.

## Professional Counseling Programs

**Location:** McKee 248      **Telephone:** 970.351.2731  
**Professors:** Tracy D. Baldo, Ph.D.; David M. Gonzalez, Ph.D.; M. Sean O'Halloran, Ph.D.; Sarah F. Shaw, Ed.D.; Basilia (Lia) C. Softas-Nall, Ph.D.; William M. Walsh, Ph.D.  
**Associate Professors:** Brian D. Johnson, Ph.D.; Sandy Magnuson, Ed.D.  
**Assistant Professor:** Linda L. Black, Ed.D.

**Community Counseling, M.A. on page 127**

**Marriage and Family Therapy Emphasis**

**School Counseling, M.A. on page 140**

### Community/School Counseling (M.A.) Requirements

The Counseling faculty views potential candidates as unique, with strengths and assets to be identified, encouraged and developed during their graduate education. The knowledge and human relations skills necessary to help individuals recognize their own and other persons' unique promise and discover opportunities for its expression form the core of professional preparation for students in professional counseling. Such knowledge and skills are learned in part from research and study in the behavioral and social sciences, various skill development activities and supervised practica.

Opportunities for a broad understanding of human behavior and human relationships are included in the education of the student in Counseling.

Although the University is housed in the Rocky Mountain region, students in the program come from diverse backgrounds in terms of age, gender, race, ethnicity, region of the country/world, sexual orientation, etc. Given the diverse nature of the student population and future clientele, faculty members strive to train counselors for ethical practice with all forms of client diversity.

**Admission.** In addition to meeting the admission requirements of the Graduate School, the student must apply for admission to and be accepted by the program area faculty.

Admission to the program requires a GPA of 3.0 on the last 60 hours of course work. If the student's GPA is below 3.0, the Graduate Record Exam (General Test) score must be submitted. It is recommended that the student have a total score that meets or exceeds 1000 on the Verbal and Quantitative subtests, with no score below 400. The Analytical Writing subtest should have a minimum score of 3.5. A Minnesota Multiphasic Personality Inventory - 2 (MMPI - 2) profile is required. If you received your bachelor's degree before the age of 25, you must have two years of post-degree work experience. If you received your bachelor's degree at 25 years of age or older, then post-degree work experience is not required. Attendance at a pre-admission workshop is required for this admission process to be completed. When attendance at the pre-admission workshop is an extreme hardship for the applicant, special arrangements are made. These may include a conference telephone interview with faculty, contact with references and/or campus interviews at alternate times.

Acceptance is based on consideration of the following criteria:

- Clarity of career goals.
- Intellectual qualities.
- Professional judgment of appropriate personality characteristics as evidenced by personality assessment, a structured interview, interpersonal communication style and personal references.

## Counselor Education and Supervision

**Location:** McKee 248      **Telephone:** 970.351.2731

**Professors:** Tracy D. Baldo, Ph.D.; Sarah F. Shaw, Ed.D.; William M. Walsh, Ph.D.

**Associate Professor:** Sandy Magnuson, Ed.D.

**Assistant Professor:** Linda L. Black, Ed.D.

Counselor Education and Supervision, Ph.D. on page 100

### Counselor Education and Supervision (Ph.D.) Requirements

**Admission:** Application must be completed and on file in the Professional Psychology Office by January 1, with decisions announced by the first week of April.

- Total score of 1000 for the Verbal and Quantitative subtests of the GRE, and a minimum score of 3.5 on the Analytical Writing subtest is recommended.
- A master's degree in counseling or a related area is required.
- Three letters of recommendation are required from individuals who are familiar with the student's academic and clinical skills.
- GPA of 3.25 in the last completed degree is desired.
- Written statement must be completed regarding the relationship of the doctoral program to the future career goals of the applicant.

Applicants must first apply to the Graduate School, after which a further review process is conducted by the Counseling faculty for admission to a specific program.

Attendance at a pre-admission workshop is required for the admission process to be completed.

Admission decisions are based on the professional judgment of the Counseling faculty, considering the above data, including personal characteristics and interpersonal communications style as assessed in the pre-admission workshop. Applications are evaluated on a competitive basis for a limited number of positions.

### Prerequisites: Required of All Counselor Education Ph.D. Students

Entering doctoral students should have completed graduate courses in the following areas:

- Abnormal Psychology
- Career Counseling and Theory
- Counseling Theories
- Developmental Psychology
- Family Systems
- Group Counseling/Guidance
- Learning Theory
- Legal and Ethical Issues in Counseling
- Personality Theories
- Substance Abuse
- Testing: Analysis and Interpretation
- Tests and Measurement

Students who have not completed coursework in these areas must complete these courses as deficiency coursework not to be counted toward the hours required for the degree.

### Counseling Psychology Program

**Location:** McKee 248      **Telephone:** 970.351.2731

**Professors:** David M. Gonzalez, Ph.D.; M. Sean O'Halloran, Ph.D.; Basilia (Lia) C. Softas-Nall, Ph.D.; William M. Walsh, Ph.D.

**Associate Professor:** Brian D. Johnson, Ph.D.

Counseling Psychology, Psy.D. on page 99

### Counseling Psychology (Psy.D.) Requirements

1. Applications must be complete and on file in the Professional Psychology office by December 15, with decisions announced by the first week of April.
2. All entering doctoral students will hold a master's degree in counseling or a related field; a minimum of 1000

combined score on the Verbal and Quantitative subtests of the GRE, with no score below 450, and a minimum of 3.5 on the Analytical Writing subtest; 3.25 GPA; and a minimum of two years of counseling or related experience.

3. Three letters of recommendation from individuals who are familiar with the student's academic and clinical skills.
4. Applicants must first apply to the Graduate School; then a further review process is conducted for admission. Finalists are invited to attend an admission screening workshop.

Admission decisions are based on the professional judgment of the faculty, considering the above data, including personal characteristics and interpersonal communications style as assessed in the pre-admission workshop. Applications are evaluated on a competitive basis; positions are limited.

### School Psychology Programs

**Location:** McKee 248      **Telephone:** 970.351.2731

**Professors:** Achilles N. Bardos, Ph.D.; Rik Carl D'Amato, Ph.D.

**Associate Professor:** Michelle S. Athanasiou, Ph.D.

**Assistant Professors:** M. Franci Crepeau-Hobson, Ph.D.; Robyn S. Hess, Ph.D.

School Psychology, Ed.S. on page 115

### School Psychology (Ed.S.) Requirements

The Graduate School application must be submitted by December 15. In addition to meeting the admission requirements of the Graduate School, the student must submit the following data to the Professional Psychology Office by December 15. Decisions will be announced by March 30. The master's degree is not required for admission.

- Supplementary Data Sheet (included in Division Application Packet).
- Scores on the Graduate Record Examination.
- Current vita.
- A written statement regarding the relationship of the specialist program to the personal and professional goals of the applicant. This statement should be forwarded to the School Psychology Admissions coordinator.

Applications are evaluated competitively for a limited number of positions. The application must demonstrate clear potential for success in a specialist program in School Psychology.

**Prerequisites.** The program is based on the student's entering with a bachelor's degree. A student with a master's degree in psychology or professional psychology should meet with his or her advisor to develop a specific plan of study. Courses in tests and measurements and abnormal psychology are prerequisites to the program and must be completed by any student who has not had them. In consultation with the advisor, a student should select the number of hours and specific courses to meet licensure requirements, complete the program and prepare the student to be a professional school psychologist.

### School Psychologist Licensure

Institutional recommendation for endorsement in School Psychology is based on the completion of the Ed.S. or the Ph.D. program in School Psychology. No prior teaching experience is necessary.

Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the Teaching/Special Services Licensing Office in McKee 216.

Students desiring licensure in states other than Colorado should note that requirements for licensure are set by each state's Department of Education and should become familiar with the requirements for any other state from which they seek licensure.

Near the end of the semester that the licensure program is to be completed, the candidate should complete application forms in the Teaching/Special Services Licensing Office in McKee 216. Applications are processed as soon as official

transcripts, ordered by the applicant, are received from the Registrar showing completion of requirements. Departmental recommendations are required before institutional endorsement is granted.

### School Psychology, Ph.D. on page 109

#### School Psychology (Ph.D.) Requirements

The Graduate School application must be submitted by December 15. In addition to meeting the admission requirements of the Graduate School, the student must submit the following data to the Professional Psychology Office by December 15. Decisions will be announced by April 15. The master's degree is not required for admission.

- Supplementary Data Sheet (included in Division Application Packet).
- Current vita.
- A written statement regarding the relationship of the doctoral program to the personal and professional goals of the applicant. This statement should be forwarded to the school psychology admissions coordinator.

Applications are evaluated competitively for a limited number of positions. The applicant must demonstrate clear potential for success in a doctoral program in School Psychology.

**Prerequisites.** The program is based on the student entering with a bachelor's degree. A student with a master's or specialist's degree in psychology or professional psychology should meet with his or her advisor to develop a specific plan of study. Courses in tests and measurements and abnormal psychology are prerequisite to the program and must be completed. In consultation with the advisor a student should select the number of hours and specific courses to meet licensure requirements, complete the program and prepare to be a professional school psychologist.

## READING

**Location:** McKee 303                      **Telephone:** 970.351.2969

**Chair:** Roger G. Eldridge, Jr., Ph.D.

**Professors:** Roger G. Eldridge, Jr., Ph.D.; Michael F. Opitz, Ph.D.

**Associate Professor:** Carolyn W. Edwards, Ed.D.

**Assistant Professors:** Grace L. Sussman, Ed.D.; Matthew D. Zbaracki, Ph.D.

Reading offers graduate programs at the master's level. The programs in reading/literacy are based on a rationale that through wide reading, writing, discussion, and practice, teachers construct, then reflect and act upon their knowledge about learners, reading content and process, and contexts in which teaching and learning occur. Student and faculty research is directed to the study of learners from birth to adult maturity. Research sites available to students include the Reading Clinic, and public as well as private schools.

### Reading Minor on page 212

### Reading Licensure Endorsement on page 120

#### Reading Specialist Endorsement

#### Reading Teacher K-12 Endorsement

#### Reading Licensure Endorsement Requirements

Must apply through the Graduate School. Endorsements are granted by the Colorado Department of Education upon the recommendation of the University of Northern Colorado Licensure Officer. Courses taken at other accredited institutions within the preceding 10 years may be accepted in lieu of courses taken at UNC. However, these courses will be assessed by the UNC Graduate Evaluator before acceptance. Applicants should be prepared to present evidence of course appropriateness (e.g., a catalog and course syllabus) to address questions regarding the content, scope and/or focus of a course completed at another university.

Applicants must have an overall 3.0 GPA on the last 60 semester hours for full admission to this program. Applicants must complete a Reading Program application in addition to the Graduate School application.

Students wishing to obtain Colorado licensure in the Reading Specialist or Reading Teacher Endorsement area are required to pass proficiency examination(s). Students should contact the Department of Elementary Education or the Department of Educational Foundations and Curriculum Studies in McKee for information.

### Reading, M.A. on page 139

#### Reading (M.A.) Requirements

Applicants must apply to and meet the admission requirements of the Graduate School; have an overall 3.0 GPA on the last 60 semester hours for full admission to the Reading Program; must complete the Reading program Application and have three letters of recommendation sent to the Coordinator of the Reading Program in McKee Hall. Upon receiving formal notification of admission a student must meet with his/her assigned advisor to plan a program of study.

If applicant's GPA is below 3.0, the applicant may choose to submit a Graduate Record Exam (General Test) score to attain non-probationary admission to the Reading program.

The Reading program faculty recommend that an applicant have a total score that meets or exceeds 1350 on the Verbal, Quantitative, and Analytical subtests; and it is highly recommended that the Verbal score meets or exceeds 500.

There are several steps to the evaluation of the Reading Program as well as to the evaluation of the students enrolled in the Reading M.A. degree program. The evaluation process is ongoing. For admission into the Graduate School and admission into the Reading M.A. degree program a student must complete and submit specific documents (Graduate School application, Reading program application, three letters of reference and a resume) that Reading program faculty members review and evaluate. As a student takes courses, he/she completes a university generated course evaluation form and may be asked to complete an instructor developed evaluation form. When a student reaches the mid-point of taking the eleven reading courses (after five courses), the student and the student's advisor meet to complete a progress interview. The purpose of the interview is for the student to reflect upon his/her performance to date, as well as to make known his/her evaluation of the strengths and needs of the Reading program. At the conclusion of all the Reading M.A. degree coursework, a student takes a written comprehensive examination or completes a thesis. At the end of the written comprehensive examination or at the end of the thesis defense the student completes an exist survey evaluating all of the elements of the Reading program that the student has participated in and completed. Two years after graduating from the Reading program with a Master of Arts degree the student will be asked to complete another survey and to reflect on his/her overall program experience.

## FACULTY, COLLEGE OF EDUCATION

- Janet K. Alcorn, Ed.D.
- Michelle S. Athanasiou, Ph.D.
- Tracy D. Baldo, Ph.D.
- Achilles N. Bardos, Ph.D.
- Frederick J. Bartelheim, Ed.D.
- Diane Bassett, Ph.D.
- Jeffrey W. Bauer, Ph.D.
- George T. Betts, Ed.D.
- Linda L. Black, Ed.D.
- Sandra K. Bowen, Ph.D.
- Robin D. Brewer, Ed.D.
- Cliff Brookhart, Ed.D.
- Linda J. Button, Ed.D.
- Antonio L. Carvajal, Ed.D.
- Kathryn F. Cochran, Ph.D.
- Paula W. Conroy, Ed.D.
- John B. Cooney, Ph.D.
- M. Franci Crepeau-Hobson, Ph.D.
- Rik Carl D'Amato, Ph.D.
- Carolyn W. Edwards, Ed.D.
- Roger G. Eldridge, Jr., Ph.D.
- David A. Falvo, Ed.D.
- Kay A. Ferrell, Ph.D.
- Gary Fertig, Ph.D.
- James E. Gall, Ph.D.
- Thomas J. Gavin, Ph.D.
- Jennifer K. Geringer, Ph.D.
- Michael J. Gimmestad, Ph.D.
- David M. Gonzalez, Ph.D.
- Thomas A. Griggs, Ph.D.
- Florence Guido-DiBrito, Ph.D.
- Robyn S. Hess, Ph.D.
- Allen Huang, Ed.D.
- Susan R. Hutchinson, Ph.D.
- Lewis B. Jackson, Ed.D.
- Michael L. Jacobs, Ed.D.
- Brian D. Johnson, Ph.D.
- Richard A. King, Ph.D.
- Heng-Yu Ku, Ph.D.
- Maria K. E. Lahman, Ph.D.
- J. Melvin Lane, Ed.D.
- Kevin M. Laxalt, Ed.D.
- Fong-Yun Lee, Ph.D.
- Randy J. Lennon, Ph.D.
- Linda L. Lohr, Ed.D.
- John L. Luckner, Ed.D.
- Sandy Magnuson, Ed.D.
- Teresa M. McDevitt, Ph.D.
- Madeline Milian, Ed.D.
- Daniel J. Mundfrom, Ph.D.
- Francie R. Murry, Ph.D.
- M. Sean O'Halloran, Ph.D.
- Stuart N. Omdal, Ph.D.
- Michael F. Opitz, Ph.D.
- Carol A. Picard, Ph.D.
- Steven M. Pulos, Ph.D.
- Barbara G. Rhine, Ed.D.
- Harvey Rude, Ed.D.
- Adele Sanders, Ph.D.
- Jay R. Schaffer, Ph.D.
- Debora L. Scheffel, Ph.D.
- Dale Shaw, Ph.D.
- Sarah F. Shaw, Ed.D.
- Eugene P. Sheehan, Ph.D.
- Fredrick L. Silverman, Ed.D.
- Basilia (Lia) C. Softas-Nall, Ph.D.
- Grace L. Sussman, Ed.D.
- Ann M. Thomas, Ph.D.
- Susan A. Thompson, Ed.D.
- Gardiner L. Tucker, Jr., M.Ed.
- Linda R. Vogel, M.A.
- William M. Walsh, Ph.D.
- Barbara L. Whinery, Ph.D.
- Kathryn S. Whitaker, Ph.D.
- Phillip M. Wishon, Ph.D.
- Matthew D. Zbaracki, Ph.D.





# COLLEGE OF HEALTH AND HUMAN SCIENCES



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## OFFICE OF THE DEAN

**Location:** Gunter 1000      **Telephone:** 970.351.2877  
**Fax:** 970.351.2176

**Dean:** Vincent A. Scalia, Ed.D.  
**Associate Dean:** Robbyn R. Wacker, Ph.D.

The College of Health and Human Sciences is a multidisciplinary unit offering undergraduate and graduate programs in a wide range of disciplines in the health care, human service and human performance professions. The College recognizes its obligations to serve in the several capacities of teaching, research and service. The fundamental aim of the College is excellence and distinction in these pursuits.

Programs of the College are designed to prepare students for the proficient and successful practice of a profession and to pursue advanced educational opportunities. Students are prepared for careers in Athletic Training, Exercise Science, Outdoor Education, Physical Education/Sport Pedagogy, Recreation, Audiology, Speech-Language Pathology, Dietetics, Gerontology, Nursing, Public Health, Human Rehabilitative

Services, Rehabilitation Counseling and Vocational Evaluation, and Sport Administration. Graduates find employment in schools, hospitals, public and private agencies, business and industry.

The College of Health and Human Sciences is a unique resource in terms of the quality and type of academic programs it offers. The mission of the College is to provide the best possible education for its undergraduate and graduate students, to contribute to knowledge and the solution of significant problems through research and to serve the people of Colorado and the nation.

The College contains five units:

- Department of Communication Disorders
- Department of Community Health and Nutrition
- Department of Human Services
- School of Sport and Exercise Science
- School of Nursing

Programs within each unit are approved and/or accredited by appropriate professional organizations. The College provides a wide array of physical activity courses for college credit in order to enrich students' present and future sport, recreation and leisure pursuits.

Performance based standards for degree programs in the College of Health and Human Sciences are available online at <http://www.unco.edu/HHS/hhs/assess.htm>.

## ADVISING CENTER (HHS)

**Location:** Gunter 1000      **Telephone:** 970.351.1519  
**Director:** Sue Kent, M.A., HHS Administrative and Student Services

The College of Health and Human Sciences Advising Center provides academic advising to students considering majors in Health and Human Sciences. Services are designed to support all Health and Human Science majors and assist with general education requirements.

## CLINICS AND LABORATORIES

Faculty and students from all programs in the College participate in the College's multidisciplinary health clinics and human performance laboratories that provide student

learning experiences and client care services. Well equipped laboratories for studying physiological, mechanical and psychological kinesiology and a teaching laboratory with state-of-the-art video equipment and computers provide faculty and students with excellent instructional and research capabilities.

The **Speech-Language Pathology Clinic** provides assessment and treatment services for speech and language problems in the areas of articulation, voice, stuttering, language and augmentative/alternative communication devices.

The **Audiology Clinic** provides a full range of services related to hearing including hearing assessment, special hearing tests, hearing aid evaluations, hearing aid analysis and dispensing, speechreading and auditory training, counseling on hearing impairment, noise measurement and other related services. Services are extended to nursing homes and industry on a contractual basis.

The **Dietetics Program** conducts research and offers nutritional assessment and counseling in its Food Science and Nutrition Laboratories.

The **Rehabilitative Services Clinic** provides learning experiences and client services in vocational evaluation, job seeking and placement skills for independent living.

Programs in the **School of Nursing** provide learning experiences and health services in a variety of health areas. Included are health assessment, health counseling, health promotion and illness prevention activities.

An outstanding faculty of teachers and scholars serves the students enrolled in College programs. Among the faculty members are nationally recognized scholars, researchers, master teachers, experts and vigorous groups of talented coaches, all dedicated to providing high quality programs and the personal attention students at UNC have come to expect.

The **School of Sport and Exercise Science** labs provide learning experiences and/or client services in the following areas: Exercise Physiology, Anatomical/Biomechanical, Teacher Education, Sport Marketing Research Institute, and the Rocky Mountain Cancer Rehabilitation Institute.

## DEPARTMENTS, SCHOOLS AND PROGRAMS

### COMMUNICATION DISORDERS

**Location:** Gunter 1400      **Telephone:** 970.351.2734  
**Fax:** 970.351.2974

**Chair:** Kathleen R. Fahey, Ph.D.

**Professors:** Donna J. Bottenberg, Ph.D.; Kathryn E. Bright, Ph.D.; Kathleen R. Fahey, Ph.D.; Ellen Meyer Gregg, Ph.D.; Dennis R-S. Ingrisano, Ph.D.

**Assistant Professors:** Julie A. Hanks, Ed.D.; Jennifer E. Weber, Au.D.

**Lecturers:** Diane Erdbruegger, M.A.; Karen Gookin, M.S.; Susan Morrison, M.A.

The Department of Communication Disorders offers educational programs in Speech-Language Pathology and Audiology, both with a clinical orientation. The department also houses the Speech-Language Pathology and Audiology Clinics. Students majoring in either emphasis area of this department who meet the grade point requirement and who pass speech-language-hearing screening by the department faculty are offered the opportunity for supervised clinical experiences through the Speech-Language Pathology and Audiology Clinics and various other centers and programs on- and off-campus. The educational programs offered through this department are as follows:

#### Audiology Programs

This program prepares students in the diagnosis, treatment and management of hearing disorders and related areas.

UNC offers an undergraduate pre-professional major in Audiology, a non-certification master's degree program and a

professional certifying clinical doctorate in audiology (Au.D.). The certifying clinical doctoral degree program is fully accredited and provides excellent academic, research, and clinical preparation. Areas emphasized include:

- Diagnosis of hearing disorders in persons ranging in age from infants through older adults;
- Audiological treatment of the hearing impaired, including counseling and specific treatment procedures for children and adults;
- Special test procedures including ABR, OAE and ENG; Hearing aids and other amplification and auditory prosthetic devices;
- Hearing conservation programs for industry, schools and other agencies.

This program offers extensive supervised clinical experience through the well-equipped UNC Speech-Language Pathology and Audiology Clinics and ancillary clinics in Colorado. The Au.D. program leading to certification is accredited by the Colorado Department of Education (CDE) and by the Council on Academic Accreditation (CAA) of the American Speech-Language-Hearing Association (ASHA).

Career opportunities include positions in hospitals; ear, nose and throat clinics; audiology clinics; private ear, nose and throat medical practices; rehabilitation centers; schools; industry; and in private practice.

**Communication Disorders Minor on page 205**

**Communication Disorders: Audiology, B.A. on page 157**

**Communication Disorders: Audiology, M.A. on page 125**

#### Communication Disorders: Audiology, Non-Certifying (M.A.) Requirements

In addition to meeting the admission requirements of the Graduate School, students will be admitted to this program on the basis of (1) a letter of intent, (2) at least two letters of recommendation from persons familiar with their academic performance and (3) Graduate Record Examination scores.

**Prerequisites.** This program assumes an undergraduate background in Communication Disorders or Audiology. Students who do not have such a background must fulfill academic requirements as determined by their major advisor and must be prepared to spend a longer period of time than usual for completion of the master's degree.

**Communication Disorders, Au.D. on page 98**

#### Communication Disorders: Audiology (Au.D.) Requirements

Areas emphasized in the graduate program include:

- Diagnosis of hearing disorders in persons ranging in age from infants through older adults.
- Audiological treatment of the hearing impaired, including counseling and specific treatment procedures.
- Diagnosis for and dispensing of hearing aids and other amplification and auditory prosthetic devices.
- Educational audiology for diagnosis and treatment of hearing disorders in early childhood and K-12 educational settings.
- Consultation for and execution of noise abatement programs for industry, schools and other agencies.
- Supervised clinical practica are provided at both on- and off-campus sites.

Upon completion of the program, graduates are eligible to take the National Examination in Speech-Language Pathology and Audiology (NESPA) and for the Certificate of Clinical Competence (CCC) awarded by the American Speech-Language-Hearing Association (ASHA). Certified audiologists find employment in schools, private practice, hospitals, rehabilitation facilities, industry, free-standing clinics and otolaryngological practices.

**Admission.** In addition to meeting requirements of the Graduate School, students will be admitted to this limited-enrollment program on the basis of 1) a letter of intent, 2) at



least two letters of recommendation from persons familiar with their academic/clinical performance and 3) Graduate Record Examination scores. Admission to the Graduate School does not guarantee admission to the Audiology graduate program.

**Prerequisites:** This program assumes an undergraduate background in Communication Disorders of Audiology.

**Students who do not have such a background must fulfill academic requirements as determined by their major advisor. Students who are deficient in clinical observation hours should see their advisor for enrollment options.**

Students who complete this program are eligible for the Certificate of Clinical Competence in Audiology from the American Speech-Language-Hearing Association. Students can qualify for licensure from the Colorado Department of Education by taking the additional required practicum as indicated.

### Speech-Language Pathology Programs

This program prepares students in the diagnosis and treatment of speech and language disorders.

UNC offers an undergraduate pre-professional major in Speech-Language Pathology, a professional certifying master's degree program and a master's degree program that does not lead to certification. The certifying master's degree program is fully accredited and provides excellent academic, research, and clinical preparation. Areas emphasized include:

- The science of communication
- Diagnosis and management of developmental articulation, language and stuttering
- Acquired voice disorders
- Dysphagia
- Psychiatric disorders and neurologic disorders including aphasia, apraxia, post head injury disorders and dementia.

This program offers extensive supervised clinical experience through the well-equipped UNC Speech-Language Pathology and Audiology Clinics and ancillary clinics in Colorado. The M.A. program leading to certification is accredited by the Colorado Department of Education (CDE) and by the Council on Academic Accreditation (CAA) of the American Speech-Language-Hearing Association (ASHA).

Career opportunities include: positions in schools, hospitals, practice in association with a range of physicians including otolaryngology, neurology, neurosurgery, psychiatry and pediatrics; rehabilitation centers, and private practice.

**Communication Disorders: Speech-Language Pathology, B.A. on page 158**

**Communication Disorders: Speech-Language Pathology, M.A. on page 126**

### Communication Disorders: Speech-Language Pathology (M.A.) Requirements

**Admission.** In addition to meeting the admission requirements of the Graduate School, students will be admitted to this limited-enrollment program on the basis of (1) a letter of intent, (2) at least two letters of recommendation from persons familiar with their academic/clinical performance and (3) Graduate Record Examination scores.

**Prerequisites.** This program assumes an undergraduate background in Speech-Language Pathology and related areas. Students who do not have such a background must fulfill academic requirements as determined by their major advisor. Students must be prepared to spend a longer period of time than usual for completion of the master's degree.

## COMMUNITY HEALTH AND NUTRITION

**Location:** Gunter 2280      **Telephone:** 970.351.2755  
**Chair:** Sherrie L. Frye, Ph.D.      **Fax:** 970.351.1489

## Community Health

**Location:** Gunter 2280      **Telephone:** 970.351.2755

**Chair:** Sherrie L. Frye, Ph.D.

**Professors:** Bryan E. M. Cooke, Ph.D.; William Ebomoyi, Ph.D.; Kathleen J. Zavela, Ph.D.

**Lecturer:** Robert F. Guthmann Jr., M.A.

The Department of Community Health and Nutrition at the University of Northern Colorado is the only department in Colorado to offer the following undergraduate and graduate degree programs:

**Community Health Education Minor on page 205**

**School Health Education Minor on page 212**

**Health, B.S. on page 168**

**Public Health, M.P.H. on page 138**

### Public Health (M.P.H.) Requirements

In addition to meeting the admission requirements of the Graduate School, students must submit with their application at least two letters of recommendation and a typed, one-page statement of career goals.

Students applying with less than a 3.0 GPA for the last 60 semester hours must complete GRE or MAT requirements before the completion of the first semester of attendance.

Students in these programs are prepared to work with populations of all ages – helping prevent disease and developing positive healthy life-styles.

Students take a broad range of courses covering health and disease processes, effective educational strategies and community health resources. Coursework in Community Health Education is supported by classes from the behavioral, natural and social sciences. Both undergraduate and graduate programs include pre-professional experiences through practica and internships. In addition, students have opportunities to practice health education skills as part of regular classroom activities.

Students who graduate with a degree in Community Health are expected to possess the knowledge and skills needed to enhance the health and well being of people.

The Master of Public Health program is the only program of its kind in the Rocky Mountain region with Council on Education for Public Health (CEPH) accreditation.

Careers in community health are people-oriented, with employment opportunities available for working with people in all age groups. Examples of such opportunities include: community-wide health promotion programs, tobacco cessation programs, employee health seminars, adolescent health programs, disaster preparedness and wellness programs for people of all ages.

### Dietetics

**Location:** Gunter 2280      **Telephone:** 970.351.2755  
**Fax:** 970.351.1489

**Chair:** Sherrie L. Frye, Ph.D., R.D.

**Program Coordinator:** Jamie M. Erskine, Ph.D., R.D.

**Associate Professors:** Alana D. Cline, Ph.D., R.D.; Jamie M. Erskine, Ph.D., R.D.; Sherrie L. Frye, Ph.D., R.D.

**Lecturer:** Judith Stauter Huse, M.S.

The Dietetics major offers a wide range of studies applicable to community, clinical, private practice and management aspects of nutrition in health care and business.

The undergraduate dietetics program provides fundamental knowledge and skills necessary to practice as a professional dietitian according to the competencies established by the Commission on Accreditation for Dietetics Education (CADE) of the American Dietetic Association.

To complete the professional preparation, graduates must complete a supervised practice program (internship) before taking the dietetic registration examination. Note: The Department of Community Health and Nutrition offers a CADE accredited dietetic internship.

Dietetic graduates are prepared for career opportunities in nutrition, dietetics, education, management and research.

[Nutrition Minor on page 211](#)

[Dietetics, B.A. on page 159](#)

## HUMAN SERVICES

**Location:** Gunter 1250      **Telephone:** 970.351.2403  
**FAX:** 970.351.1255

**Chair:** [Kenneth E. Galea'i, Ph.D.](#)

### Gerontology

**Location:** Gunter 1250      **Telephone:** 970.351.2403  
**Fax:** 970.351.1255

**Professor:** [Robbyn R. Wacker, Ph.D.](#)

**Assistant Professors:** [Mark S. Adams, M.A.](#); [Susan M. Collins, M.A.](#)

The Gerontology program provides the student with the opportunity to study the human aging processes and to learn skills needed in working directly with the older population. A broad spectrum of courses is offered covering the social, psychological and biological aspects of aging. Individuals who hold a degree in gerontology are prepared to work as service providers in social service agencies, senior centers, long term care facilities, adult day care and other community organizations. The Gerontology Program offers the programs listed below.

[Gerontology Minor on page 209](#)

[Gerontology, B.S. on page 168](#)

[Gerontology Graduate Certificate Program \(Non-Degree\) on page 95](#)

[Gerontology, M.A. on page 132](#)

[Direct Service Emphasis](#)

[General Studies Emphasis](#)

[Management/Administration Emphasis](#)

### Gerontology (M.A.) Requirements

In addition to meeting the admission requirements of the Graduate School, the student must send directly to the department:

1. Two letters of recommendation.
2. Miller Analogies Test scores.
3. A statement of interest covering the following topics (maximum 10 pages double-spaced):
  - a. Why have you chosen gerontology? What factors and events motivated your interest in gerontology? Discuss your attitude and philosophy toward aging in general and your personal aging in particular. Also discuss your attitude or philosophy toward research, community change and advocacy.
  - b. What are your career and educational goals? In what role and in what organizational setting would you ultimately like to be employed? Why have you chosen the Direct Service, General Studies, or Management/Administration emphasis area?
  - c. What past exposure have you had to gerontology? Include any coursework or work experience (paid or volunteer) you have had related to aging. If you have had none, provide a justification of your current interest in the field of aging.
  - d. How would you describe your strengths and weaknesses? This should cover such areas as academic ability, capacity to work with others, leadership and ability to cope with stress.

## Recreation

**Location:** Gunter 1250      **Telephone:** 970.351.2403  
**Fax:** 970.351.1255

**Professor:** [Marcia J. Carter, Re.D.](#)

**Assistant Professor:** [Diane B. Gaede, Ph.D.](#)

The Recreation Program has been a pioneer in the design and development of professional recreation curricula since it was established in 1964. The program has been directly responsible for the professional preparation of more than 1,300 students. Graduates have obtained positions in many varied agencies throughout the nation, including the Armed Forces, therapeutic agencies, corporations, sports and fitness centers, voluntary agencies (e.g., YMCA, Campfire, Inc.), universities and city, state and national park and recreation agencies.

The program is committed to providing students with the highest possible quality education. All faculty have had both academic and practical experience in their subject areas and place a special emphasis on excellence in instruction and academic advising.

The program participates in the Recreation Club, subscribes to pertinent job bulletins and maintains detailed files on internship placements available throughout the world. The concept of learning through doing is further emphasized through numerous volunteer opportunities and the internship experience.

[Recreation Minor on page 212](#)

[Recreation, B.S. on page 190](#)

[Therapeutic Recreation Emphasis](#)

## Rehabilitation

**Location:** Gunter 1250      **Telephone:** 970.351.2403  
**Fax:** 970.351.1255

**Professors:** [Juliet H. Fried, Ed.D.](#); [Kenneth E. Galea'i, Ph.D.](#); [Dennis A. Gay, Ph.D.](#); [Raymond E. Nelson, Ph.D.](#); [Joseph N. Ososkie, Ph.D.](#); [Vincent A. Scalia, Ed.D.](#)

The Department of Human Services houses the only rehabilitation degree programs in Colorado. The following undergraduate and graduate degree programs are offered:  
Bachelor of Science: Human Rehabilitative Services; Master of Arts: Rehabilitation Counseling; Master of Arts: Rehabilitation Counseling with an emphasis in Vocational Evaluation; and a Doctor of Philosophy: Human Rehabilitation.

Students in these programs are prepared at three professional levels to work with people with physical and/or mental disabilities. Both undergraduate and graduate programs include experiences through practica and internships.

Careers in Human Rehabilitation are available in areas of direct service, administration, teaching and research.

In addition to the academic programs, the Department operates the following: Region VIII Rehabilitation Continuing Education Program – [Juliet H. Fried, Ed.D.](#), Interim Director.

[Rehabilitative Services Minor on page 212](#)

[Human Rehabilitative Services, B.S. on page 170](#)

[Rehabilitation Counseling, M.A. on page 139](#)

[Vocational Evaluation Emphasis](#)

### Rehabilitation Counseling (M.A.) Requirements

In addition to meeting the admission requirements of the Graduate School, the student must send DIRECTLY TO THE DEPARTMENT:

1. Two letters of recommendation.
2. Miller Analogies Test scores.
3. A statement of interest covering the following topics (maximum of ten pages doubled-spaced).
  - a. What factors and events motivated your interest in rehabilitation? Discuss your attitude and philosophy in general. Describe your attitude or philosophy toward

research, community change and advocacy.

- b. What are your career and educational goals? Why have you chosen rehabilitation counseling as your area of study? In what role and in what organizational setting would you ultimately like to be employed?
- c. What past exposure have you had to rehabilitation? Include any coursework or work experience (paid or volunteer) you have had. If you have had none, provide a justification of your current interest in the field.
- d. How would you describe your strengths and weaknesses? This should cover such areas as academic ability, capacity to work with others, leadership and ability to cope with stress.

### Objectives

1. Students will develop an appreciation for cultural diversity and political values.
2. Students will develop life-long habits of scholarship and service.
3. Students will acquire knowledge and skills that prepare them for careers in Rehabilitation Counseling, Vocational Evaluation, and/or advanced scholarly work.
4. Students will master methods of inquiry to acquire deeper understanding of their discipline.
5. The professional service activities of students will be a resource to the community, state, region and nation.
6. The professional activity of faculty, staff and students extends beyond the boundaries of Colorado, to the region, the nation, and the world.
7. All students who graduate will be qualified to sit for the Certified Rehabilitation Counselor (CRC) examination; those students who graduate with an emphasis in Vocational Evaluation will be qualified to sit for the Certified Vocational Evaluation (CVE) examination as well as for the CRC examination.
8. All students who graduate will be prepared to enter the professional Rehabilitation Counseling field in public and/or private rehabilitation programs.

**Human Rehabilitation, Ph.D. on page 107**

### Human Rehabilitation (Ph.D.) Requirements

All doctoral applicants must meet the following criteria for preliminary consideration:

1. Hold a master's degree from an accredited college or university, in Rehabilitation Counseling or a closely allied discipline. The appropriateness of a degree in a related discipline will be determined by the graduate faculty of the department. If the student is deficient in rehabilitation counseling content, the equivalents determined by the student's program committee will be included in the plan of study.
2. Have two years of work experience (or equivalent, as determined by the department's graduate faculty) in the field of rehabilitation. This must include the minimum of one year's experience before receipt of the master's degree and completion of a minimum of two years of work experience before receipt of the doctorate.
3. Meet all University of Northern Colorado Graduate School requirements.
4. Submit all requested materials to the Graduate School.
5. Participate in a personal interview on request. Admission decisions are based on multiple criteria, without fixed weights for any individual criterion.
6. Please submit a statement of interest (double spaced, no more than 12 pages) addressing the following:
  - a. State why you are interested in pursuing a doctorate in the field of rehabilitation. Did any life experiences motivate you to seek this degree?
  - b. What is your career history and what, if any, role did it play in your decision to pursue doctoral studies?
  - c. What are your short-term and long-range educational and career goals? What do you hope to be doing in five

years? In ten years? Beyond?

- d. Express your personal attitudes towards individuals with disabilities.
- e. Who do you envision your future consumers to be once you graduate?
- f. Discuss your interest in conducting scholarly research, providing community service, and/or teaching in the field.
- g. Explain your exposure to the field of rehabilitation. Please talk about any coursework, volunteer activities, or fieldwork you have experienced.
- h. Identify your top three strengths or assets as a doctoral student. What are the primary areas in which you need to improve? We are interested, among other things, in academic, interpersonal, communication, problem-solving, planning, organizational, and work ethic skills and abilities. Do you consider yourself to be a people person? Are you creative, visionary, goal-oriented? How do you deal with stress? In short, tell us about your aptitudes as well as strengths you hope to develop.

## NURSING

**Location:** Gunter 3080      **Telephone:** 970.351.2293  
**Fax:** 970.351.1707

**Director:** Margaret M. Andrews, Ph.D.

**Professors:** Kathryn A. Blair, Ph.D.; Faye I. Hummel, Ph.D.; Debra Leners, Ph.D.; Judith A. Malkiewicz, Ph.D.; Janice Hoot Martin, Ph.D.; Diane Peters, Ph.D.; Judith Richter, Ph.D.; Nancy E. White, Ph.D.

**Associate Professors:** Vicki Wessman Downey, Ph.D.; Carol Roehrs, Ph.D.

**Lecturers:** Gayle Johnson Bohrer, M.S.; Priscilla A. Faulkner, M.S.; Karen Hessler, M.S.; Alison D. Merrill, M.S.; Heidi Ritchie, R.N., M.S.; Pamela Stoeckel, M.S.; Laurie Arnold Struthers, M.S.

The School of Nursing subscribes to the philosophy that nursing is both an art and a science which promotes, supports and restores optimal health in individuals, families and communities. Nursing is a caring profession that is an integral component of the health care delivery system.

The undergraduate program in nursing is a nine (9) semester program (4 years including one summer) leading to a bachelor of science degree. Qualified students are prepared to be professional nurses and receive a foundation for graduate study in nursing.

Nursing students have a variety of clinical experiences in hospitals, nursing homes, industry, schools and community agencies, primarily in northeastern Colorado communities. Clinical practice is concurrent with nursing theory (classes) and is guided by nursing faculty. Health clearance, OSHA requirements, and CPR certification are required.

Graduates of state-approved diploma or associate degree programs in nursing are eligible to apply for admission to the on-line baccalaureate program in nursing. The program to be pursued by R.N. students has been designed to be as flexible and responsive to individual student needs as possible, within the constraints and resources of the School of Nursing.

The Master of Science in Nursing Program has two emphases available: a nursing education with a clinical emphasis in chronic illness and the Family Nurse Practitioner emphasis. Full and part-time options are available.

**Nursing, B.S. on page 183**

**Nursing Education Graduate Certificate Program on page 95**

**Transcultural Nursing Graduate Certificate Program (Non-Degree) on page 95**

**Nursing, M.S. on page 137**

**Nursing Education Doctoral Minor on page 114**

## Nursing (B.S.) Requirements

### Admission Requirements

**Pre-clinical Major.** Students interested in nursing are accepted as pre-clinical nursing majors if they meet the general admission requirements of the University. Formal application is made to and obtained from UNC's Office of Admissions.

It is highly recommended that students planning a career in nursing include chemistry, biology and algebra in their high school programs. Proficiency in mathematics is essential to success in the nursing program.

Students enrolled in the pre-clinical major will receive academic advisement from members of the School of Nursing faculty.

**Clinical Major.** The designation of pre-clinical nursing major does not assure admission to the clinical nursing program. A separate application and acceptance process during the sophomore year is required for the student to enter clinical nursing courses in the junior year. Forms for applying to the clinical program and information about application procedures are obtained at the School of Nursing during late fall semester.

The following factors will be considered by the nursing faculty in the selection of students:

- Cumulative grade point average at UNC and/or all previous institutions. Contact the School of Nursing for specifics on the GPA calculation;
- Only applicants who, at the time of application, have earned a cumulative grade point average of 2.0 in the required science courses or as many as have been completed of the following: BIO 101, BIO 341, BIO 350, BIO 251 and CHEM 108, will be considered;
- Other selection variables may include: Letter of recommendation, personal essay, hours at UNC, ethnic background, previous application and rural residency.

The number of students admitted to the clinical nursing program is determined by available resources. Available resources may also limit possibilities for readmission to the program for those students who withdraw for any reason. Scores on selected tests measuring such factors as aptitude, cognitive, affective and psychomotor skills and achievement may be used for advisement.

All students entering the professional clinical nursing major must be certified in cardiopulmonary resuscitation (CPR) for the adult and child as evidenced by current CPR card. This certification must be maintained while in the program. Nurse Aid coursework is also required for application. CNA and CPR courses are available outside the School of Nursing.

**Progression.** Nursing majors must earn a minimum grade of "C" or satisfactory in all required nursing courses for progression to the next semester in the nursing major. The nursing program faculty reserves the right to place on probation or to require the withdrawal from the nursing program of any student whom in their professional judgment fails to satisfy the requirements of scholarship, health status and/or performance. A student receiving a grade less than "C" in a nursing course will be readmitted to that course on a space-available basis only.

**RN-BS Progression.** The length of the program for the registered nurse student depends upon the amount of transfer credit and successful completion of prerequisite course challenge examinations, if needed. The Colorado Nursing Articulation Model permits RNs to receive credit for prior nursing course work without testing. Individuals seeking admission must be admitted to the University of Northern Colorado following the procedures outlined in this Catalog. Students should contact the School of Nursing at the same time for information about R.N. criteria for admission to the nursing major and the specifics of the R.N. program.

**L.P.N. Progression.** As an L.P.N., challenge options are available in certain required prerequisite courses. Progression planning for the LPN through the clinical program is done with the Assistant Director.

**Policies.** Probation/Termination Policy, Critical Behaviors for Satisfactory Achievement in Clinical Nursing Courses, Withdrawal, Alcohol and Drug Abuse, Cheating/Plagiarism

and Health Policies are published in the required Student Handbook.

**Missed or Repeated Courses.** Students who must repeat a clinical nursing course or who fail to enroll or complete a course on their scheduled rotation will be readmitted for clinical courses on a space-available basis only. Courses may not be offered every semester.

**Successive Enrollment.** A student who does not enroll for either required support courses or nursing courses for two successive semesters and has not made prior arrangements with the Director will not be considered a nursing major.

**Graduation.** The Bachelor of Science degree in Nursing will be granted by the Board of Trustees upon recommendation of the faculty of the School of Nursing to those who have successfully completed the prescribed curriculum with an average of "C" or above.

**Health Policies.** Within the academic year preceding the first clinical course, the student must have met the University's requirements regarding immunizations, received any necessary update in immunizations (such as Rubella Titer, PPD, Diphtheria, Tetanus and Rubeola/Rubella/Mumps) and have on record a completed physical examination. Hepatitis B vaccination is required. Thereafter, an annual PPD is required, as well as completion of OSHA requirements.

**School Nurse Provisional Licensure.** Graduates seeking School Nurse Licensure should contact the Teacher Education and Certification Unit of The Colorado Department of Education at 201 E. Colfax Avenue, Denver, Colorado 80203 for an application packet.

**Additional Expenses.** Clinical nursing majors may anticipate the following expenses in the spring semester before the junior year.

- Uniforms – \$100
- Lab coat – \$25
- Chest x-ray – \$20
- White shoes – \$30
- Penlight – \$3
- Scissors – \$4
- Rubella Titer – \$15
- Hepatitis B Vaccine – \$150
- Watch with second hand – \$30
- Nursing Achievement Examinations – \$30
- Stethoscope – \$25
- Travel – Cost varies

Required uniforms are ordered the semester before clinical assignment. Costs listed here are approximate and subject to change.

### Senior Year Expenses:

- School pin (optional) – Cost varies
- Travel – Cost varies

**Clinical Practice.** Student practica are offered in agencies according to available resources. All placements require transportation and may necessitate commuting from the Greeley area. Students are responsible for their own transportation to all clinical practicums.

## SPORT AND EXERCISE SCIENCE

**Location:** Gunter 2590

**Telephone:** 970.351.2535

**Fax:** 970.351.1762

**Director:** Dianna P. Gray, Ph.D.

**Telephone:** 970.351.1712

**Professors:** Robert J. Brustad, Ph.D.; Dianna P. Gray, Ph.D.; Gary D. Heise, Ph.D.; Melissa A. Parker, Ph.D.; Carole M. Schneider, Ph.D.; Jim Stiehl, Ph.D.; David K. Stotlar, Ed.D.

**Associate Professor:** Linda A. Sharp, B.A., J.D.

**Assistant Professors:** Megan L. Babkes, Ed.D.; J. Reid Hayward, Ph.D.; C. Bruce Martin, Ph.D.; Christina Sinclair, Ph.D.

**Lecturers:** Ann T. Bentz, M.Ed.; Shannon M. Courtney, M.A.; Carrie Haugen, M.A.; Jani Malkiewicz, M.A.; Mark Peters, M.A.; Tim B. Ramsey, M.A.

The School of Sport and Exercise Science has a long and distinguished history of preparing individuals to assume leadership roles in sport and physical activity settings, and subscribes to the philosophy that physical activity and sport contribute to the overall quality of life. To this end the School offers a variety of majors related to teaching, fitness and exercise science, biomechanics, sport psychology, and the management of sport. Majors in these diverse fields provide students with the necessary coursework and experience to serve as a foundation for careers in the professions of physical education, athletic training, exercise science, sport psychology, and sport management.

**Undergraduate emphasis areas** are available in athletic training, exercise science, physical education K-12 teaching, and physical education liberal studies. Minors are offered in coaching, physical education K-12 teaching, outdoor education, and youth development. The undergraduate curriculum is comprised of both required and elective courses that provide opportunities for developing expertise in understanding human movement from early childhood through adulthood. Courses provide a scientific basis for the study of physical activity, emphasizing theoretical and practical approaches to the development and improvement of human performance. Each emphasis provides classroom, field, laboratory and supervised practical experiences.

**Graduate programs in sport and exercise science** provide an opportunity to go into greater depth in the study of human movement, pedagogy, delivery of sport and activity in the outdoors, sport administration, and working with youth. Both theory and professional applications are emphasized. The doctoral program seeks to develop critical thinkers with the conceptual and methodological tools for conducting meaningful research, and prepares individuals to teach courses at the college level and assume leadership positions in their respective disciplines.

Many research opportunities are available in the laboratories used by the School of Sport and Exercise Science. Facilities are available for the study and analysis of teaching physical education. The teaching research laboratory is equipped with state-of-the-art interactive video and computer equipment that is available for student and faculty use. This laboratory is the focal point for the analysis of teaching physical education. The University also operates a large challenge course and indoor climbing facility.

Biomechanical facilities include a motion analysis system for three-dimensional data acquisition using video cameras and computerized data reduction to determine the mechanical parameters of total body motion. There is a computerized system for acquiring electronic data through the use of a force platform.

Research in social psychology is primarily conducted with individuals in natural or "field" settings. The Sport Marketing Research Institute conducts marketing and other industry research for Colorado and western region sport organizations. Housed within the Ben Nighthorse Campbell Health and Human Sciences Center is the Rocky Mountain Cancer Rehabilitation Institute, one of the first programs of its kind in the United States. In addition, laboratory equipment is also available for motor learning and motor control research.

**Sport and Exercise Science/Coaching Minor on page 213**

**Sport and Exercise Science/Outdoor Education Minor on page 213**

**Sport and Exercise Science/Physical Education (K-12) Teaching Minor on page 214**

**Sport and Exercise Science/Youth Development Minor on page 214**

**Sport and Exercise Science, B.S. on page 196**

**Sport and Exercise Science (B.S.) Requirements**

**Athletic Training Emphasis**

**Admission to the Athletic Training Clinical Program**

The designations of Athletic Training as a major does not assure admission to the Clinical Athletic Training Program. The number of students enrolled to the clinical program is limited. Students must make a separate application to the Clinical Athletic Training Program typically during the fall semester of their sophomore year. Applications are only accepted during fall semester. Prior to application, students must complete the prerequisite courses: BIO 110; BIO 341, CHEM 108, SES 181, SES 220, SES 233, and SES 380. To apply SES students must possess a minimum GPA of 2.8. Admission is based on available openings, GPA grades in the prerequisite courses and an interview.

Students must complete the full five semester Clinical Program to graduate with the Athletic Training degree and to be eligible to take the NATA certification exam.

Any student receiving a grade of "D" or lower in any of the required athletic training courses in the major must retake the course until a grade of "C" or higher is achieved.

### **Exercise Science Emphasis**

#### **Exercise Science Emphasis Requirements**

Prior to taking SES 404, SES 410, SES 436 (or SES 333), and SES 490, students must pass Competency Assessment I with a grade of 70% or better. Prior to registering for SES 492, students must have a GPA of 2.7 or above in the SES prefix courses and pass Competency Assessment II with a grade of 70% or better. Competency Assessments may be repeated as necessary.

A grade of "C" or higher is required in all SES prefix courses; the course must be retaken until a "C" is achieved.

### **Physical Education K-12 Teaching Emphasis**

**Sport and Exercise Science, M.S. on page 143**

#### **Sport Administration Emphasis (M.S.) Admission Requirements**

Sport administration applicants must submit an application form, official transcripts, letter of intent/career goals statement, two letters of recommendation from persons who can attest to the applicant's academic ability, and processing fee directly to the Graduate School. Applicants are encouraged to visit the campus to meet with the sport administration faculty. Admission to the program occurs for the fall or summer semesters only. The Master's in Sport Administration curriculum is a limited enrollment degree program. Students who complete the application process by February 15 are given priority screening for fall or summer admission of that year. The application period normally closes on August 1 for fall admission.

**Sport and Exercise Science, Ph.D. on page 111**

#### **Sport Administration Emphasis (Ph.D.) Admission Requirements**

Sport administration applicants must submit an application form, official transcripts, three letters of recommendation from persons who can attest to the applicant's academic ability, Graduate Record Examination General Test Scores and processing fee directly to the Graduate School. Materials required for admission to the program are: a resume, a written statement of career goals and research interests and an essay on a current issue in sports business. Applicants are encouraged to visit the campus to meet with the sport administration faculty. Although admission decisions are made throughout the academic year, the faculty prefers that students begin the program in the fall semester. Students who complete the application process by February 15 are given priority screening for fall admission of that year and have increased opportunities for financial assistance. The application period normally closes on August 1 for fall admission.

## FACULTY, HEALTH AND HUMAN SCIENCES

- Mark S. Adams, M.A.
- Megan L. Babkes, Ed.D.
- Ann T. Bentz, M.Ed.
- Kathryn A. Blair, Ph.D.
- Gayle Johnson Bohrer, M.S.
- Donna J. Bottenberg, Ph.D.
- Kathryn E. Bright, Ph.D.
- Robert J. Brustad, Ph.D.
- Marcia J. Carter, Re.D.
- Alana D. Cline, Ph.D.
- Susan M. Collins, M.A.
- Bryan E. M. Cooke, Ph.D.
- Shannon M. Courtney, M.A.
- Vicki Wessman Downey, Ph.D.
- William Ebomoyi, Ph.D.
- Diane Erdbruegger, M.A.
- Jamie M. Erskine, Ph.D.
- Kathleen R. Fahey, Ph.D.
- Priscilla A. Faulkner, M.S.
- Juliet H. Fried, Ed.D.
- Sherrie L. Frye, Ph.D.
- Diane B. Gaede, Ph.D.
- Dennis A. Gay, Ph.D.
- Kenneth E. Galea'i, Ph.D.
- Karen Gookin, M.S.
- Dianna P. Gray, Ph.D.
- Ellen Meyer Gregg, Ph.D.
- Robert F. Guthmann Jr., M.A.
- Julie A. Hanks, Ed.D.
- Carrie Haugen, M.A.
- J. Reid Hayward, Ph.D.
- Gary D. Heise, Ph.D.
- Karen Hessler, M.S.
- Faye I. Hummel, Ph.D.
- Judith Stauter Huse, M.S.
- Dennis R-S. Ingrisano, Ph.D.
- Jane E. Koeckeritz, Ph.D.
- Debra Leners, Ph.D.
- Jani Malkiewicz, M.A.
- Judith A. Malkiewicz, Ph.D.
- C. Bruce Martin, Ph.D.
- Janice Hoot Martin, Ph.D.
- Alison D. Merrill, M.S.
- Susan Morrison, M.A.
- Raymond E. Nelson, Ph.D.
- Joseph N. Ososkie, Ph.D.
- Melissa A. Parker, Ph.D.
- Diane Peters, Ph.D.
- Mark Peters, M.A.
- Tim B. Ramsey, M.A.
- Judith Richter, Ph.D.
- Heidi Ritchie, R.N., M.S.
- Carol Roehrs, Ph.D.
- Vincent A. Scalia, Ed.D.
- Carole M. Schneider, Ph.D.
- Linda A. Sharp, B.A., J.D.
- Christina Sinclair, Ph.D.
- Jim Stiehl, Ph.D.
- Pamela Stoeckel, M.S.
- David K. Stotlar, Ed.D.
- Laurie Arnold Struthers, M.S.
- Robbyn R. Wacker, Ph.D.
- Jennifer E. Weber, Au.D.
- Nancy E. White, Ph.D.
- Kathleen J. Zavela, Ph.D.



# COLLEGE OF PERFORMING AND VISUAL ARTS



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## UNIVERSITY PROGRAMS

**Graduate Programs, 2003-2004 on page 93**

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## OFFICE OF THE DEAN

**Location:** Frasier 108      **Telephone:** 970.351.2515

**Dean:** Kathleen Rountree, D.M.

**Assistant Dean:** Charles Houghton, M.F.A.

The College of Performing and Visual Arts believes that the arts are the most powerful tools available for refining and broadening human experience. They represent beauty and order in our environment and are important to the perpetuation of our cultural heritage. The specific role of the arts at UNC is to address the aesthetic and creative potentials of students by blending theory with practical study.

The College's performing groups, artists and art works have brought regional and national recognition to UNC, as well as many opportunities for the placement of graduates in prestigious performance and educational positions.

The College of Performing and Visual Arts stresses a rigorous curriculum and maintains an annual calendar of more than 300 cultural events.

The three divisions within the College - the School of Music and the Departments of Theatre Arts/Dance and Visual Arts - provide valuable experiences for students by enabling them to demonstrate their talents through numerous exhibits, concerts, operas, musicals, recitals, and dance and theatrical performances.

The college maintains Helen Langworthy Theatre, a 612-seat fully rigged theatre with production areas; Norton Theatre, an experimental space seating up to 125; and Foundation Hall, which seats 550 and is used primarily by the School of Music.

Performance based standards for degree programs in the College of Performing and Visual Arts are available online at <http://arts.unco.edu/pva/assessment/default.html>.

## DEPARTMENTS, SCHOOL AND PROGRAMS

### MUSIC

**Location:** Frasier Hall 105      **Telephone:** 970.351.2993

**Director:** Rob Hallquist, D.M.A.

**Graduate Coordinator:** Robert Ehle, Ph.D.

**Professors:** Vergie Amendola, M.M.; H. Gray Barrier, M.M.; Jonathan Bellman, D.M.A.; R. Evan Copley, Ph.D.; Galen Darrough, D.M.A.; Robert Ehle, Ph.D.; James A. Fittz, D.M.A.; Richard C. Fuchs, M.M.; Carl Gerbrandt, D.M.A.; Roger Greenberg, M.M.; Russell Guyver, D.M.A.; Rob Hallquist, D.M.A.; Charles A. Hansen, D.M.A.; Richard G. Mayne, Ph.D.; Charlotte R. Mills, D.A.; Kathy Bundock Moore, Ph.D.; Thomas M. Poole, M.A.E.; Kenneth Singleton, D.M.A.; Howard M. Skinner, D.Mus.; Nathaniel G. Wickham, D.M.A.

**Associate Professors:** Diane Bolden-Taylor, M.M.; Robert Al Harding, D.M.E.; Errol Haun, D.M.A.; Dana B. Landry, M.M.; Lesley Manring, M.M.; Juliet T. White-Smith, D.M.A.; Sharon Wolzien, D.M.A.

**Assistant Professors:** Jason Byrnes, D.M.; Marian K. Hesse, M.M.; Deborah Kauffman, D.M.A.; Melissa Malde, D.M.A.; Kyle D. Malone, D.A.; John D. Mc Laird, M.M.; "Robert Murray, D.M.A." on page 340

Approximately 450 music majors annually have made UNC's School of Music their choice for many reasons. The School of Music offers nationally recognized faculty with specialists on every instrument, including harp, string bass, harpsichord, tuba and classical guitar. There are more than 50 performing ensembles, a number of which are nationally recognized.

The UNC School of Music, with 34 full-time and eight part-time faculty, is organized into eight departments, each headed by a chairperson and five performance programs, each with a director. The departments are Brass and Percussion, History and Literature, Keyboards, Music Education, Strings, Theory and Composition, Voice and Woodwinds. The performance programs are Bands, Choirs, Opera Theatre, Orchestras and Jazz Studies.

Students may choose from a full range of degrees, bachelor through doctoral programs and from emphases in performance, conducting, pedagogy, music education, music theory, music history and music theatre. Considerable variety and depth of course offerings are available at UNC. The academic year program is augmented by a comprehensive summer schedule with a full complement of music theory, music history, music education and applied music opportunities; and with workshops in special areas such as jazz, strings, Orff Schulwerk, recorder performance, multicultural education, choral issues, music technology, conducting and many others.

In addition, UNC possesses an active summer performance program. The Summer Performing Arts Program, a definite asset for undergraduate and graduate majors, offers concentrated, pre-professional performance experience and association with outstanding guest artists, conductors and clinicians.

General objectives of the University of Northern Colorado School of Music are based on service and leadership in the arts at local, state, regional and national levels.

An integral unit within the University, the School of Music embraces the role and mission statements of the University of Northern Colorado and has designed its goals and objectives to support and enhance institutional purposes and directions. The School of Music lends considerable support through its course offerings to programs in Elementary Education, Special Education and Recreation.

The primary goal of the UNC School of Music is to develop skilled and sensitive musicians at the undergraduate, master's and doctoral levels, including performers, conductors, educators, composers, historians, theorists and administrators. The UNC School of Music maintains a two-fold objective of providing the strongest preparation possible in music education, theory and history, while encouraging the highest standards of performance.

School of Music graduates are well accepted in the professional world. UNC-prepared educators hold positions at universities, colleges, high schools, junior high and elementary schools throughout the United States and Canada. School of Music performance graduates are found in professional symphony orchestras, opera and musical theatre repertory companies, the nation's premier military ensembles, prominent free-lance positions in metropolitan centers and in professional chamber ensembles and jazz bands.

### Major Musical Organizations

- MUS 267/MUS 467/MUS 667 University Symphony Orchestra
- MUS 268/MUS 468/MUS 668 Chamber Orchestra
- MUS 280/MUS 480/MUS 680 Mixed Concert Choir
- MUS 281/MUS 481/MUS 681 Women's Glee Club
- MUS 284/MUS 484/MUS 684 Men's Glee Club
- MUS 287/MUS 487/MUS 687 Summer Symphonic Band
- MUS 288/MUS 488/MUS 688 Concert Band
- MUS 289/MUS 489/MUS 689 University Brass Choir
- MUS 290/MUS 490/MUS 690 Symphonic Band
- MUS 291/MUS 491/MUS 691 Wind Ensemble

### Undergraduate Admission Requirements

Students planning to major in music are required to submit an application to the School of Music. The music application and appropriate instructions are provided by the Admissions Office upon request, or upon receipt of an Application for Admission that specifically indicates a music major. Auditions are required of all applicants to the School of Music. Information concerning auditions may be requested

from the School of Music, University of Northern Colorado, Frasier Hall, Greeley, Colorado 80639, phone 970.351.2993.

**Music/Liberal Arts Minor on page 210**

**Music, B.A. on page 180**

### Music (B.A.) Requirements

MUS 100 Recitals, Concerts and Productions must be taken each semester in residence.

Students must take Individual Performance and Major Musical Organizations during each semester in residence.

**Liberal Arts Emphasis**

### Liberal Arts Emphasis Requirements

Two foreign language courses may count toward General Education requirements and electives in the content area; minor courses may fulfill General Education requirements.

### Music (B.M.) Requirements

**Music, B.M. on page 181**

**Instrumental Performance Emphasis**

### Instrumental Performance Emphasis Requirements

MUS 100 Recitals, Concerts and Productions must be taken each semester in residence.

Students must take Individual Performance and Major Musical Organizations during each semester in residence.

**Music Theory and Composition Emphasis**

### Music Theory and Composition Emphasis Requirements

MUS 100 Recitals, Concerts and Productions must be taken each semester in residence.

Students must take Individual Performance and Major Musical Organizations during each semester in residence.

Six semesters of piano are required. Levels are to be determined by advisement.

Students seeking admission to this program must have completed MUS 201 and MUS 202 with minimum grades of "B." They must submit copies of their written compositions for evaluation by their theory/composition faculty. This process will normally take place at the end of the sophomore year.

Students are admitted as undergraduate majors to the theory/composition program only after an audition, interview and thorough assessment of a portfolio of their compositions by the faculty of the theory department. Students seeking this major must demonstrate adequate keyboard skills as well as advanced skills in musical analysis and composition. Theory/composition majors at the undergraduate level must have either keyboard, vocal or instrumental performance competence equivalent to that expected of a Bachelor of Arts student.

**Piano Emphasis**

### Piano Emphasis Requirements

MUS 100 Recitals, Concerts and Productions must be taken each semester in residence.

Students must take Individual Performance and Major Musical Organizations during each semester in residence.

**Vocal Performance Emphasis**

### Vocal Performance Emphasis Requirements

MUS 100 Recitals, Concerts and Productions must be taken each semester in residence.

Students must take Individual Performance and Major Musical Organizations during each semester in residence.

Placement in MUS 285/MUS 485 or MUS 286/MUS 486 is by audition and advisement. Four semesters are required.

**Music Education, B.M.E. on page 182**

**Vocal, Piano and General Music K-12 Teaching Emphasis**

**Instrumental Music K-12 Teaching Emphasis**

Students with education emphasis should enroll for a half-hour lesson each week for two hours credit.



## Graduate Admission Requirements

Prerequisite to admission to any graduate program in Music is completion of an appropriate undergraduate degree. Admission will be based on an evaluation of the student's competencies and the content of the undergraduate program.

In addition to meeting the admission requirements of the Graduate School, the student must take the Advisory Examinations in Music Education, Music History and Music Theory, administered by the School of Music faculty upon the student's arrival on campus. Students with an instrumental emphasis will be required to take written examinations on technique in their performance area.

**Masters/Doctoral Programs.** An audition in the major applied area is required of all entering graduate students, and three letters of recommendation are also required of Music Education majors.

**Doctoral Program.** A minimum of two years public school teaching experience is required of D.A. (Music Education) applicants. Three letters of recommendation are required of all applicants

### Music, M.M. on page 135

Choral Conducting Emphasis

Instrumental Performance Emphasis

Music Education Emphasis

Music History and Literature Emphasis

Music Theory and Composition Emphasis

Vocal Performance Emphasis

Wind/Orchestra Conducting Emphasis

### Music (M.M.) Requirements

In addition to meeting the admission requirements of the Graduate School, the candidate must take the Advisory Examinations in Music History and Literature, Music Theory and writing skills. Candidates with deficiencies will meet with their major advisor and other appropriate faculty to determine the best way to address the deficiencies. An entrance audition is required.

### Music, D.A. on page 108

Conducting, Music History and Literature, Music Performance, Music Theory and Composition, Performance and Pedagogy Emphases

Music Education Emphasis

### Music (D.A.) Requirements

The Doctor of Arts in Music at UNC is part of the Western Regional Graduate Program (WRGP) established by the Western Interstate Commission for Higher Education (WICHE). In most cases, WRGP students pay tuition at resident student rates; prospective D.A. students may direct inquiries concerning the WRGP to the School of Music.

## THEATRE ARTS AND DANCE

**Location:** Frasier Hall 100    **Theatre Arts** – 970.351.2991  
**Dance** – 970.351.1204

**Chair:** Daniel G. Guyette, M.F.A.

**Professors:** Raymond Vance Fulkerson, M.A.; Karen Sue Genoff-Campbell, D.A.; Daniel G. Guyette, M.F.A.; Thomas P. McNally, M.F.A.

**Associate Professors:** Heather Hollingsworth, M.F.A.; Charles Houghton, M.F.A.; John R. Leonard, M.A.; Mary Schuttler, M.A.

**Assistant Professors:** Monte Black, M.F.A.; Charlotte Guyette, M.F.A.; Anne Toewe, M.A.

**Instructor:** Casey J. Kearns, M.F.A.

UNC's Theatre Arts program combines classroom instruction with first-hand experiences in the Little Theatre of the Rockies (LTR), established in 1934. In addition to theatre

productions, LTR serves as the production entity for Opera Theatre and provides technical support, scenes, costumes, stage direction, choreography, promotion and general management for UNC's popular Performing Arts Series.

During the summer, the College of Performing and Visual Arts presents the Little Theatre of the Rockies and other events. LTR Summer company members are involved in acting and technical aspects of professional theatre, working under the excitement of a rigorous production schedule. As participants, they encounter a wide variety of opportunities to observe, learn from and share ideas with an experienced faculty, professional actors, singers and technicians.

General objectives of the University of Northern Colorado Department of Theatre Arts and Dance are based on service and leadership in the arts at local, state, regional and national levels. An integral unit within the University, the Department embraces the role and mission of the University and has designed its goals and objectives to support and enhance institutional purposes and directions.

**Admission.** All degree program areas in the Department of Theatre Arts and Dance (Theatre, Musical Theatre and Dance) require an audition/interview for entrance into the degree program.

Consideration of student acceptance will be made by the Admission Committee in the department in accordance with the student's audition or interview, resume, letters of recommendation and academic record.

All students planning to major in Musical Theatre are required to submit an additional application to the Musical Theatre Program. The application and appropriate instructions are provided by the College of Performing and Visual Arts. Auditions are required of all applicants to the Musical Theatre Program. Information concerning auditions may be requested from Vance Fulkerson, Coordinator of Musical Theatre Program, University of Northern Colorado, Frasier Hall, Greeley, Colorado 80639, phone 970.351.2991.

### Theatre Arts Minor on page 214

### Theatre Arts/Teaching Minor on page 215

### Dance Minor on page 206

### Musical Theatre, B.A. on page 183

### Musical Theatre (B.A.) Requirements

Admission to the Bachelor of Arts with a major in Musical Theatre program is by audition. Students pursuing the degree must complete the required courses and meet the following requirements:

- Meet all recital and production attendance requirements.
- Meet annual juried audition (assessment) requirements.

Any student receiving a grade of "D" or lower in a course required in the major must retake the course until a grade of "C" or higher is achieved.

\* Mixed Concert Choir, Women's Glee Club, Men's Glee Club are major ensembles.

\* Must attend Voice Department 4:40 pm recitals as required by the applied voice teacher if enrolled in MUS 269 or 469.

### Theatre Arts, B.A. on page 198

### Theatre Arts (B.A.) Requirements

Admission to the Bachelor of Arts in Theatre Arts degree program with concentration areas of acting, design technology and the general theatre option is by audition and interview.

The Department of Theatre Arts requires student majors to consult with and be advised by a faculty member teaching in the department.

The student must apply and be accepted to one of the concentration areas. The student must then complete all of the required courses in the concentration area prior to achieving the Bachelor of Arts in Theatre Arts degree. The exception to this rule are students enrolled in the General Theatre Arts Option.

Any student receiving a grade of "D" or lower in a course in the required core or concentration area must retake the course until a grade of "C" or higher is achieved.

First semester (non-Design Technology Concentration Area) freshmen do not take THEA 100 Individual Performance in Theatre, but are required to take THEA 100 or THEA 110 all other academic year semesters in residence.

Attendance at or involvement in all productions of the Little Theatre of the Rockies is required during residency.

The Colorado Commission on Higher Education and this department requires the completion of a yearly assessment process. The assessment, which includes an evaluation of your year's progress as well as a yearly audition or interview, may be the basis of your continuance in this program area.

#### Dance Emphasis

#### Dance Emphasis (B.A.) Requirements

Admission to this emphasis is by audition and interview. All new students must take a placement technique class as part of their audition. Students choosing this emphasis must have a 2.7 GPA before enrolling in the practicum experience. Any student receiving a grade of "D" or lower in a course in the emphasis must retake the course until a grade of "C" or higher is achieved (with the exception of technique classes). A grade of "B" or better must be achieved in a technique class in order to progress to the next level.

Students must obtain a card to certify completion of CPR training.

All emphasis students must take a written assessment at the end of the fourth year. Assessments in the areas of modern dance, jazz dance, ballet, choreography, performance and teaching will be done as part of coursework throughout the four years.

#### Secondary Teaching Emphasis

## VISUAL ARTS

**Location:** Guggenheim Hall      **Telephone:** 970.351.2143

**Chair:** Virginia Jenkins, M.F.A.

**Graduate Coordinator:** Dennis Morimoto, Ed.D.

**Professors:** Michael A. Coronel, M.A.; Virginia Jenkins, M.F.A.; Dennis Morimoto, Ed.D.; Anna Ursyn, Ph.D.

**Associate Professor:** Thomas Stephens, M.F.A.

**Assistant Professors:** Connie Bethards, M.A.; Jane Dillon, M.F.A.; Mark Fetkewicz, M.F.A.; Charlotte Nichols, M.F.A.

**Lecturers:** Sieger Hartgers, M.A.; Kenneth Price, M.A.; Connie Stewart, M.A.

The Department of Visual Arts offers the opportunity to study the artistic aspects of our heritage, our culture, visual communications and personal artistic expression, as well as the arts of other cultures and civilizations. It is the purpose of the department to provide a comprehensive education in the visual arts through studio practice, art history, cultural studies and critical studies.

Students learn to produce works of art in a variety of media and to understand the processes of various art forms as they relate to personal expression and professional application. Through the programs of the Art Department, students learn to analyze and make reasoned, critical judgments about the significance and quality of works of art. This approach gives students an excellent background for recognizing and understanding art in context, which is necessary preparation for the many careers in the visual arts.

In addition, students pursuing Art Education Studies will have demonstrated the ability to teach art effectively in grades K-12.

**Visual Arts Minor on page 215**

**Visual Arts, B.A. on page 199**

**Art Emphasis**

**Graphic Arts Emphasis**

**Art K-12 Teaching Emphasis**

#### Visual Arts (B.A.) Requirements

##### Course Level and Portfolio Review

Prior to taking courses above the 100-level the following is required: a GPA of 2.5 or higher in the freshmen foundation courses and successful completion of the foundations portfolio review by achieving a minimum score of 3 on a 4 point scale (after completing ART 181, 182, 183, 184). The portfolio consists of work completed during the student's enrollment in Art 183 and 184. The portfolio is assessed on presentation and is reviewed by Visual Arts foundation faculty. Students who earn a score below 3 on the Foundations Portfolio Review may apply credits already completed in the program towards the requirements for the Minor in Visual Arts degree.

##### Senior Portfolio

An exit level Senior Portfolio assessment is required prior to graduation. The portfolio consists of work from the student's concentration area. Students are evaluated on their knowledge and successful demonstration of: professional portfolio preparation of art work, art history and cultures, and verbal and written critical analysis.

**Visual Arts, M.A. on page 145**

#### Visual Arts (M.A.) Requirements

In addition to meeting the admission requirements of the Graduate School, admission to the Master of Arts in Visual Arts degree program is approved by the faculty of the Department of Visual Arts following an evaluation of the applicant's admission materials. At the time of application to the Graduate School, departmental application materials should be sent to: Graduate Coordinator, Department of Visual Arts, University of Northern Colorado, Greeley, CO 80639. Art Department application materials include a slide portfolio of no less than 20 different pieces of current work in the proposed area of study on 35mm color slides of professional quality; a typewritten statement by the applicant elaborating the reasons for pursuing advanced studies in art or art education, statement to be two pages in length and an example of writing ability; three letters of recommendation, preferably from professionals working in the field; and a current resume. For more information, contact the Graduate Coordinator or Department Chair.

**Prerequisites.** Students who have completed an undergraduate degree in art or art education or the equivalent and whose grade point average is a minimum of 3.0 based on the last 60 semester hours of coursework may apply for the Master of Arts degree program in the Department of Visual Arts. An applicant who does not have an undergraduate major in art or art education, or its equivalent, will be required to complete specified coursework or areas of study before beginning the program.

## FACULTY, PERFORMING AND VISUAL ARTS

- Vergie Amendola, M.M.
- H. Gray Barrier, M.M.
- Jonathan Bellman, D.M.A.
- Connie Bethards, M.A.
- Monte Black, M.F.A.
- Diane Bolden–Taylor, M.M.
- Jason Byrnes, D.M.
- R. Evan Copley, Ph.D.
- Michael A. Coronel, M.A.
- Galen Darrough, D.M.A.
- Jane Dillon, M.F.A.
- Robert Ehle, Ph.D.
- Mark Fetkewicz, M.F.A.
- James A. Fittz, D.M.A.
- Richard C. Fuchs, M.M.
- Raymond Vance Fulkerson, M.A.
- Karen Sue Genoff–Campbell, D.A.
- Carl Gerbrandt, D.M.A.
- Roger Greenberg, M.M.
- Charlotte Guyette, M.F.A.
- Daniel G. Guyette, M.F.A.
- Russell Guyver, D.M.A.
- Rob Hallquist, D.M.A.
- Charles A. Hansen, D.M.A.
- Robert Al Harding, D.M.E.
- Sieger Hartgers, M.A.
- Errol Haun, D.M.A.
- Marian K. Hesse, M.M.
- Heather Hollingsworth, M.F.A.
- Charles Houghton, M.F.A.
- Virginia Jenkins, M.F.A.
- Deborah Kauffman, D.M.A.
- Casey J. Kearns, M.F.A.
- Dana B. Landry, M.M.
- John R. Leonard, M.A.
- Melissa Malde, D.M.A.
- Kyle D. Malone, D.A.
- Lesley Manring, M.M.
- Richard G. Mayne, Ph.D.
- John D. McLaird, M.M.
- Thomas P. McNally, M.F.A.
- Charlotte R. Mills, D.A.
- Kathy Bundock Moore, Ph.D.
- Dennis Morimoto, Ed.D.
- Robert Murray, D.M.A.
- Charlotte Nichols, M.F.A.
- Thomas M. Poole, M.A.E.
- Kenneth Price, M.A.
- Anne Toewe, M.A.
- Mary Schuttler, M.A.
- Kenneth Singleton, D.M.A.
- Howard M. Skinner, D.Mus.
- Thomas Stephens, M.F.A.
- Connie Stewart, M.A.
- Anna Ursyn, Ph.D.
- Juliet T. White–Smith, D.M.A.
- Nathaniel G. Wickham, D.M.A.
- Sharon Wolzien, D.M.A.



# GENERAL INFORMATION



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# ADMISSION, UNDERGRADUATE

## ACADEMIC ADVISING

It is University policy that each student is entitled to academic advising. Advising expedites course selection and helps the student create a personal academic program suited to his or her needs and the University's graduation requirements.

Academic planning is best achieved when a student works with a qualified advisor. Students who declare majors are assigned advisors in their departments. Undergraduate students who have not yet declared majors are advised by the College Transition Center located in the University Center. Each advisor has access to a complete summary of a student's academic records, which are updated each semester.

Information provided by the Registrar's Office and information from advising sessions with the student equip the advisor to help with a variety of academic issues, procedures and opportunities.

All students are encouraged to make full use of the advising system including, but not limited to, a visit to an advisor before registration each semester. All undergraduate students must obtain a Personal Access Code (PAC) each semester from their academic advisors before registration unless the PAC is printed on their course selection forms. Appointments are encouraged for all students and are mandatory in most offices.

## ACADEMIC CRITERIA FOR ADMISSION

Admissions to the University is based upon academic criteria including the secondary school academic record, rank in class, standardized test scores (ACT or SAT) and the academic record from all previous colleges the student may have attended.

## FRESHMAN ADMISSION

Freshman applicants are expected to be high school graduates who have successfully completed a minimum of 15 secondary school units. The academic records of graduates from high schools that are not state approved will be examined in greater depth for admissions purposes.

Students who have not received a high school diploma may be admitted to the University upon receipt of a high school equivalency certificate obtained by satisfactorily completing the General Education Development Test (GED) with an average score of 550 or above.

**Admission to UNC** is based on standards developed by the Colorado Commission on Higher Education as measured by a selectivity index created from high school performance and standardized test score. Eighty percent of the freshmen admitted must have a selectivity index of 94 or above. An index of 94 represents a cumulative high school GPA of 2.9 and an ACT composite of 22 or an SAT combined score of 1,000. A higher ACT/SAT score can compensate for a lower GPA and a higher GPA can compensate for a lower test score.

Twenty percent of the freshmen admitted to UNC may have a selectivity index of 93 and below. Those applicants are evaluated on an individual basis.

Applicants for freshman admission are required to have earned the following secondary school credits:

- Mathematics - three units of higher mathematics of algebra or above.

and are expected to have earned at least the following distribution:

- English - four units with emphasis upon courses in composition.
- History/social science - two units.
- Natural science - two units including a laboratory course.

**Freshman Application Procedures.** Both applications and supporting credentials may be submitted at any time after completion of the junior year of high school. However, they should be received at the Admissions Office no later than three weeks before the academic semester in which the student intends to enroll.

Prospective students are encouraged to submit applications as early as possible. Applications can be submitted on-line at: [www.GoBears.unco.edu](http://www.GoBears.unco.edu).

The Application for Admission, the appropriate secondary school transcripts and a \$40 non-refundable processing and evaluation fee must be submitted to the Office of Admissions.

An applicant should take the American College Test (ACT) or the Scholastic Aptitude Test (SAT) and have examination results forwarded to UNC.

Upon receipt and evaluation of the completed Application for Admission and the relevant academic support material, an admissions decision is made. Applicants who provide all required credentials at the time of application receive immediate processing and are notified at the earliest possible date.

Students planning to major in music are required to submit a separate application to the School of Music. The music application is provided by the School of Music upon request or upon receipt of an Application for Admission that specifically indicates a music major. Auditions are required of these applicants. Information concerning auditions may be requested from the School of Music or at [www.arts.unco.edu](http://www.arts.unco.edu).

Students planning to major in musical theatre are required to submit an additional application to the Musical Theatre Program. The application and appropriate instructions are provided by the College of Performing and Visual Arts. Auditions are required of all applicants to the Musical Theatre Program. Information concerning auditions may be requested from the Coordinator, Musical Theatre Program or at [www.arts.unco.edu](http://www.arts.unco.edu).

**Freshman On-Campus Living Requirements.** All students with less than 20 semester hours earned and under 20 years of age are required to live in a residence hall and will be assigned a full meal plan (19 meals a week).

A student who has earned fewer than 20 semester credits is exempt from this requirement if he or she is:

- married or at least 20 years of age at the beginning of the contract period,  
*or*
- is living at and commuting from the home of a parent or legal guardian who lives within a 30 mile radius of the campus throughout the contract period. The decision to commute must be made before the beginning of the contract period.

If one of the above exceptions is met, the freshman student must write in advance to the Coordinator for Contract Release, Housing and Dining Services, University of Northern Colorado, Greeley, Colorado 80639. This letter should include name, student number and detailed documentation supporting the request for an exemption, i.e., marriage certificate, or if living at home, a verifying letter from parent. A written response granting or denying the request will be made promptly. Additional information may be obtained from the Housing and Dining Services Office.

**Transfer Student Admission.** For admission purposes, a student can be a transfer student if transferable college hours have been completed beginning with the fall semester following high school graduation or thereafter. College credit completed while in high school is eligible to count towards a UNC degree but cannot alone classify a student as a transfer for admission purposes.

To be eligible to transfer, students must be in good academic standing at the college or university most recently attended.

Admission requirements to UNC as a transfer student are based upon the number of credit hours of collegiate work the student has attempted and the cumulative GPA from all schools attended. Students who have completed under 30 semester hours (45 quarter hours) of college work must submit an official transcript from each college attended, along with a high school transcript and ACT/SAT test score.

The admission decision will then be based on freshman admission requirements. Transfer applicants who have completed 12-29 semester hours (18-44 quarter hours) at other institutions are required to have maintained a cumulative grade point average of 2.50 or better and submit an official copy of their college transcripts. A student who has 30 semester credit hours (45 quarter hours) of transfer credit is required to have earned a cumulative grade point average of 2.00 or better to be admitted.

**Transfer Application Procedures.** An Application for Admission and a \$40 non-refundable processing fee must be submitted to the Admissions Office. Applicants also must submit an official transcript from EACH college or university previously attended. Final admission status cannot be determined until official transcripts have been received from each institution attended. Applications can be submitted online at [www.GoBears.unco.edu](http://www.GoBears.unco.edu).

**No Portion of An Applicant's Previous Collegiate Record Can Be Disregarded. Should The Applicant Fail To List All Institutions Previously Attended, Admission To UNC May Be Denied Or Canceled.**

Transfer students planning to major in music are required to submit an additional application to the School of Music. The music application is provided by the School of Music upon request or upon receipt of an Application for Admission that specifically indicates a music major. Auditions are required of these applicants. Information concerning auditions may be requested from the School of Music or at [www.arts.unco.edu](http://www.arts.unco.edu).

Students planning to major in musical theatre are required to submit an additional application to the Musical Theatre program. The application and appropriate instructions are provided by the College of Performing and Visual Arts. Auditions are required of all applicants to the Musical Theatre program. Information concerning auditions may be requested from the Coordinator, Musical Theatre Program or at [www.arts.unco.edu](http://www.arts.unco.edu).

Transfer students planning to major in Nursing program are required to submit an additional application to the School of Nursing. Application information can be obtained by contacting the School of Nursing or at the UNC website [www.unco.edu](http://www.unco.edu).

**Transfer Credit.** A maximum of 90 semester or 135 quarter hours of academic credit may be accepted from regionally accredited four-year institutions. No more than 60 semester or 90 quarter hours of credit earned at junior or community

colleges may be applied towards UNC degree requirements. A student who has earned a liberal-arts based Associate of Arts or Associate of Science degree from an accredited college will receive a full waiver of the content area in the General Education requirements. The skills requirements will be evaluated course by course. Completion of the Colorado Community College Common Core Curriculum will result in a full waiver of both the Skills and Content area of General Education. Associate of general studies degrees are not transferable to UNC. Students with an AAS or AAA degree must choose an applied bachelors degree at UNC to transfer their associate degree.

Any credit earned by examination alone (e.g., CLEP credit) will be reevaluated by the Admissions Office. This may reduce the number of credit hours allowed for students who have completed a liberal arts-based Associate of Arts or Associate of Science degree.

College work earned 15 years before the baccalaureate degree is to be granted may be applicable toward the UNC degree at the discretion of the applicant's intended major and minor departments.

Previous grade point averages are used for admission and scholarship purposes only and are not carried forward on the student's academic record at UNC. New transfer students begin a new grade point average. Courses with letter grades of "D" are not transferable.

To graduate with a baccalaureate degree from UNC, students must earn a minimum of 30 semester hours of credit on the UNC campus. This does not include attendance in UNC off-campus courses. If a community college program corresponds to the requirements of the first two years in a similar program at UNC, graduation after two additional years of study at UNC is possible.

**Transfer Course Guide.** UNC does not allow transfer of credit from institutions not accredited by a regional association of colleges and secondary schools.

Information concerning transfer to UNC from Colorado community and junior colleges is available in the UNC Transfer Guide. Copies of this publication are on file at each Colorado community or junior college and may also be obtained online at [www.unco.edu/admissions](http://www.unco.edu/admissions).

**Transfer Status.** Transfer students will use the Catalog in the Admissions Office at the time of their acceptance to find their General Education requirements.

For the student's major requirements, the Catalog in effect when the student declares or changes a major will be followed.

Major departments will inform the Admissions Office in writing of all major/minor Catalog changes for incoming transfer students.

## INTERNATIONAL EDUCATION ADMISSION

Please see "*International Education Admission*" (on page 78)

# FINANCIAL AID, RATES AND STUDENT FEES

## FINANCIAL AID

Financial aid is awarded to assist students and parents with meeting college costs such as tuition, fees, books, food, housing and transportation. The Office of Student Financial Resources administers several types of state and federal aid programs including grants, loans, employment, scholarships and veterans' benefits. The following represents the types of assistance available as of this printing.

**Educational Loans.** UNC participates in the following programs: Federal Perkins Loans, Federal subsidized and unsubsidized Stafford Loans and Parent Loans for Undergraduate Students (PLUS). Eligibility for Federal Perkins Loans and Subsidized Stafford Loans is based upon need, as determined by the completion of the Free Application for

Federal Student Aid (FAFSA). This application is available in the Office of Student Financial Resources or online at [www.fafsa.ed.gov](http://www.fafsa.ed.gov). Loan funds plus interest must be repaid to the lending institutions, usually after graduation. Some loans have cancellation and deferment provisions.

**Grant Funds.** Grant funds are awarded on the basis of financial need. These funds do not require repayment unless the student does not complete the term in which the funds are received. Grant funds available at UNC include the Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, Colorado Diversity Grant, Colorado Student Grant, Colorado Graduate Grant and the Colorado Leveraging Educational Assistance Partnership Program.

**Graduate Assistants, Teaching Assistants, Graduate Research Assistants.** Graduate Assistantships are available through the individual academic and administrative departments. Awards are usually comprised of a monthly stipend, as well as a tuition waiver, based proportionally on the stipend in exchange for a work assignment. These tax qualifying awards are disseminated according to individual departmental budgets. For more information students should contact their department.

**Student Employment.** UNC offers a number of employment opportunities. Federal and State Work Study programs provide on-campus and off-campus jobs to students demonstrating financial need. Colorado No-Need Work Study is available on a limited basis to undergraduate Colorado residents who do not qualify for other forms of financial assistance and apply by the priority deadline of March 1. For those students who do not qualify for the Work Study programs there are part-time hourly positions both at the University and off campus.

**Scholarships.** Scholarship funds do not have to be repaid and are usually awarded on the basis of academic performance, talent, athletic ability and other criteria determined by the donor.

**Veterans' Benefits.** Eligibility for veterans' benefits is certified through the Financial Aid office.

### Academic Progress Standards

The Office of Student Financial Resources is responsible under state and federal regulations for establishing and monitoring minimum acceptable progress for the continuation of financial aid eligibility. The standard of satisfactory progress must include a student's total academic history at UNC.

In order to be eligible to receive financial aid, the student must be making satisfactory progress toward a degree program, regardless of whether he/she has previously received financial assistance. For a more detailed explanation of these policies, refer to the Standards of Satisfactory Academic Progress available in the Office of Student Financial Resources or on our web site.

### How to Apply for Aid

To qualify for "need-based" programs, the student must demonstrate "financial need" or a difference between the cost of education and what the family (both student and parents) can reasonably afford to pay toward that cost. The family's income and assets are reviewed to calculate the family contribution in a process called "Need Analysis." UNC uses the Free Application for Federal Student Aid (FAFSA) to initiate this process. Completion of the FAFSA means the student is applying for all state and federal aid programs offered at UNC with the exception of scholarship programs.

The FAFSA form can be obtained from college financial aid and high school guidance counselor's offices or on-line at [www.fafsa.ed.gov](http://www.fafsa.ed.gov). To receive the maximum amount of funding, the application must be received by the need analysis service by **March 1** preceding the award year. An application processed after March 1 will be considered late and the applicant will have limited funding opportunities.

To apply for a Federal Stafford or Parent Loan for Undergraduate Students, students must accept the loan on the Award Notification form. Students will receive notification from the Colorado Student Loan Program that an online promissory note is available for electronic signature.

### How To Apply for a UNC Scholarship

Incoming freshmen and transfer students must be admitted to UNC by March 1 to be considered for some scholarships for the upcoming academic year. Eligibility for scholarships is based on information obtained from the admission application. All students are encouraged to complete the "UNC FAS~T~APP" for scholarships. The priority deadline is March 1. The "UNC FAS~T~APP" is available on-line at [www.unco.edu/sfr](http://www.unco.edu/sfr). A listing of scholarships offered through private sources is available for use in the Office of Student Financial Resources. Many local libraries offer a

comprehensive list of local and national scholarships. Students are also encouraged to use the World Wide Web for scholarship listings.

### Refund and Repayment

Tuition adjustments resulting from a complete withdrawal from the University may affect the financial aid the student has received. Credit balances are returned to financial aid accounts. Students can refer to Paying Your Account in the Schedule of Classes for more explanation.

Any student withdrawing totally from the University who has received her/his financial aid for that semester may be required to repay the financial aid. For a more detailed explanation of these policies, refer to the Repayment of Title IV Aid Policy available in the Office of Student Financial Resources.

### The Award

Financial aid is awarded on the basis of "need" and may include a package of grants, loans and employment.

Students and parents are expected to contribute their share toward the costs of education. All students are expected to work during the summer and periods of non-enrollment and save a significant portion of their earnings.

Financial aid is available in limited amounts to help students finance school expenses. However, while college costs continue to rise, federal and state aid does not rise at the same rate. Consequently, families must increasingly rely upon their own funds to pay for school. Students are expected to arrive on campus with funds to use for books, tuition, fees, housing and utility deposits and other expenses associated with the beginning of the year.

Financial aid funds usually are available at the beginning of each semester as a credit to charges on the student's bill. A refund will be deposited to the student's checking account if the aid exceeds all institutional charges.

Financial aid awards are offered for an academic year (Fall/Spring). A separate application is required for funding during the summer session. Contact the office for dates and more details.

Renewal of financial aid is not automatic. A new FAFSA (new, renewal or online) for the next academic year must be submitted early enough to meet our **priority filing date of March 1**. The student's academic progress as well as financial need determine the continuance of funding.

**Web Homepage.** Visit our web site at [www.unco.edu/sfr](http://www.unco.edu/sfr).

### RATES

All rates quoted in this Catalog are approved by the Board of Trustees and are subject to change.

The rates quoted in the print and CD Catalog relate to the 2002-2003 academic year. Rates for the 2003-2004 academic year, which begins with fall semester 2003, were not available at the print publication of this document.

Updated information about tuition and fees will be available from Accounts Receivable after June 30 of each year and will be updated in the *current online Catalog* August 1 of each year.

**Undergraduate/Graduate Student Definitions.** A student is considered to pay undergraduate tuition rates if he or she has not previously earned a baccalaureate degree. A student is considered to pay graduate tuition rates if he or she has previously earned a baccalaureate degree.

### Housing and Dining Services

The University operates thirteen residence halls and one apartment complex. Rooms and apartments hold two, three or four persons per unit. All freshmen with less than 20 semester hours earned and under 20 years of age are required to live in a residence hall and will be assigned a full meal plan. Non-freshmen residents will be assigned a full meal plan, but may re-contract for a 15 Meal Plan or a 14 Meal Plan. The final date to re-contract for a 14 or 15 Meal Plan is the drop/add deadline for the semester.



## Room and Board Rates by Semester

Residence Halls, 2003-2004	Semester Rate
Harrison and McCowen	\$1,352.00
Belford, Decker, Gordon, Sabin, Snyder, Turner, Wiebking and Wilson	\$1,508.00
Hansen-Willis, Lawrenson and Faculty Unit One	\$1,664.00
University Apartments Unfurnished	Per Month \$620.00
Furnished	\$670.00

Meal Plans, 2003-2004	Semester Rate
19 Meal Plan	\$1,539.00
15 Meal Plan	\$1,459.00
14 Meal Plan	\$1,439.00
Optional Bear Plans:	
50 Meals	\$315.00
80 Meals	\$504.00
120 Meals	\$720.00
160 Meals	\$960.00

### Room and Board Withdrawal Costs

Students totally withdrawing from their classes during a semester will be assessed room and board charges according to the pro-rata percentage assessment in the Total Withdrawal Section of the appropriate Schedule of Classes.

Note that 100% of non-refundable fees will be assessed. Some federally-funded aid programs mandate a different withdrawal/cancellation computation.

See Schedule of Classes for each term for exact dates.

### Semester Optional Bear Plans

Dining facilities on-campus provide convenience and economy. Varied entrees, salad bars, beverage and dessert selections are available daily. Computerized access allows contract holders to dine in any dining room and at the University Center Food Court.

UNC Dining Services offers 4 Optional Bear Plans to residents of Lawrenson (excluding freshmen under age 20), and University Apartments, as well as off campus students. With options of 50, 80, 120 or 160 meals, students can choose when to eat, where to eat and how often to eat. For more information, contact the Dining Services Office at 970.351.2652, or [www.auxiliary.unco.edu/dining](http://www.auxiliary.unco.edu/dining).

### Tuition Classification: Non-Resident, Resident

Non-Resident, Per Semester, Credits Taken	Undergraduate	Graduate
8.9 credit hours or less, tuition per credit hour	\$647.00	\$689.00
9-18 credit hours, total tuition (full-time enrollment)	\$5,823.00	\$6,198.00
Surcharge per credit hour for credits above 18 hours	\$647.00	\$689.00

Resident, Per Semester, Credits Taken	Undergraduate	Graduate
8.9 credit hours or less, tuition per credit hour	\$140.00	\$166.00
9-18 credit hours, total tuition (full-time enrollment)	\$1,260.00	\$1,490.00
Surcharge per credit hour for credits above 18 hours	\$140.00	\$166.00

Tuition and Fees are calculated on the total cumulative hours that a student is enrolled in each academic term.

Students auditing a course (taking it for no credit) are required to pay the same tuition and fees required when the course is taken for credit.

Tuition and fees for classes taken through Extended Studies may differ from on-campus charges and are subject to the Colorado Commission on Higher Education Extended Studies policies.

### Tuition Classification: Out-of-State and In-State

Students who are classified as in-state are permitted to enroll at the University at a significantly lower tuition rate because the University is assisted by the taxpayers of Colorado in addition to the student tuition and fees. The determination of a student's tuition status is provided for under State Law Title 23, Article 7, Colorado Revised Statutes 1997 Repl. Vol., 1994 Supplement.

A person who has been domiciled in Colorado for one year or more immediately preceding registration may be eligible for in-state tuition classification. A domicile is a person's true, fixed and permanent home and place of habitation. It is the place where the student intends to remain and where he/she expects to return to when he/she leaves, without intending to establish a new domicile elsewhere. It differs from the notion of residence or mere physical presence within the state. A person may have several places of residence, but may have only one true domicile at a given time.

A person is capable to begin establishment of a Colorado domicile if he/she is 22 years of age or if he/she has been emancipated. Evidence of emancipation includes the person's ability to meet all financial obligations including the cost of education, along with an affidavit from the student's parents stating their relinquishment of any claim or right to the care, custody and earnings of the minor.

Evidence that a Colorado domicile has been established includes the observance of all mandatory duties imposed on domiciliaries. State requirements concerning auto registration, driver's license and payment of state income tax must be met for the full one-year period.

A student's tuition classification is determined before or at the time of registration. If at a later date, the student thinks the classification is no longer correct, he/she may petition for a change in tuition classification.

Petitions can be submitted to the Tuition Classification Specialist in the Enrollment Services Office (University Center, Room 2205), or to the Registrar's Office (Carter Hall, Room 3002) no later than the first day of classes for the given school term that the student desires a change in classification. Any student who is denied in-state classification after petitioning may appeal that decision in writing to the Tuition Classification Appeals Committee. The appeal must be submitted to the Tuition Classification Specialist in the Enrollment Services Office (University Center, Room 2205) no later than 10 days after the denial has been sent to the student. The decision rendered by the Tuition Classification Appeals Committee is the final University determination.

Petitioning for in-state tuition classification requires the student to complete a detailed form available at the Enrollment Services Office (University Center 2205), or the Registrar's Office (Carter 3002). This form and other relevant information will be reviewed and a decision rendered in accordance with the state law and authorized procedures.

Active duty Armed Forces personnel and their dependents stationed in Colorado on a permanent change-of-station basis may contact the Tuition Classification Specialist in the Enrollment Services Office (University Center 2205) for information regarding qualification for the lower in-state tuition rates.

## STUDENT FEES

General Fees: 2003-2004		
Per Semester 8.9 hours or less, per credit hour	Student service fees:	\$25.08
	Bond Retirement Fees:	\$4.83
9 or more credit hours	Student service fees:	\$225.73
	Health insurance fee:	\$548.00
	Bond Retirement Fees:	\$43.49
Technology Fee per credit hour (Maximum \$75.00)		\$5.00
Academic Program Fee	\$1.85 per credit hour	
	\$16.65 maximum fee	
All state funded off-campus classes, per credit hour	Program delivery fee:	\$45.00

General University, student and health service fees are committed to support essential student activities and programs, the Student Health Center and the Student Representative Council. Every student must pay these fees each semester, whether or not he/she makes use of the privileges and activities underwritten by the fees. However, student service fees for students enrolled in the summer session may be set at a rate lower than that charged during the regular academic year.

### Other Fees

In addition to general tuition and fees, and room and board rates for students who choose to purchase those services, a number of other fees have been established by the Board of Trustees. Such fees relate to the academic program fee, fees assessed for employment opportunity assistance services, transcripts, etc. Refer to the current Schedule of Classes for more specific information on these fees.

### Payment

By applying for admission, registering for classes or allowing charges to be added to their account, **the student** represents to UNC that they have the intention and ability to pay and they promise to pay for all charges placed on their account as well as any service charges or collection costs, if any, that may be due.

The student will receive a billing statement. The first billing statement of the semester will be sent to the student's permanent address unless a billing address is provided. Subsequent billing statements for the semester will be sent to the student's local address unless a billing address is provided. Payment is due at the Cashier's Office on or before the **Payment Due Date** shown on the billing statement.

Payments from Financial Aid will be automatically posted to the billing account. Any excess funds will be deposited to the student's checking account.

A service charge of 1.75% of the unpaid balance will be added to the student's account if payment is not received in the Cashier's Office by the due date. Service charges are figured on the student's account by applying the service charge rate to the previous balance owed at the billing date minus any

credits made to the account during the previous billing cycle. The annual percentage rate (APR) that corresponds to this service charge is 21%.

The University will accept payment on the student's account by cash, check, money order, VISA, MASTERCARD, DISCOVER, direct payment through financial aid and through the Credit Available for Student Employees at UNC (CASE-UNC). To learn more about the CASE-UNC plan please contact the Office of Student Employment in Carter Hall. Payments are accepted in person at the Cashier's Office in Carter Hall. Payments can also be made in person at the satellite location in the University Center, Aspen Suite the first week of classes, until the tenth class day. Check or credit card payments can be dropped in collection boxes in the Carter Hall lobby and at the Card Office in the University Center until the tenth class day. Credit card payments are accepted in person at the Cashier's Office and can also be accepted 24 hours a day by calling the credit card line at 970.351.2838 and choosing option 4.

**The University of Northern Colorado will not register a student, release a diploma, provide a transcript, or supply employment opportunity assistance and other University services to any student or former student who has an outstanding financial obligation to the University other than a loan that is not yet due or on which payments are up-to-date. Also, failure to pay a financial obligation to the University when it is due may result in your account being placed with a collection agency and such action reported to a credit bureau. In addition, the student's account may be charged legally allowable collection charges and attorney fees needed to collect or enforce the student's indebtedness.**

**Registration Cancellation.** The last day to drop all advance registered classes, without being assessed a fee is the first class day of each semester. During the Drop period, if you drop all classes, you will incur a minimum charge of 10 percent (10%) of tuition and fees. When applicable, you will also pay the new enrollment fee and housing deposit. Therefore, it is strongly recommended to drop all the classes by the first day of the semester to avoid a minimum 10% late withdrawal charge. The minimum 10% withdrawal charge does not apply if you drop individual classes as a part of your schedule adjustment process.

**Fees for Class Withdrawals.** Withdrawal from an individual class is permitted until the midpoint of the course. Students can withdraw from individual classes via the Web through Webster or in person. The student must initiate the process of withdrawing from ALL classes in the Registration Center and the Registrar's Office. A total withdrawal may be initiated through Friday of the 12th week of the term.

Changes in tuition, fees, and other charges can occur during the Add and Drop periods if the individual credit hours change from part-time to full-time or vice versa. After the Drop deadline, no changes in tuition and fees will occur unless the student totally withdraws from all classes. In this instance, the student is assessed a percentage of the tuition and fee costs based on the number of credits registered for and the date at the time of withdrawal.

To determine the actual percentages of tuition and fees and the varying withdrawal dates, refer to the Total Withdrawal Section in the appropriate Schedule of Classes.

Students who need to withdraw from all of their classes must do so by Friday of the 12th week (see Schedule of Classes for actual date). This is the LAST day that you can withdraw from all classes for the semester.

**Note:** 100% of non-refundable fees will be assessed. These fees include academic program fees, technology fees, course fees and online fees, Bookstore charges, graduation, health insurance, housing damages, ID card replacement, instructional fees, lab equipment not returned, library fines, lost athletic equipment, lost library books, new student fee, parking fines, phone features, returned check service charges, unpaid short term loans, etc. Some federally funded aid programs mandate a different withdrawal computation.

All amounts owed to the University are due and payable as of the date of the withdrawal. Only charges for tuition, general student service fees, room and board may be pro-rated based

on the date of the withdrawal. All other charges are not prorated or refunded.

Individual classes may be dropped or added during the Add and Drop periods at no charge. Students with room and board are assessed amounts based upon rates, policies and

procedures explained in the Residence Life contractual materials.

If a more complete explanation of the above policies is required or if individual circumstances warrant review, the student should contact the Bursar's Office.

## POLICIES AND PROCEDURES, ALL STUDENTS

### ACADEMIC FREEDOM, RIGHTS AND RESPONSIBILITIES OF STUDENTS

The University has established policies and procedures that reflect concern for student freedom, rights and responsibilities. Essentially, students can expect protection against improper academic evaluation and protection of the right to due process in academic and disciplinary proceedings. The student can also expect to be held responsible for performance and conduct in the classroom and on the campus.

For more information, students should obtain a copy of the Student's Rights and Responsibilities document from the Dean of Students' Office, Carter Hall.

### ATTENDANCE

Regular attendance in all classes is assumed and encouraged. Each instructor determines the relationship between class attendance, the objectives of the class and the student's grade. The instructor is responsible for informing students of attendance policies and the effect of attendance on their grade. The student is responsible for knowing the policy of each course in which he or she enrolls.

Only the instructor can approve a student request to be absent from class. The student is responsible for requesting such approval when absence is unavoidable.

Attendance during the first two class sessions is required. The instructor has the option to drop a student from class if he or she does not attend the first two hours during which the class meets, in order to allow other students to enroll. Not all instructors will exercise this option; therefore, a student should not assume that non-attendance will automatically drop him or her from class.

### COURSE DESIGNATIONS

**Prefixes.** Each course is assigned a prefix that identifies the discipline, field or department offering the course. For example, course numbers in Communication Disorders are preceded by CMDS; course numbers in Mathematics are preceded by MATH; and courses in Visual Arts are preceded by ART.

**Numbers.** Five groups are identified by course numbers, generally to indicate the difficulty of a course and its location on a continuum of study that leads to general mastery of the content and methodology of a discipline:

- Basic skills courses - 001 through 099 range are not counted in cumulative credits, total credits toward graduation or grade-point-average.
- Lower division courses - the 100 range for freshmen and the 200 range for sophomores.
- Upper division courses - the 300 range for juniors and the 400 range for seniors.
- Master's level courses - the 500 and 600 ranges. Juniors and seniors with a cumulative grade-point-average of 3.00 or higher may be admitted to 500-level courses but no undergraduates may be admitted to course numbers above the 500 range.
- Doctoral and Specialist level courses - the 700 range.

Occasionally, courses that do not appear in the Catalog may appear in the Schedule of Classes. These course numbers end in "98" and are considered experimental. For example, an experimental course in geology might be GEOL 398. Courses ending in "98" cannot be used to meet General Education requirements.

### COURSE LOAD

**Overload.** More than 18 credit hours per semester will increase tuition. Students requesting overload credits must have a 3.00 or higher cumulative grade point average.

- In addition, specific colleges, departments and programs may have additional conditions regarding overloads. It is the student's responsibility to meet these conditions.
- Overloads of more than 21 hours require approval by the department advisor and department chair. These approvals must be forwarded to the Registrar. The Registrar will assure that these procedures have been followed.

### Graduate Students

Course load limitations for graduate students apply to any combination of all courses taken on-campus, off-campus, or on-line while an individual is enrolled as a graduate student in a graduate degree program, a nondegree certification program, or any combination thereof. The maximum load for a graduate student is 17 hours per semester. This information may vary during summer terms; students should check the Summer Schedule of Classes for correct information.

- **Financial aid and verification of enrollment.** Full-time enrollment is nine credit hours for graduate students.
- **Half-time classification.** Graduate students enrolled in five to eight credits hours are classified as half-time. Part-time enrollment is four credit hours or less.
- **Overload.** More than 17 credit hours per semester for graduate students is considered an overload.

Graduate students receive overload approval from their academic advisor. Students who have lower than a 3.00 GPA but have extenuating circumstances may petition for an overload to the dean of the Graduate School.

### Undergraduate Students

A normal undergraduate course load, is 15 credit hours of academic credit in each semester. This information may vary during summer terms; students should check the Summer Schedule of Classes for correct information. Undergraduate students are allowed to enroll for a maximum of 18 credit hours before the beginning of the semester.

- **Financial aid and verification of enrollment.** Full-time enrollment is considered 12 credit hours for undergraduate students.
- **Half-time classification.** Undergraduate students enrolled in six to eleven credit hours are classified as half-time. Part-time enrollment is five credit hours or less.
- **Overload.** More than 18 credit hours per semester for undergraduate students is considered an overload
- Undergraduate students who have lower than a 3.00 GPA but have extenuating circumstances may petition for an overload from the department advisor and department chair.

### FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT

The University maintains an educational record for each student who is or has been enrolled at the University. In accordance with the Family Educational Rights and Privacy Act of 1974, as amended, the following student rights are covered by the Act and afforded to all eligible students at the University.

1. The right to inspect and review information contained in the student's educational records.  
Students should submit to the Registrar's Office written requests that identify the record(s) they wish to inspect. The

University official will make arrangements for access and notify the student of the time and place where the records may be inspected.

2. The right to request amendment of the contents of the student's educational records if believed to be inaccurate, misleading, or otherwise in violation of the student's privacy or other rights.

Any student who believes that his/her education records contain information that is inaccurate or misleading or is otherwise in violation of his/her privacy or other rights or who believes that his/her records have been or are being maintained or processed in violation of his/her privacy or other rights, may discuss his/her concerns informally with the Registrar's Office. If the decision of that person is in agreement with the student's request, the appropriate records shall be amended and the student shall be notified in writing of the amendment(s). If the decision is not in agreement, the student shall be notified within thirty (30) calendar days that the records will not be amended and the student shall be notified by the official of the student's right to a hearing.

Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. The right to prevent disclosure without consent, with certain exceptions, of personally identifiable information from the student's educational records. One exception which permits disclosure without consent is disclosure to school officials with legitimate educational interests. "School officials" shall mean any person who is a trustee, officer, agent or employee of the University. "Legitimate educational interest" shall mean any authorized interest or activity undertaken in the name of the University for which access to an education record is necessary or appropriate to the proper performance of the undertaking. It shall include, without limitation, access by a student's instructor, department or division head, dean, the chief academic administrator, the president, a trustee, the custodian of the University records, the alumni administrator, legal counsel, the financial aid administrator, administrators charged with maintaining education records, the staff and subordinates of the foregoing, and others authorized by the President to the extent the foregoing persons are acting within the course and scope of their employment or authority.
4. The right to file complaints with the U.S. Department of Education concerning alleged failures by the University to comply with the provisions of the Act. The name and address of the office that administers FERPA is: Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue S.W., Washington, D.C. 20202-4605.

Each of these rights with any limitations or exceptions is explained in the University's policy statement, a copy of which may be obtained from the Registrar's Office.

The University may provide "Directory Information" in accordance with the provisions of the Act without the written consent of an eligible student unless it is requested in writing that such information not be disclosed (see below). The items listed below are designated as Directory Information and may be released about any student for any purpose at the discretion of the University unless a written request for nondisclosure is on file:

- Category I: Name, address(es), e-mail address, telephone number(s), dates of attendance, classification, enrollment status.
- Category II: The most recent institution attended, major field of study, honors, awards, degree(s) conferred and conferred date(s), degrees pursued or being pursued.
- Category III: Past and present participation in officially recognized sports and activities, physical factors of athletes (height and weight).

Currently enrolled students may prohibit general disclosure of this Directory Information by notifying the Registrar's Office in writing within 10 calendar days after the first scheduled class-day of each term. The University will honor the request until the student notifies the Registrar's Office in writing of intent to allow release of Directory Information. The student should carefully consider the consequences of any decision to withhold any category of Directory Information. Regardless of the effect upon the student, the University assumes no liability that may arise out of its compliance with a request that such information be withheld. It will be assumed that the failure on the part of a student to request the withholding of Directory Information indicates the student's consent to disclosure.

Directory information may be disclosed through a variety of methods including, but not limited to, paper, electronic, voice and other means.

Any questions concerning the student's rights and responsibilities under the Family Educational Rights and Privacy Act should be referred to the Registrar's Office.

## FINAL EXAMINATIONS

All final examination periods are 150 minutes in length. Examinations are conducted in the same classroom used throughout the semester unless alternative arrangements are made with the room scheduling department in the Events/Scheduling Office at the University Center.

Faculty should alert students to changes in final examination times or locations before the testing date.

With the approval of the department chairperson, the final examination may be eliminated by an instructor who considers it unnecessary.

If no final examination is given, class will continue through the last week of the semester. In such cases, classes will meet at the times shown on the final examination schedule.

Each student registered for credit in a course must attend the final examination unless the student has made prior arrangements to be excused by the instructor.

In extreme instances, a final examination may be rescheduled by the instructor, provided the change is coordinated with the appropriate dean's office and approved by the department chairperson.

If a student has three or more final examinations scheduled for one day, the student may negotiate a time change with the instructors involved. This negotiation should take place not less than one week before the scheduled examinations. If the parties involved cannot find a mutually agreeable time, the Office of Academic Affairs will indicate courses for which a change must be made. Laboratory sessions will not meet during the final examination period. Laboratory examinations should be given before final examination week.

## FULL-TIME AND PART-TIME ENROLLMENT STATUS

Full-time status for tuition purposes, health insurance requirement and verification of enrollment for health insurance purposes is nine credit hours for undergraduate and graduate students. (Some health insurance carriers require enrollment in a minimum of 12 credits. Check with your health insurance company for their minimum enrollment requirement.)

Full-time for financial aid purposes and enrollment verification (other than health insurance) is 12 credit hours or more for undergraduates and nine credit hours or more for graduates. Undergraduates enrolled in six to eleven credit hours and graduates enrolled in five to eight credit hours are classified as half-time. Part-time is five credit hours or less for undergraduates and four credit hours or less for graduates.

## GRADING

Standard Grading	Quality Points
A = superior	4.0
B = above average	3.0
C = average	2.0
D = minimum passing	1.0
F = failure	0.0
I = incomplete	*
I/F = incomplete turned to failure	0.0
NC = no credit (audit)	*
NR = no report	*
S = satisfactory-credit granted	**
U = unsatisfactory-no credit	*
UW = unauthorized withdrawal	*
W = withdrawal	*

\*Credits not used to compute grade point average (GPA) and not counted toward graduation.

\*\*Credits not used to compute GPA but counted toward graduation.

Courses for which "D," "F," "U," "W," "UW," "NR," or "I" grades are awarded will not count in graduate degree programs and will not satisfy program deficiency requirements.

A "W" indicates an approved withdrawal from the course and is assigned only when the student has completed the official withdrawal processes outlined in this publication.

A "UW" indicates an unauthorized withdrawal and is assigned when the student has never attended the class for which he/she enrolled.

An "I" is assigned due to unanticipated circumstances the last week of the term that make the student unable to complete course requirements within the allotted time (e.g. he/she missed the final examination due to sickness, an emergency in the family). The instructor must submit to the department chair, a written notice of the specific coursework to be completed before the final grade is determined; a copy is kept in the department and one is provided to the student. To amend a grade of "I" with an earned grade on a student's transcript, the student must complete all incomplete course work by the last day of the next semester, including summer term. If the academic requirements are not completed within the time limitation and the grade received in the Registrar's Office, the grade will be recorded as "I/F" or "I/U" on the academic record.

The grade of "NR" is used for honors courses, theses, dissertations, and other courses that have been granted approval for "NR" grading. The "NR" is assigned when the coursework requires longer than a semester to complete. The "NR" will be replaced by the appropriate grade when the work is completed.

### Grade Point Average

The University operates on a 4.00 grade point system. A grade of "A" has a value of four grade points, "B" three points, "C" two points, "D" one point. No points are given for an "F".

To compute a grade point average, first remove all basic skills courses (courses numbered 001 through 099) and all courses that carry the grades: "S," "U," "W," "UW," "NR," "I," "NC." Multiply the credit hours for each remaining class by the number equivalent to the letter grade. Total the hours, total the credit points, and finally divide the total points by total credits.

### GPA Example:

Grade	Credit	Points	GPA
A = 4	3	12	
B = 3	5	15	
C = 2	3	6	
I = 0			
<b>Total</b>	11	33	= 3.00 GPA

If a course is repeated, all grades earned are used in determining the GPA. If a course is listed as grade forgiveness, the grade will not be used in determining the GPA. Grades received at other institutions are not included in the UNC GPA.

### Grades-Submissions and Corrections

Faculty must submit grades via the Web to the Registrar's Office by 5 pm of the third working day after the end of a course. Grade changes or corrections must be submitted within the first two weeks of the following semester. Spring term grade changes are also due the first two weeks of Summer term. Grade change requests are submitted on special grade report forms signed by the instructor and department chairperson. Forms are available from departmental offices. No grade change request forms delivered by students will be accepted.

## IMMUNIZATION REGULATION

Colorado State law requires that students who were born after January 1, 1957, show proof of immunization prior to registering for classes. The required immunizations are against mumps (two doses), measles, (two doses), and rubella (two doses). **All students who are admitted to UNC are sent a health history form and Certificate of Immunization form. Students must submit the completed Certificate of Immunization form to the Student Health Center before they will be allowed to register for classes. Students who fail to comply with this requirement will not be allowed to register for classes.**

Individuals who are unable to be immunized due to medical, religious, or personal reasons are exempt from this regulation if they provide a signed Certificate of Exemption form. In the event of an outbreak of illness on campus, individuals who do not have proof of immunization or who have signed a Certificate of Exemption form will be subject to exclusion from classes and quarantine.

## INSURANCE REQUIREMENT FOR ALL STUDENTS

UNC's Board of Trustees requires that all students registered for nine credit hours or more have health insurance.

The UNC-sponsored health insurance policy is automatically assessed to all full-time students but can be waived if the student presents evidence of a comparable health insurance plan. **The deadline for such waivers is the 10th class day of the semester. Nonpayment of the health insurance premium does not waive the insurance. A waiver form must be completed by the deadline.**

Any student who enrolls in the University's health insurance plan during spring semester is automatically covered by that insurance during summer session with no additional premium. The University does not require students registered only for summer session to purchase its student health insurance plan or demonstrate possession of an acceptable insurance plan. However, students registered for summer sessions may purchase the insurance plan for the summer term only.

The University's health insurance is available to students' dependents and part-time students upon request.

## OFF-CAMPUS ACTIVITY AND FIELD TRIP DISCLAIMER

As part of the courses and extracurricular activities offered by the University, students will be encouraged to attend campus events or engage in off-campus activities as a supplement to their on-campus instruction and education. These activities may include travel to foreign countries or other states as well as in-state field trips. Students may be expected to provide their own transportation to and from such activities, or the University may arrange or otherwise provide transportation.

Under any circumstance, however, the University requires its students to maintain appropriate insurance and be responsible for their conduct and activities at all times, on- or off-campus. The University requires its students to comply with all laws and to assume all responsibility and liability for their actions and conduct while attending, being involved in or traveling to and from any off-campus activities, whether for required or voluntary activities.

## PARKING REGULATIONS

The mission of University Parking Services is to facilitate the safe and orderly conduct of University business and to provide parking facilities in support of this function within the limits of available space. Students, faculty or staff who wish to park on campus should purchase a parking permit from Parking Services in Gray Hall. Parking Services is a self-supporting auxiliary department of the University of Northern Colorado. No tax revenue, student fees, or tuition funds are received or used for parking facilities.

# REGISTRATION

## REGISTRATION PROCEDURES

The Schedule of Classes are found at [www.registrar.unco.edu](http://www.registrar.unco.edu) and serve as the basic guide for registering for classes.

Registration is continuous. Students are assigned times during the last part of an academic semester when they may register for courses offered in the following semester. Registration consists of the following processes:

1. Obtaining your assigned registration date and advising.
2. Selection of courses.
3. Verification of courses.
4. Receipt of statement of account and change of address form.
5. Payment of student account.

New freshmen and transfer students for fall term are strongly encouraged to attend Discover UNC. Discover UNC is an orientation program for entering freshmen and transfer students that provides essential information about the University and special assistance in registering for classes.

The College Transition Center conducts the Discover UNC program during June, July and August. The Graduate School conducts an orientation for new graduate students.

## SCHEDULE CHANGES (ADDS/DROPS)

During the beginning of each semester, students may add or drop courses from their schedule. Students may add a class during the first eight percent (8%) of the class term and may drop a class during the first fifteen percent (15%) of the class term. Any student seeking to add a class after the 8% period has lapsed must secure approval from the professor. Dates for the add/drop deadlines are listed in the Schedule of Classes.

This procedure may be handled through Web Registration ([www.unco.edu](http://www.unco.edu)) and accessing Webster) or at the Registrar's Office. After the deadline posted in the Schedule of Classes, students may not enroll in additional full term courses or drop full term courses in which they are currently registered.

## SEMESTER SYSTEM

The University of Northern Colorado follows the early semester system in which the academic year is divided into two instructional semesters of approximately 15 weeks each. The academic year (fall, spring) begins in late August and concludes in mid-May, with a vacation break between the semesters. A full slate of courses is offered during the summer semester. Students enrolling in the University for the first time may do so before the beginning of any semester.

## TRANSCRIPTS

Place official transcript requests through the Registrar's Office. There is a fee for each transcript ordered. Contact the Registrar's Office for appropriate request procedures and fee payment options.

## WITHDRAWAL FROM THE UNIVERSITY

A student may withdraw completely from the University through the 12th week of the semester. Students must start the process at the Registrar's Office. Depending upon the date the withdrawal is initiated, a percentage of tuition and fees may be assessed. (See the description of Withdrawals, Drops, or Cancellation from Classes within the Costs, Payment, Financial Aid section of this Catalog.)

Students who receive financial aid and then withdraw during a semester that they received aid may be required to repay a proportionate amount to the financial aid account. Information about a specific repayment amount is available from the Office of Student Financial Resources.

The add deadline for a short-term class occurs when the class has held 8% of its class meetings. The drop deadline occurs when the class has held 15% of its class meetings. The number of credits for which a student is registered at the time of the add/drop deadline determines tuition and fee charges. Drops differ from withdrawals since drops are not recorded on the student's transcript and withdrawals are recorded on the transcript (see next section).

## TWO-CLASS-HOUR DROP REQUIREMENT

A faculty member may drop a student from a class during the Drop period if the student has not attended the first two 50 minute sessions. The student must notify the instructor if he or she cannot attend during this time. Not all instructors will exercise this option; thus, a student cannot expect that the failure to attend the class will automatically cause him or her to be dropped. Consequently, the student must follow the procedures listed in the Schedule of Classes.

## WITHDRAWAL FROM CLASS

When a student registers for a class, he or she is considered to be a member of the assigned class. Students are responsible for confirming their schedule by web or in person.

The student may drop a class during the Drop period, normally the first 10 class days of a semester for full-term courses. The dates of the Drop period each semester are listed in the Schedule of Classes.

Students may withdraw from individual classes in person or on the web. The first date to withdraw from an individual course is the first class-day immediately after the drop deadline. The last date to withdraw from an individual course is the midpoint of the semester. Withdrawal deadlines for each semester are also noted in the Schedule of Classes. The withdrawal deadline for an individual short-term class occurs when the class has held 50% of its meetings. A "W" appears on the transcript for each class from which a student withdraws. Students may withdraw from all classes at the Registrar's Office through the twelfth week of the term.

# STUDENT RESOURCES

**The Office of Extended Studies** in the Center for Professional Development (CPD) provides the coordination, with academic colleges, of off-campus state and cash funded degree and licensure programs in Colorado. Degree programs and licensure programs are provided state-wide by the academic departments. The Office of Extended Studies offers hundreds of graduate and undergraduate career and professional development courses. Contract courses for credit are offered in collaboration with school districts and other sponsoring agencies.

Independent study credit courses, offered by faculty in many departments, provide a flexible opportunity for students on and off campus to earn credit. Special professional and certificate programs are available and focus on skill development for individuals who are employed. These courses are offered in Greeley and throughout the state as non-credit courses or for Continuing Education Units (CEU's).

**Information Technology** Information Technology provides a number of services designed to assist students in the pursuit of their academic careers. Computer labs, open to all students, are strategically located throughout the campus with the flagship facility located in the University Center and open extended hours. Access to campus computing resources and the Internet is provided through direct connections in the residence halls via ResNet and from off campus through a dial-in modem pool (Slip/PPP). Telephone service and the student long distance calling program are provided in the residence halls by Telecommunications. Access to powerful statistical packages and specialized resources is provided through a state-of-the-art enterprise server. Information Technology also manages and operates Bear Logic, the campus computer store, where students, faculty and staff may purchase computer supplies, software and equipment at significant discounts. For complete information about any of the services provided by Information Technology or help with technical problems call User Support at 351-4357 (351-HELP).

## ACADEMIC TECHNOLOGY SERVICES

The Center for Professional Development (CPD) provides consultation, production and other services to support the academic staff in using technology in instruction and research. Among its services are assisting faculty in creating original teaching material, distance-education program planning and teleconferencing. CPD also operates the University's on- and off-campus cable television distribution systems.

## ALUMNI RELATIONS

Alumni Relations provides the link between the University and its graduates, offering news and information of other graduates and current campus events and coordinating the efforts of chapters throughout the country.

## BOOKSTORE

Barnes and Noble College Bookstore, located in the lower level of the University Center, provides course textbooks and general reading books. Barnes and Noble also sells a large selection of University of Northern Colorado imprinted clothing, greeting cards, posters, school and art supplies and other necessities for students. Additional services include book buyback, special order books and book information.

## CAMPUS RECREATION

The Campus Recreation Center is the focal point for recreational sports, fitness and wellness activities on campus. Programs include intramural sports, group fitness classes, club sports, swimming, indoor rock climbing, personal fitness training and a wide range of drop-in, recreation activities. Facilities include two multipurpose gymnasiums, an indoor climbing room, two strength and conditioning areas, one group fitness room, one multi-purpose room, three racquetball courts, a jogging track and locker rooms. Strength and conditioning areas feature elliptical machines, treadmills,

steppers, cross-trainers, upright and recumbent exercise bikes, an upper-body cycle, rowing machines, elliptical machines, and a full line of free weight equipment and weight machines.

Intramural sports offer competitive opportunities in women, men, and co-recreational divisions in league and tournament play. Sports include basketball, flag football, indoor and outdoor soccer, indoor and outdoor volleyball, golf, tennis, racquetball, softball, 5k runs, and indoor climbing and bouldering. For opportunities to compete with other institutions and/or further develop one's skills, the following club sports have been organized by students: men's lacrosse and rugby; women's soccer; cheer leading; Shotokan karate; men's ice hockey; outdoor adventure; fencing; cycling; ultimate Frisbee; and men's baseball.

## DINING SERVICES

UNC Dining Services provides students, faculty and staff with a variety of meals in different settings, seven days a week. Dining rooms located in Harrison, Tobey-Kendel, and the University Center are open to students with meal plans. Take-out meals called "Gourmet to Go" are available at McCowen and Tobey-Kendel. Freshmen under age 20 and living on campus will be assigned a full meal plan (19 meals a week). At the University Center, Taco Bell *Express*, and UC Dining and other cash venues offer services to cash paying customers. Menu choices encourage the practice of good nutrition and a registered dietitian is available to assist with any special dietary needs. Dining Services also provides catering for special occasions.

UNC Dining Services is the largest student employer on campus providing a variety of job opportunities ranging from service staff to student supervisor and catering staff positions.

## ENROLLMENT SERVICES

**The Enrollment Services Office** coordinates the functions of the following student services areas to assist in providing seamless services to UNC students:

**The Office of Admissions** provides information and assistance to potential new undergraduate students. New freshmen, as well as undergraduate students transferring from other colleges and universities, should contact this office. Admissions information is available on UNC's website: [www.unco.edu](http://www.unco.edu). (Prospective graduate students should contact the Graduate School.)

**The Career Services Office** helps students and alumni to explore their educational and occupational options and prepare for the work world. Students receive assistance in choosing their majors and careers as well as finding internships and full time professional jobs. The services offered are career counseling, testing, career planning classes and workshops, resume critiquing, mock interviewing, career fairs, on-campus recruiting, credential files, career and job search resources. The office is located at the University Center.

For more information, access the Career Services website, [www.unco.edu/careers](http://www.unco.edu/careers) or call 970.351.2127.

**The College Transition Center** provides the following services to undergraduate students: advising for undeclared students and assistance in their transition to selecting an academic major; academic support for individuals experiencing academic difficulties and administration of the Fresh Start Programs for freshman and continuing students. Full-time and peer advising staff also provide students, faculty and staff with information regarding general education requirements, academic policies and procedures, and referral assistance.

The College Transition Center also assists new students and their family members with their transition to the University of Northern Colorado. All new freshmen and their family members attend a two-day orientation program, Discover UNC, held during the summer. During the Discover UNC program, new students are advised and register for Fall Semester classes. Transfer students can choose to attend a one-day orientation program held in April, June and July. For

more information, explore the Discover UNC website, [www.unco.edu/discover](http://www.unco.edu/discover) or call 970.351.1391.

**The Disability Access Center (DAC)** provides equal opportunities for individuals with documented disabilities to pursue their educational goals through the provision of access, accommodations and advocacy. DAC also serves as a resource for the UNC community on disability related issues. Services include interpreters, test accommodations, readers, assistive technology and training, alternate text conversion, and learning strategy workshops. DAC can assist students with specific needs such as orientation training and obtaining volunteer note takers. PRIDE (People Redefining Independence through Disability Education), an organization for any student with a disability, is also available.

Students must submit disability documentation to DAC, meet with the DAC Director to discuss services, and request disability accommodations in a timely manner. DAC information may be located at [www.unco.edu/dac](http://www.unco.edu/dac). For more information, please contact DAC at 970.351.2289 (voice and TTY).

**The Office of the Registrar** (Carter Hall 3002) provides assistance with class registration via Webster (web) or in person. The Office of the Registrar processes the following: total withdrawals from all classes, personal information updates, final grade submissions and grade changes, and requests for transcripts. The Office of the Registrar is also responsible for academic room scheduling, enrollment verification, and graduation audits for undergraduate students.

**The Student Financial Resources Office (Financial Aid)** administers and distributes aid in the form of loans, grants, scholarship and employment to help students meet college costs (tuition, fees, books, food, housing, and transportation).

**The Visitors Center**, located at 1862 10<sup>th</sup> Avenue, provides campus tours Monday through Friday, five times daily. The prospective student should contact this center to arrange a visit to a residence hall, make an appointment with an admissions officer, visit the Student Financial Resources Office, or schedule (two weeks in advance) an appointment with a professor in his or her proposed field of study.

## HOUSING - RESIDENCE LIFE

Student housing at UNC is known as the Department of Housing and Residence Life and provides housing for more than 3,000 undergraduate and graduate students in traditional residence halls and apartment style facilities. Services and programs assist students in transition to UNC, support their academic success and facilitate the development of life-long friendships. Students are encouraged to participate in activities, programs and leadership opportunities provided by staff and the Residence Hall Association. Numerous employment opportunities are also available to students within the residence halls.

Residence halls and apartments are situated on two separate campuses known as Central Campus and West Campus. The Central Campus residence halls are located on a beautiful, tree-lined area and include Belford, Decker, Gordon, Faculty Unit One-Three, Hansen-Willis, Sabin, Snyder, Wiebking and Wilson halls. These halls house between 28 and 280 students and are a five-minute walk from the University Center. West Campus residence halls are located west of the University Center and house between 440 and 612 students per hall. These buildings include Harrison, Lawrenson, McCowen, and Turner halls. Many students enjoy the opportunity to live on theme floors including: pre-business community, Cumbres, elementary education, honors, Global Village, performing and visual arts, volunteering/community service, education, international and quiet life-style. These floors offer programs, activities and experiences centered around the respective theme. Students may live in the Global Village during winter and spring breaks for an additional cost.

Each residence hall is served by a twenty-four hour, staffed, customer service desk. In addition, professional and student staffs live in the halls and are available for assistance and support. Centrally located dining facilities are located on both campuses and provide air-conditioned dining as well as the convenience of Gourmet-to-Go take-out meals. Laundry

facilities, study lounges and television lobbies are also available for student use.

Residence halls and apartments are available for students with disabilities on both campuses and include numerous accommodations and helpful features. Housing and Residence Life staff are interested in working with any student to review accommodations to ensure rooms and apartments are ready prior to arrival. Please contact Housing and Residence Life as early as possible to ensure timely planning and preparation of a room or apartment.

The University Apartment complex is a five-minute walk from Central Campus and provides housing to upper division and graduate students. Single students and students with families are welcome to apply for housing in these newly renovated two-bedroom, furnished and unfurnished apartments. Utilities provided in the rent charge include cable television, gas, electric, water, sewer and trash services. Telephone installation, monthly charges and long distance are to be paid for by the resident. Additional amenities include centrally located laundry, playground, computer access, and a community center with large screen television.

The Housing and Residence Life web site provides detailed descriptions and floor plans for review as well as answers to commonly asked questions about living in any facilities on campus. Access the web site at <http://housing.unco.edu/>.

## INTERCOLLEGIATE ATHLETICS

Men's and women's teams compete in the NCAA, Division II. Intercollegiate sports include baseball, football, men's and women's basketball, women's soccer, women's swimming, men's and women's tennis, men's and women's track and field, men's and women's golf, women's cross country, volleyball, and wrestling. Athletically-related financial aid, based upon athletic ability and academic eligibility, is available in all intercollegiate sports.

## STUDENT ACTIVITIES

The Office of Student Activities provides students with involvement and leadership opportunities that enhance the academic experience. Students practice leadership skills, responsible citizenship, and develop management skills while making new friends and having fun.

**Charters student clubs and organizations.** Students may become involved in one of the 130 student groups which include academic societies, international, social, and political clubs and honorary organizations.

**Drug Prevention/Education Program.** This nationally recognized program educates the campus community about alcohol and other drug issues. The program supports alcohol-free alternative activities, provides training and education to students, staff, and faculty and refers students needing assistance with alcohol or other drug problems to campus and community resources.

**Fraternities/Sororities.** These organizations, also known as Greek organizations, offer leadership, social, academic, and community service activities for members. The University recognizes the following fraternities: Alpha Kappa Lambda, Delta Chi, Delta Tau Delta, Delta Upsilon, Kappa Alpha Order, Lambda Chi Alpha, Sigma Alpha Epsilon, Sigma Chi, Sigma Lambda Beta, Sigma Pi and Tau Kappa Epsilon. The University recognizes the following sororities: Alpha Phi Alpha, Alpha Phi, Alpha Omicron Pi, Alpha Sigma Alpha, Delta Zeta, Kappa Sigma, Lambda Theta Nu, Sigma Lambda Gamma, Sigma Gamma Rho Alpha Kappa Alpha, and Sigma Kappa.

**Gay, Lesbian, Bisexual, Transgender Resource Office, The.** Seeks to offer education and support to students, faculty and staff through student panels, educational programming, social and support groups, and a library of related materials.

**Student Representative Council (SRC).** This is the UNC student government comprised of eleven officers, two non-voting members, and representatives for PASC, SPEEC and the faculty. SRC activities include allocation of student fees, voicing student concerns and issues to the campus and



community and supervising four services which are the Center or Peer Education, Legal Services, Off-Campus Housing and National Student Exchange.

**University Program Council (UPC).** This student-run, student-funded organization sponsors lectures, movies, comedians, concerts and other special events at low or no cost to students. Students obtain practical experience in all aspects of program and event management while having fun and meeting new people.

**Volunteer Link.** Students volunteer for community service activities such as Best Buddies, Alternative Spring Break (a national program for service projects), Habitat for Humanity, and other Weld County services agency programs.

## STUDENT SUPPORT SERVICES

Every student has specific and changing needs for emotional, physical, and social support or assistance that must be met to fulfill personal and academic goals. UNC provides a comprehensive range of support services.

**The Assault Survivors Advocacy Program (ASAP)** provides sexual assault prevention education as well as comprehensive advocacy services to student survivors of sexual assault. This includes emotional support, information, referral, and advocacy through the medical, legal, judicial and administrative system.

**The Bursar's Office** (Accounts Receivable, Loans Receivable, Collections and the Cashier's Office) prepares and mails student billings; disperses financial aid; collects tuition, fees, room and board and other related charges; maintains and collects Federal Perkins Loans and university loans, and handles the cashier functions for the entire University.

**The Center for International Education** provides support through ongoing orientation, advising, cultural, social and educational activities for students from other countries. The office offers services related to immigration and cross-cultural programming for the entire university community.

**The Counseling Center** provides psychological services to UNC students. In addition to individual and group counseling, the Center provides educational programs such as test anxiety reduction and time management. The Counseling Center is located in Cassidy Hall. The Counseling Center also presents workshops across campus on a wide variety of mental health topics, focused on the prevention of psychological distress and difficulties, as well as teaching positive life coping skills. Contact the Counseling Center at 970.351.2496.

**The Dean of Students Office** serves as a University-wide problem-solving, information, and referral service. The dean coordinates a recognition and awards program and administers academic misconduct and discipline.

**The Office of Multicultural Affairs** coordinates the programs of UNC's cultural centers, the Center for Human Enrichment and Cumbres. Centers and services include:

- **Asian/Pacific American Student Services** provides academic and cultural programs/events, advising, a resource room, computer labs, and support with emphasis on Asian/Pacific American students but is open to all students.
- **Center for Human Enrichment (CHE)** provides academic advising, skill development classes, tutoring and personal and career advising to referred students. The CHE Learning Center offers computer, tutoring and study skills workshops.
- **Cesar Chavez Cultural Center** provides cultural, social and academic support to all students, with a focused emphasis on the Hispanic/Latino student, as well as programs, cultural events, a resource room, and support to students in cultural, social and academic areas.
- **Cumbres** prepares Hispanic/Latino students to teach with an English as a Second Language or bilingual education endorsement.
- **Marcus Garvey Cultural Center** provides academic, cultural and social support to African-American students, as well as programs, cultural events and resources for all students throughout the year.

- **Native American Student Services** enhances the diversity of the University through cultural programming and events. Academic, cultural and social support is also provided to all students with an emphasis on Native American students.

**The Student Health Center** provides a variety of medical and nursing services. Appointments can be scheduled with physicians, nurse practitioners, and nurse specialists. The center manages a Certified Drug Outlet and is fully accredited by the Accreditation Association for Ambulatory Health Care, Inc. The Student Health Center is located in Cassidy Hall.

**The Women's Resource Center** provides educational programs, speakers, performers, resources and opportunities for students interested in women's initiatives and women's leadership. The Center is located in Scott-Willcoxon Hall. The Scott-Willcoxon Hall also houses the Stryker Institute for Leadership Development.

## THE UNIVERSITY CENTER

Located at the corner of 10th Avenue and 20th Street, the University Center (UC) provides cultural, educational, social, leisure, and co-curricular activities for the University community and guests.

The UC houses Enrollment Services, College Transition Center, Career Services, Registration Center and is the home for Student Activities.

A variety of merchants serve the campus community on the UC lower level including several food vendors (Zachariah's Food Court and Taco Bell *Express*), the Barnes and Noble College Bookstore and Copy Center, a travel center, convenience store, hair salon, computer store and Wells Fargo Customer Service Center.

The UC Computer Commons offers students 24-hour access during the week and provides students with IBM compatible and MacIntosh computers.

Lounges, meeting rooms and other facilities are also available. The University Center hosts an exceptional range of events and programs with attendance surpassing 200,000 annually.

**The UNC Card** is the official identification card for all members (faculty, staff and students) of the university community. On campus, the UNC card functions as a library card, dining card, activities card, recreation center pass, and as security access to various buildings. Students may also use the UNC Card as a discounted calling card. As a financial tool, the UNC Card functions as an ATM/Debit Card and permits direct deposit of financial aid and student payroll checks to a free Wells Fargo Bank account. For alternative bank options, stop by the Card Office.

**The UNC Card Office** and the customer service office for Wells Fargo Bank are located in the lower level of the University Center.

## UNIVERSITY POLICE DEPARTMENT (UNCPD)

The UNCPD provides law enforcement services to the campus. It is staffed 24 hours a day year-round with professional, full-time, state-certified police officers. This office is responsible for the preventative police patrol, traffic and parking enforcement, response to medical calls, crime prevention efforts, as well as criminal investigations. The UNC Police Department is accredited by the Colorado Association of Chiefs of Police on Professional Standards.

## UNIVERSITY LIBRARIES

The **James A. Michener Library**, named for one of America's most popular authors (a UNC alumnus and former faculty member), maintains a primary collection of approximately 1.5 million units of hardbound volumes, periodicals, monographs, government documents, archival materials, filmstrips, slides, maps, software programs, videos, and microforms. Opportunities to borrow materials are available to all Colorado citizens. Services include bibliographic instruction in the state of the art Instruction Center,

interlibrary loan, reference, circulation, reserves, and access to information via CD-ROM, on-line systems and the World Wide Web.

Access to library materials and resources is provided through *The Source*, an on-line Public Access Catalog. In cooperation with the Colorado Alliance of Research Libraries, access is provided to the holdings of the UNC Libraries, and the collection of hundreds of libraries throughout the country. In addition, indexed access is provided to more than 3 million articles and databases, including full-text.

Through special arrangements, UNC students may borrow library materials from any state-supported college or university in Colorado, the University of Denver, and the Denver Public Library.

The Interlibrary Loan Service obtains library materials for UNC students and faculty from within the state and nation as well as from foreign libraries. The University Libraries has initiated a new service that allows students to request materials directly from Colorado libraries participating in *Prospector*. Through the on-line catalog *The Source, Prospector* provides the student direct access and the ability to borrow materials from all participating libraries in Colorado and Wyoming.

The **Adaptive Technology Room**, located on the main level of Michener Library, is available to individuals with disabilities who use assistive technology to retrieve and view information. The hardware/software includes: screen reading software, screen enlarging software, scan/read software, Braille translating software, Braille printer, trackball, large monitor, internet access, and closed circuit television. UNC students may be trained to use the technology at the Disability Access Center, 970.351.2289.

The **University Libraries** has been designated as the repository for the works of James A. Michener. The **James A. Michener Special Collection** includes manuscripts, personal papers, research materials and publications that are available to researchers, faculty, and students who want to further explore the works of the famous author. The University Archives provides materials dealing with the history and priorities of the University.

The **Music Library** building was completed in October of 1997. Services include a listening laboratory, a bibliographic instruction classroom, a group study room, study alcoves and carrels. Comprehensive holdings of scores, recordings, periodicals, and monographs are available to the academic community.

## UNDERGRADUATE STUDENTS, POLICIES AND PROCEDURES

### ACADEMIC APPEALS

Students may appeal any academic decision that they consider arbitrary or capricious, or contrary to University policy. The procedures of the Academic Appeals Board and the University Disciplinary Committee are published in the Student's Rights and Responsibilities statement and can be further explained by the Dean of Students Office.

Before initiating an appeal and between various appeals stages, the student is strongly encouraged to discuss her or his case with the Dean of Students Office and/or his or her academic advisor.

### ACADEMIC APPEAL FOR READMISSION

Students may immediately appeal their suspensions if extenuating circumstances exist. These circumstances include factors beyond the student's control (e.g., family emergency, serious illness, death, etc.) and must be documented. Appeals due to other circumstances will be reviewed on a case by case basis. Appeal forms are available at the College Transition Center.

A student who has been suspended may not re-enroll at the University until at least one term, not including summer term, has passed. A readmission appeal form must be submitted to the College Transition Center at least 60 days prior to the start of the term in which the student wishes to re-enter UNC. The appeal should include the following:

- A detailed account of the reasons the student did not achieve his or her academic potential.
- A description of the circumstances that have changed to allow the student to perform at a satisfactory level.
- A specific plan of action that the student will follow to attain academic success.

A student who has attended other institutions since suspension from UNC must furnish the College Transition Center official transcripts from those institutions.

Readmission forms are available at the College Transition Center, or on our web site at [www.unco.edu/aac/scholastic/Scholastic.htm](http://www.unco.edu/aac/scholastic/Scholastic.htm).

### ACADEMIC RECOGNITION

**Dean's List of Distinction.** Students will be placed on the Dean's List of Distinction through the Dean of Students if they complete a minimum of 24 credit hours and achieve a 3.75 or above grade point average for any two of the three academic terms of the year (cumulative grade point averages are not considered).

**Dean's Honor Roll.** Students will be placed on the Dean's Honor Roll through the Dean of Students if they complete a minimum of 24 credit hours and achieve a 3.50 to 3.74 grade point average for any two of the three academic terms of the year (cumulative grade point averages are not considered).

**Graduation with Honors.** Graduation with honors (cum laude, magna cum laude, summa cum laude) is determined on the basis of a student's UNC cumulative grade point average. A student's academic record is reviewed for graduation with honors the semester before the semester that the student will graduate. To qualify for honors the semester before graduation, the student must have completed 50 semester hours of credit at UNC and have achieved the necessary cumulative grade point average. A student's record may also be reviewed at the end of the semester that he or she graduates.

To qualify for honors at the time of graduation, the student must have completed 56 semester hours of credit at UNC and have achieved the necessary cumulative grade point average.

In either situation, the honors designation will be indicated on the student's transcript. However, the honors designation will be announced at graduation ceremonies only for those students who qualified for honors the semester before graduation.

The criteria for awarding honors will be determined by the graduating classes of a given college from the previous academic year. The criterion for cumulative grade point average for "summa cum laude" will be determined by the lowest cumulative grade point average of the students in the top two percent of the previous year's school/college graduating class; for "magna cum laude", by the lowest cumulative grade point average of students in the top four percent; and for "cum laude", by the lowest cumulative grade point average of students in the top six percent.

### ACADEMIC STANDING

A student's academic standing is determined by the cumulative grade point average. In order to graduate, a minimum of 2.0 on a 4.0 scale must be earned at the University of Northern Colorado:

- Students are placed on academic probation up to the next 24 credit hours at UNC (excluding summer) if the cumulative grade point average falls below 2.00. At any time the cumulative GPA is raised to 2.00 or higher, the student will return to regular academic standing.

- Students on academic probation who do not raise their cumulative grade point average to the required level after the next 24 credit hours at UNC (excluding summer) will be suspended. Students suspended from UNC may *not* apply for readmission until the passage of at least one term, excluding summer, unless extenuating circumstances exist and are documented.
- Students seeking readmission to UNC must have successfully completed nine semester hours of a 2.00 cumulative grade point average at another accredited institution, have reached the necessary cumulative grade point average through enrollment in the UNC summer session, or have presented other evidence of potential future academic success if readmitted.
- Applications for readmission are available through the College Transition Center.
- All applications will be reviewed by the University Academic Review Board and the Board's decisions are considered final.
- A second academic suspension is considered a permanent suspension from future enrollment at UNC.

## BASIC SKILLS COURSES

These courses are designed to teach academic skills and general competencies necessary to succeed in college. Numbered 001 through 099, they do not count in term, cumulative or total credits and are not calculated into the grade point average. Credits earned in these courses will not count toward meeting financial aid minimum credit-hour requirements.

## CLASSIFICATION STATUS

A student is classified as a freshman until successful completion of 30 semester hours of credit and as a sophomore until completion of 60 semester credit hours. A student is considered a junior until completion of 90 semester hours and then is classified as a senior until completion of a baccalaureate degree.

## COURSE CREDIT

All credit toward graduation is computed in semester credit hours. "One semester hour" typically means a course is taught for approximately one hour one day each week throughout the semester of 15 weeks. Likewise, a two-credit-hour course usually meets twice a week and generates two semester hours of credit. Most courses are offered for three semester credit-hours.

Some UNC courses may be repeated for credit; they are specifically noted in the course description section of this *Catalog* with the maximum amount of credit allowed for each course.

For repeated courses, grades of "F," "U" and "I" that have not been completed within the allotted time, the credit hours are bracketed on the transcript and not included in total credits.

Students may register in a course for "no credit" but must pay the same tuition and fees as those taking the course for credit. No audit or visitor cards are issued. Students taking a course for no credit must enroll for 00 credit hours through the regular registration procedure before the add deadline. Students need not complete assignments or exams used to determine grades but are expected to attend classes when enrolled for no credit.

Non-attendance may result in the assignment of a "UW" grade.

## Course Repeat Policy

The Repeat Policy affects all courses. Repeated courses are recorded on the transcript for every individual registration; all letter grades count towards the cumulative grade point average. Repeated courses will be counted one time only in total credits toward graduation. A course may be taken for a maximum of three (3) times without written consent from the academic dean of the respective college. It may be repeated only two (2) times without written consent from the academic

dean of the respective college. A mark of "W" does not count towards the maximum of three (3) times (not using Grade Forgiveness).

**Grade Forgiveness.** Grade Forgiveness, which took effect Fall semester 2002, affects only students that apply for the program. Undergraduate students may repeat a UNC course in an effort to attain a satisfactory level of achievement in courses in which they initially encountered difficulty, referred to as grade forgiveness, subject to the following conditions.

1. A course may only be applied to the grade forgiveness if the original grade of the exact same course was "D" or "F".
2. Grade forgiveness can only be applied once (1) per course for a maximum of four (4) courses, not to exceed 12 credits during the student's academic career.
3. Both the original and the second attempt at an individual course will be recorded on the student's transcript, but only the more recent grade will be calculated into the cumulative grade point average.
4. If a student enrolls and receives a mark of "W" or "UW" in the second attempt of a course, that enrollment counts as the grade forgiveness opportunity and the original grade will stand.
5. Credits earned are used only once to fulfill graduation requirements.
6. A student receiving a letter grade can only replace such a grade in the cumulative GPA with another letter grade.
7. To be eligible for the grade forgiveness, students must submit an application to the Registrar's Office. Approval will not be given after the drop deadline.
8. A student who has been granted "Fresh Start" is not eligible for grade forgiveness.
9. Approved, repeatable courses, such as activity courses, clinicals, research, seminars and selected topics, do not qualify for grade forgiveness.

## COURSEWORK COUNTED IN NEXT HIGHER DEGREE

While completing one degree, students may count a maximum of 12 graduate credits applicable to the next higher degree. Such dual enrollment is limited to two consecutive semesters. All credits applicable to graduate degrees must be earned within the time limits specified for each degree program. The initial date for the next higher degree will be the date of the first course credits counted toward that degree. Students will be accountable for the final examination in the courses taken for the next higher degree.

If students desire to count work toward the next higher degree, they must have:

1. applied for and been admitted to the next higher degree program;
2. applied for graduation in the current degree program;
3. submitted a "Petition to Count Work Toward the Next Higher Degree" form to the Graduate School before starting any courses that are to count on the next higher degree.

Seniors registering for master's degree work according to this procedure will continue to be classified as undergraduates until they have been awarded their baccalaureate degrees.

## CREDIT BY EXAMINATION: AP, CLEP, CHALLENGE, PROFICIENCY

The University offers three options for credit by examination: A student may qualify for University credit or may exempt a specific course by demonstrating superior performance on the subject matter examinations administered through the Advanced Placement (AP) program of the Educational Testing Service. These are usually taken when the student is still in high school. Generally, an AP test score of 3, 4, or 5 will result in college credit being awarded. Please consult the Office of Admissions for specific AP test score requirements.

The College-Level Examination Program (CLEP) offers another opportunity to earn credit through demonstration of superior performance in subject matter examinations. CLEP credit is offered for certain introductory and select advanced courses. Arrangements are made at Career Services.

In addition, students who judge their current academic ability in a specific course to be sufficiently high to earn credit may take rigorous subject matter examinations. Several departments offer University challenge examinations that may be taken under the following conditions:

- The specific course must have been approved for challenge examination by the academic department that administers the course.
- The student must enroll in the course and pay the appropriate tuition and fees.
- The student must obtain approval from the course instructor to challenge the course through examination.
- The student must arrange for and pass a challenge examination designed and administered by the instructor or the department during the first two weeks of the semester that the specific course is offered.
- If a student passes the examination, he or she will not be required to attend the remaining class sessions. At the end of the semester that the examination was passed, the class credit and grade earned on the examination will be entered on the student's transcript.
- Should the student fail the examination or seek to earn a higher grade than attained on the examination, the student may either remain in the class and meet the course requirements or withdraw from the class before the withdrawal deadline for that semester and re-enroll in the class to attempt to earn credit by examination in a subsequent semester.
- Not all academic departments offer the credit-by-examination option. Students should contact the main office of any department to determine the policy of that particular department.

**Proficiency Examinations.** Certain required courses in some majors and minors offer proficiency examinations to determine whether or not a student may be excused from a requirement.

## DIRECTED STUDIES

Directed Studies are available in most disciplines. These are identified within this publication by course numbers 422 and 622. The Directed Study course provides a vehicle to allow a qualified student may use to receive University credit for an individualized investigation under the direct supervision of a UNC faculty member. Because Directed Studies with the number 622 are at the graduate level, the faculty member providing the supervision must be approved to teach graduate-level courses. No faculty member will be authorized to supervise a directed study during a semester that he/she is not actually employed on-campus at UNC.

The investigation must be on a specific topic that is not duplicated by an existing course within the University's curriculum. The nature of the study must involve intensive use of relevant literature, materials, or techniques, and the study report must reflect a synthesis of the information or techniques acquired. The following policies apply for registration in Directed Studies courses:

1. A Directed Study course may be for no more than four semester hours of credit per academic semester, with no more than six credits of Directed Studies taken in any semester. A study may be further limited to the maximum number of credits listed in this *Catalog*.
2. The student should apply through the department in which he or she is doing the study.
3. Permission to engage in a Directed Study for credit must be approved by the student's program advisor, the faculty member supervising the study, and the department chairperson of the major department. The Non-Scheduled Course form to be presented at the Registrar's Office at the time of enrollment must bear the signatures of the supervising faculty member and the department chairperson. A rationale for course credit form should be

completed and filed in the academic department. Forms are available only through the department in which the study is supervised.

Separate policies exist for distribution of critiqued and graded copies of a completed Directed Study, based on whether the study was completed at the graduate or undergraduate level. A student should consult with either the Graduate School or the dean of the college in which the Directed Study is to be undertaken for the appropriate policy.

Students receiving graduate credit for a 622-numbered course must submit two copies of a final report to the supervising faculty member. While the final report may be in the nature of a scholarly research paper, it may also take the form of a report or a summary of activities undertaken. The format and writing style of the final report must be in keeping with the style manual used by the discipline concerned. It is the student's responsibility to acquire the appropriate style manual for reference. The faculty member must submit one copy of the final report to the appropriate department office with the final grade assignment.

## DOUBLE MAJORS AND CONCURRENT DEGREES

Students may complete the requirements for two majors (a "double major," the concurrent completion of the requirements for two majors), in which case both majors will be listed on the transcript. Additional hours above the minimum requirement for a degree are incorporated into that degree program and may not be used to meet other requirements.

Undergraduate students who have two majors and have satisfactorily completed a minimum total of 150 semester hours of credit, will receive diplomas indicating the awarding of two degrees simultaneously. A student with less than 150 semester credit hours will receive one diploma and one degree appropriate for the major declared as the first major with both majors stated on the diploma.

## FRESH START PROGRAMS FOR FRESHMEN, CONTINUING STUDENTS

The Fresh Start Programs were created to provide a second chance or "fresh start" to students who experienced poor academic standing. Students who apply to and meet the requirements of the program are given the opportunity to recalculate their cumulative grade point averages without grades of "D" and "F".

The Fresh Start Program for freshmen is for students who have earned less than 30 semester credits toward graduation and who have less than a 2.00 cumulative grade point average. To be eligible, a student must attend another institution and transfer a minimum of 24 semester credits (or 36 quarter credits) of transferable course work to UNC with a 2.50 grade point average for these credits. After returning to UNC, the Fresh Start Program for freshmen can be invoked if the student earns a minimum of a 2.5 grade point average in the first 12 credits completed.

The Fresh Start Program for Continuing Students is for individuals who have grades of "D" and/or "F" that are at least four (calendar) years old based on the most recently completed term at UNC. In both programs, "D's" and "F's" earned during the terms covered by the Fresh Start Program are not used in the recalculation of the cumulative grade point average and no longer count for credit toward graduation.

For more information, students should contact the College Transition Center.

## GRADUATION APPLICATION

Undergraduate students must apply for graduation upon completion of 90 semester hours of credit applicable to the degree program. Applications for graduation are accepted at the Registrar's Office. There is a graduation fee assessed for the term the student initially plans to graduate.

After the application is filed, the student is required to inform the Registrar's Office of any change in graduation plans, (i.e., the proposed semester of graduation, course substitutions, course repeats).

## ON-CAMPUS LIVING REQUIREMENT

All students with less than 20 semester hours earned and under 20 years of age are required to live in a residence hall. Undergraduate students must be enrolled in a minimum of six semester hours to live on campus.

## ORIENTATION

Discover UNC is an orientation program for entering freshmen and transfer students that provides essential information about the University, its academic policies and requirements; academic advising, and assistance in registering for classes. By separate mailing, newly admitted students are invited to attend the orientation program, or visit our web site at [www.unco.edu/discover](http://www.unco.edu/discover).

## SECOND BACCALAUREATE

Students who received their first degree at UNC and wish to declare an intent to complete a second baccalaureate degree must complete a Change of Major form available in each academic department. Upon completion of the form and approval by the appropriate department, the student's records will be changed to reflect the intent to complete a second baccalaureate degree. In order for the classification change to be approved for a particular semester and, thus, allow the student to pay undergraduate rather than the graduate tuition rates, the form must be sent from the appropriate department to the Registrar's Office by Wednesday of the third full week of the first semester the student is enrolled in courses to count toward the second baccalaureate degree. Applications submitted after this point in the semester will not affect the student's classification (undergraduate, second baccalaureate degree) until the following semester. Students must complete a minimum of 30 semester hours in residence to qualify for the second bachelor's degree.

Students who have completed their baccalaureate degree at another institution and seek a second baccalaureate degree at UNC must complete an admission application through the UNC Admissions Office and are required to pay undergraduate tuition rates.



# GRADUATION REQUIREMENTS, GENED, TEACHER EDUCATION AND SPECIAL PROGRAMS

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## BACHELOR'S DEGREE

A bachelor's degree is an academic title granted to a student who has completed a specific course of study. Degree titles are authorized by the Colorado Commission on Higher Education and programs leading to the degrees are administered by the University, a college, a department and sometimes a program board or coalition of faculty.

The faculty of UNC has established five general requirements that a student must meet to earn a baccalaureate degree:

1. Earn a minimum of 120 semester credit hours.
2. Have a University of Northern Colorado cumulative grade point average of at least 2.00. Certain programs or majors may have additional requirements (e.g., recommendation for teacher licensure requires a UNC cumulative grade point average of at least 2.50).
3. Have at least 40 credit hours in courses designated as General Education in the Catalog of the academic year in which the student first completes courses at the University. The UNC undergraduate Catalog expires after six years. The General Education program is described later in this chapter.

Meet all degree requirements in the student's major field of study, as listed in the Catalog current when the first major is officially declared. If applicable, teacher licensure requirements must be satisfied.

## CATALOG REQUIREMENTS

Requirements for graduation are checked as follows:

1. Student completes the General Education requirements as designated in the Catalog in effect at the time of acceptance.
2. Major or minor requirements are determined by the Catalog of the academic year in which the student declares a first major.
3. The undergraduate student has six years to complete his or her academic program using the appropriate Catalog.
4. At the end of the student's six-year limit, the student may select any subsequent Catalog up to and including the current one, provided the student is or was in attendance at the University during that academic year.

## CORRESPONDENCE CREDIT

A maximum of 30 semester hours of credit in correspondence and/or continuing education courses will be accepted toward graduation.

All correspondence courses and/or transfer work must be completed, received, graded and recorded before the semester of graduation.

## MAJOR AND MINOR REQUIREMENTS

A major is a concentration of courses in a student's declared area of primary academic study which, when accompanied by appropriate supporting courses, leads to a degree. Majors are recorded on the student's permanent record. The requirements for a major are specified in the Catalog of the academic year in which the student declares a major.

A student must meet the General Education requirements as designated in the Catalog of the academic year in which the first term of completed on-campus courses occurs.

Certain courses are required for the major, but electives may be selected from a range of alternatives prescribed by the department. Students who are unsure of their major may enter the University as "undeclared." Students should choose a major by the time they have completed 30 credit hours. Undergraduate students may transfer from one major to another by filing a Change of Major/Minor form as long as they meet the requirements of the new department as listed in the Catalog of the academic year in which he or she declares a first major. Please note: a change of emphasis area constitutes a change of major.

An emphasis area includes specified courses that provide a particular focus within a major. Emphasis areas for majors are recorded on the student's permanent record.

In contrast with a major, an academic minor involves less extensive concentration in a discipline but still imposes specific requirements. An undergraduate minor is a specific set of courses in a subject area or academic discipline. A minor does not alone lead to an academic degree, but may be required by some majors. A minor differs from an emphasis area in that a minor is not a focus within the student's major. The requirements for a minor are specified in the Catalog of the academic year in which the student declares a first major.

To complete a major from UNC, a student is required to earn a minimum of nine upper-division UNC credits (300-400) in that major. To complete a minor, a student is required to earn a minimum of six upper-division UNC credits (300-400) in that minor.

The student must meet all requirements and pass all courses required by the school/college or department from which he or she selects a major or a minor. These requirements vary and are specifically stated in the section of this Catalog that summarizes each academic department's offerings including its major and minor programs.

Each undergraduate student is strongly encouraged to work closely with his or her assigned faculty advisor in selecting General Education courses, major and minor offerings and elective courses from other disciplines.

## MATHEMATICS REQUIREMENTS

The Department of Mathematical Sciences offers several different mathematics courses that may be appropriate starting points for students who need to take college mathematics. The department strongly desires that students begin their college mathematics by taking the most appropriate course.

The following are the most commonly followed sequences of mathematics courses. Choices depend on choice of major/minor and high school mathematics preparation.

1. If you have three full years of high school mathematics with a grade of "C" or better:

*To satisfy General Education Category 2 only –*  
MATH 120 or STAT 150

*To satisfy Business majors –*  
MATH 175-MATH 176 or MATH 124-MATH 176

*To satisfy Elementary Education Teacher Licensure –*  
MATH 181 and MATH 182

**Note:** Students in the Mathematics Concentration should consult an advisor in the Department of Mathematical Sciences.

*To satisfy Nursing and some Health Science majors –*  
STAT 250

*Majors/minors needing the calculus sequence –*  
MATH 124-MATH 125-MATH 131-MATH 132-MATH 233 or  
MATH 125-MATH 131-MATH 132-MATH 233 or MATH  
127-MATH 131-MATH 132-MATH 233 or MATH 131-MATH  
132-MATH 233

Other students will need to complete MAT 105 or MAT 100-105 through Aims Community College (taught on the UNC campus) with a grade of "C" or better, then follow 1. above.

## OFFICIAL TRANSCRIPTS

Transcripts from all colleges and universities containing transfer credit necessary for completion of degree requirements must be received by the Admissions Office before the semester of graduation.

## PREVIOUS CREDIT EARNED

Any college work earned more than 15 years before the time a baccalaureate degree is granted at UNC may be applicable toward a degree at the discretion of the Registrar and the major and minor departments.

## RESIDENCY REQUIREMENT

A student must have earned a minimum of 30 semester credit hours in UNC courses. For students who exceed the minimum 30 hour residence requirement, 20 of the last 30 semester credit hours of a degree program must be earned in UNC courses.

# ELEMENTARY EDUCATION LICENSURE: GENERAL EDUCATION PROGRAM

## Requirements

### General Education Courses — 40 semester hours

**Note:** Students are strongly recommended to take the courses listed with the full course titles. Courses listed in brackets are acceptable alternatives.

1a - **ENG 122 College Composition (3)**

1b - one course from Intermediate Composition (3)\*

2 - **MATH 181 Fundamentals of Mathematics I (3)\*\***

and

**MATH 182 Fundamentals of Mathematics II (2)**

3 - one course from Physical Activity (1)

4c - **HIST 100 Survey of American History from Its Beginnings to 1877 (3)**

or [HIST 101 or HIST 121]

4d - **ENG 131 Introduction to Literature (3)**

or [ENG 211, ENG 214 or ENG 262]

4a/b/e - one course from ART/MUS/FL/PHIL/MIND

or

5a/e/f - one course from ANT/PSY/SOC

5bd - **ECON 103 Introduction to Economics:**

**Macroeconomics (3)**

or [ECON 105 or ECON 101]

or **PSCI 100 United States National Government (3)**

or [PSCI 105]

5c - **GEOG 100 World Geography (3)**

or **GEOG 110 Geography of the United States and Canada (3)**

or [GEOG 200]

6 - Science-select one course from each of two of the following areas. The two courses must total at least 7 credit hours.

**ESCI 265 Earth Science Concepts for Elementary Teachers (3)**

or [AST 100, GEOL 100, MET 205 or OCN 200]

**SCI 265 Physical Science Concepts (4)**

or [CHEM 108, CHEM 111, PHYS 200 or PHYS 240]

**BIO 265 Life Science Concepts (3)**

or [BIO 110 or BIO 111]

7a - one course from Interdisciplinary and International Studies (3)\*\*\*

and

7b - one course from Multicultural Studies\*\*\*\*

\* select any course except BA 205, AFS 305 and MUS 152

\*\* students selecting the Mathematics Concentration take MATH 131 instead of MATH 181

\*\*\* select any course except GERO 205, NURS 200 and BA 251

\*\*\*\*select any course except CH 236 and HRS 290



# GENERAL EDUCATION PROGRAM (GENED)

## Mission

The mission of the General Education program is to foster competencies and perspectives that enrich and enhance our life experiences. Liberal arts education at the University of Northern Colorado extends beyond the teaching and learning of vocational skills and the acquisition of specialized knowledge. The program provides skills and abilities which strengthen an individual's capacity to both make a living and to have a satisfying life. It promotes an understanding of the circumstances and events which may not have shaped our personal development but that may exert a strong influence on the ability of others to read, hear, or understand our viewpoints.

The skills component of General Education fosters growth in critical thinking, computational ability, self-expression in written, oral and graphic forms and physical competence. All of these skills improve your ability to understand or develop new ideas and to present them to others.

The content component of General Education deals with the complexity and integrated nature of knowledge. It focuses on the paradigms and patterns of inquiry of many disciplines and the fundamentally multidisciplinary character of true understanding. The many different approaches to subject matter and problem-solving practiced in the humanities, the social sciences, the natural sciences and mathematics all contribute to an appreciation of diversity and the value of inquiry. The interdisciplinary, multicultural and international courses provide a grounding in the wealth of human experience and the necessity of taking this diversity into account throughout our lives.

Collectively, the skills and content components of the General Education program provide the framework for lifelong learning and personal growth. They provide an understanding of and perspective on our history, current events and future challenges. This foundation increases the ability of students to apply the knowledge acquired in major, minor and other parts of their education program more effectively.

The courses included in the General Education program represent a variety of disciplines, but are designed to help all students reach some common goals. Each of the seven categories in General Education has its own set of criteria, which all courses offered in that category must meet. Each category of courses also has its own set of student performance expectations. As students complete general education courses their achievement of the expectations will be assessed. In turn, students are provided with the opportunity to comment on the effectiveness of the courses in helping to meet the performance expectations.

The requirements in the Skills Areas are intended to help you to develop:

- Correct and effective use of the English language in generating writing in a variety of formats.
- The ability to gather and interpret information from a variety of sources, including computerized retrieval systems.
- Numerical, statistical and algebraic skills required for the understanding and investigation of real world problems.
- The ability and confidence to interpret numerical and graphical data.
- Appropriate use of technology in support of mathematical studies.
- Successful strategies for group participation in physical activity.
- Skills and techniques necessary for participation in physical activity.
- Knowledge that will help you to enhance and maintain your personal fitness and health.

The requirements in the Content Areas are intended to help you to:

- Understand the historical frameworks of and interactions between diverse disciplines.

- Understand and apply research techniques from different disciplines. You will collect, organize and interpret data using current technology.
- Assess the validity of diverse sources of information.
- Understand Western and non-Western cultures and values.
- Understand the perspectives, contributions and concerns of different ethnic, gender and age groups.
- Be able to identify important issues involved in human welfare and survival.

## Requirements

The General Education Program at UNC is divided into two areas: Skills Area — *Category 1. - Category 3.* and Content Area — *Category 4. - Category 7.*

- An overall minimum of 40 semester credit hours selected from the Skills and Content Areas (*Categories 1 - 7*)
- At least 30 semester hours must be taken in the Content area.
- Only 6 semester hours of general education courses may be courses carrying the students' major prefix (i.e. Music majors can only use 6 hours of courses with the course prefix of MUS).

## Offerings

The typical frequency of offering of each General Education course is indicated following the credit hours for the course. Frequencies are indicated using the following codes:

**SEM** — course is offered every Fall and Spring Semester

**1YR** — course is offered every Academic Year

**2YR** — course is offered every two (2) Academic Years

**IRR** — course is offered irregularly

Please note: The frequency listed is typical and may be affected by departmental ability to staff the course when it is typically scheduled.

## Skills Area Requirements

### Category 1. Composition — 6 credits

Choose 2 courses; one must be **ENG 122 College Composition (3)**, and the second course selected from b. Intermediate Composition courses.

#### a. Elementary Composition

**ENG 122 College Composition (3) SEM**

#### b. Intermediate Composition

**ANT 315 Life History and Culture (3) 1YR**

**BA 205 Business Communications (3) SEM**

**AFS 305 Survey of African American Literature (3) 1YR**

**ENG 123 College Research Paper (3) SEM**

**ENG 225 Communications on a Theme (3) 1YR**

**ENG 227 Technical Writing (3) 2YR**

**MUS 152 Writing and Scholarship in the Performing and Visual Arts (3) 1YR**

**PHIL 101 Critical Thinking and Writing (3) IRR**

**SCI 291 Scientific Writing (3) SEM**

### Category 2. Mathematics — 3 credits

One course, chosen from among these listed courses, except that **MATH 181** and **MATH 182** must both be taken together to satisfy the requirement:

**MATH 120 Mathematics and Liberal Arts (3)**

**MATH 124 College Algebra (4) SEM**

**MATH 125 Plane Trigonometry (3) SEM**

**MATH 127 Elementary Functions (4) SEM**

**MATH 131 Calculus I (4) SEM**

**MATH 175 Topics in Finite Mathematics (3) SEM**

**\*MATH 181 Fundamentals of Mathematics I (3)**

**MATH 182 Fundamentals of Mathematics II (2)**

**STAT 150 Introduction to Statistical Analysis (3) SEM**

**STAT 250 Statistics for Health Sciences (3) SEM**

\*Students selecting the Mathematics Concentration take MATH 131 instead of MATH 181.

### Category 3. Physical Activity — 1 credit (minimum)

Choose 1 course from the courses listed below:

#### Lifetime and Leisure Skills

##### Team Sports:

SES 100 Basketball (1) SEM  
SES 101 Flag Football (1) 1YR  
SES 102 Soccer (1) SEM  
SES 103 Softball (1) SEM  
SES 104 Volleyball (1) SEM

##### Lifetime Sports:

SES 110 Badminton (1) 1YR  
SES 111 Bowling (1) SEM  
SES 113 Fly Fishing/Trap Shooting (1) SEM  
SES 114 Golf (1) SEM  
SES 116 Water Safety Instructor (2) 1YR  
SES 117 Racquetball (1) SEM  
SES 118 Swimming (1) SEM  
SES 119 Tennis (1) SEM

##### Adventure/Risk Activities:

SES 125 Backpacking and Hiking (1) SEM  
SES 126 Canoeing (1) IRR  
SES 127 Cross-Country Skiing (1) 1YR  
SES 128 Cycling (1) SEM  
SES 129 Downhill Skiing (1) SEM  
SES 130 Kayaking (1) 1YR  
SES 131 Orienteering (1) SEM  
SES 132 Challenge Ropes Course (1) SEM  
SES 133 Scuba Diving (1) SEM  
SES 134 Self Defense (1) SEM  
SES 135 Rock Climbing (1) SEM

##### Exercise and Fitness:

SES 145 Activity for Stress Management (1) SEM  
SES 146 Aerobics (1) SEM  
SES 147 Aquacize (1) SEM  
SES 148 Exercise and Weight Control (1) SEM  
SES 149 Fitness and Conditioning (1) SEM  
SES 150 Jogging and Walking (1) SEM  
SES 152 Swimming Conditioning (1) SEM  
SES 153 Weight Training (1) SEM

##### Dance and Movement Activities:

DNCE 167 Ballroom Dance I (2) 1YR  
DNCE 175 Tap Dance I (2) 1YR  
SES 174 Social Dance (1) SEM

### Content Area Requirements

At least 30 semester hours of General Education courses must be taken in the Content Area (Category 4. - Category 7.). Note: Students will need to take hours beyond the minimum requirements in the Content Area to meet the 30 semester hour requirement.

### Category 4. Arts and Letters — 6 credits (minimum)

Choose 2 courses from 2 different alphabetical subgroups (a.-e) with different prefixes from the following:

#### a. Fine Arts

ART 181 History of Art I (4) 1YR  
ART 182 History of Art II (4) 1YR  
ART 190 Art Appreciation (3) SEM  
ART 210 Ceramics for Non-Art Majors (3) SEM  
ART 290 Visual Thinking and Visual Images (3) 1YR  
DNCE 454 Dance History and Philosophy (2) 2YR  
ENST 385 Art and the Environment (2) 1YR  
GEP 101 Antiquity and the Classical Age (3) IRR – (may be used to meet the requirement in Fine Arts or History or Literature or Philosophy)  
GEP 102 Evolutions of Cultures (3) IRR – (may be used to meet the requirement in Fine Arts or History or Literature or Philosophy)  
HUM 120 Introduction to Film (3) SEM  
MIND 181 Great Traditions of Asia: India, China and Japan (3) 1YR – (may be used to meet the requirement in Fine Arts or History or Literature)  
MIND 288 Contemporary Arts Connections (3) 2YR

MIND 297 Creativity in the Arts (3) IRR  
MT 330 History of Musical Theatre (3) 1YR  
MUS 140 Introduction to Music (3) SEM  
MUS 204 Music Fundamentals and Experiences (3) SEM  
MUS 241 Perceiving the Arts (3) 1YR  
MUS 243 History of Music I (3) 1YR  
MUS 244 History of Music II (3) 1YR  
MUS 246 Music in American History and Culture (3) 1YR  
MUS 340 Survey of History and Literature of Jazz (3) SEM  
THEA 130 Introduction to the Theatre (3) SEM  
THEA 159 Acting Theories and Practice (3) SEM  
THEA 330 History of Theatre I (3) 1YR  
THEA 331 History of Theatre II (3) 1YR

#### b. Foreign Language

CHIN 101 Beginning Chinese (5) IRR  
CHIN 102 Elementary Chinese II (5) IRR  
FR 101 Elementary French I (4) 1YR  
FR 102 Elementary French II (4) 1YR  
FR 201 Intermediate French I (3) 1YR  
FR 202 Intermediate French II (3) 1YR  
GER 101 Elementary German I (4) 1YR  
GER 102 Elementary German II (4) 1YR  
GER 201 Intermediate German I (3) 1YR  
GER 202 Intermediate German II (3) 1YR  
JAPN 101 Beginning Japanese (5) IRR  
JAPN 102 Elementary Japanese II (5) IRR  
JAPN 201 Intermediate Japanese I (3) IRR  
JAPN 202 Intermediate Japanese II (3) IRR  
RUS 101 Elementary Russian I (5) IRR  
RUS 102 Elementary Russian II (5) IRR  
SPAN 101 Elementary Spanish I (5) SEM  
SPAN 102 Elementary Spanish II (5) SEM  
SPAN 201 Intermediate Spanish I (3) SEM  
SPAN 202 Intermediate Spanish II (3) SEM

#### c. History

AFS 201 African American History I (3) 1YR  
AFS 202 African American History II (3) 1YR  
GEP 101 Antiquity and the Classical Age (3) IRR (may be used to meet the requirement in Fine Arts or History or Literature or Philosophy)  
GEP 102 Evolutions of Cultures (3) IRR (may be used to meet the requirement in Fine Arts or History or Literature or Philosophy)  
HIST 100 Survey of American History from Its Beginnings to 1877 (3) SEM  
HIST 101 Survey of American History from 1877 to the Present (3) SEM  
HIST 120 Western Civilization from Ancient Greece to 1689 (3) SEM  
HIST 121 Western Civilization from 1689 to the Present (3) SEM  
HIST 267 Age of Revolution Since the 17th Century (3) IRR  
MIND 180 Great Ideas of the Western Tradition (3) SEM (may be used to meet the requirement in History or Literature or Philosophy)  
MIND 181 Great Traditions of Asia: India, China and Japan (3) 1YR – (may be used to meet the requirement in History or Fine Arts or Literature)  
MIND 290 Search for Meaning (3) IRR (may be used to meet the requirement in History or Philosophy)  
d. Literature  
ENG 131 Introduction to Literature (3) SEM  
ENG 211 Survey of American Literature (3) SEM  
ENG 213 Survey of British Literature I (3) SEM  
ENG 214 British Literature II (3) SEM  
ENG 262 Masterpieces of World Literature (3) SEM  
GEP 101 Antiquity and the Classical Age (3) IRR (may be used to meet the requirement in Fine Arts or History or Literature or Philosophy)  
GEP 102 Evolutions of Cultures (3) IRR (may be used to meet the requirement in Fine Arts or History or Literature or Philosophy)  
HISP 111 Introduction to Hispanic Literature (3) IRR  
MIND 180 Great Ideas of the Western Tradition (3) SEM (may be used to meet the requirement in Literature or History or Philosophy)  
MIND 181 Great Traditions of Asia: India, China and Japan (3) 1YR

(may be used to meet the requirement in Literature or Fine Arts or History)

MIND 293 Play as a Route to Insight and Creation (3) 2YR  
(may be used to meet the requirement in Literature or Philosophy)

*e. Philosophy*

GEP 101 Antiquity and the Classical Age (3) IRR  
(may be used to meet the requirement in Fine Arts or History or Literature or Philosophy)

GEP 102 Evolutions of Cultures (3) IRR  
(may be used to meet the requirement in Fine Arts or History or Literature or Philosophy)

MIND 180 Great Ideas of the Western Tradition (3) SEM  
(may be used to meet the requirement in History, Literature or Philosophy)

MIND 290 Search for Meaning (3) IRR  
(may be used to meet the requirement in History or Philosophy)

MIND 293 Play as a Route to Insight and Creation (3) 2YR  
(may be used to meet the requirement in Literature or Philosophy)

PHIL 100 Introduction to Philosophy (3) SEM

PHIL 110 Figures in Western Philosophy (3) SEM

PHIL 305 Ethics in Theory and Practice (3) IRR

### Category 5. Social Sciences — 6 credits (minimum)

Choose 2 courses from 2 different alphabetical subgroups (a.-f.) with different prefixes from the following:

*a. Anthropology*

ANT 100 Introduction to Anthropology (3) SEM

ANT 120 World Archaeology (3) 1YR

*b. Economics*

ECON 101 Understanding the Contemporary Economy (3) 1YR

ECON 103 Introduction to Economics: Macroeconomics (3) SEM

ECON 105 Introduction to Economics: Microeconomics (3) SEM

MIND 286 Value Issues in Political Economy (3) 1YR  
(may be used to meet the requirement in Economics or Political Science)

*c. Geography*

GEOG 100 World Geography (3) SEM

GEOG 110 Geography of the United States and Canada (3) SEM

GEOG 200 Human Geography (3) SEM

*d. Political Science*

AFS 420 Black Urban Politics (3) IRR

MIND 286 Value Issues in Political Economy (3) 1YR  
(may be used to meet the requirement in Economics or Political Science)

PSCI 100 United States National Government (3) SEM

PSCI 105 Fundamentals of Politics (3) SEM

PSCI 203 Colorado Politics (3) 2YR

PSCI 220 Introduction to International Relations (3) SEM

*e. Psychology*

CH 336 Human Sexuality (3) SEM

CMDS 160 Introduction to Human Communication and Its Disorders (3) SEM

PSY 120 Principles of Psychology (4) SEM

PSY 230 Human Growth and Development (3) SEM

PSY 265 Social Psychology (3) SEM

*f. Sociology*

CRJ 110 Introduction to Criminal Justice (3) SEM

CH 205 Issues in Health (3) SEM

NURS 318 Health Care Systems (3) 1YR

SOC 100 Principles of Sociology (3) SEM

SOC 120 Introduction to Family Studies (3) SEM

### Category 6. Science and Mathematics — 7 credits (minimum)

Choose 2 courses from two different alphabetical subgroups (a.-d.) with two different prefixes from the following courses. At least one of the courses must have an L (laboratory) designation:

*a. Earth Sciences*

AST 100 General Astronomy (4) (L) SEM

ESCI 265 Earth Science Concepts for Elementary Teachers (3) (L) SEM

GEOL 100 General Geology (4) (L) SEM

GEOL 110 Our Geological Environment (3) 1YR

MET 110 Our Violent Atmosphere (3) SEM

MET 205 General Meteorology (4) (L) SEM

MIND 294 Revolutions in Science (3) SEM – (may be used to meet the requirements in Earth Sciences, Life Sciences or Physical Sciences)

OCN 110 Our Ocean Systems (3) 1YR

OCN 200 General Oceanography (4) (L) 1YR

*b. Life Sciences*

ANT 130 Introduction to Physical Anthropology (3) 1YR

BIO 100 Exploring Biology (3) SEM

BIO 101 Biological Perspectives (4) (L) SEM

BIO 110 Principles of Biology (4) (L) SEM

BIO 265 Life Science Concepts (3) (L) SEM

FND 250 Principles of Nutrition (3) SEM

MIND 294 Revolutions in Science (3) SEM – (may be used to meet the requirements in Earth Sciences, Life Sciences or Physical Sciences)

*c. Mathematical Sciences*

MATH 132 Calculus II (4) SEM

CS 101 Introduction to Computer Science (3) 1YR

*d. Physical Science*

CHEM 101 Chemistry for Citizens (3) SEM

CHEM 102 Chemistry for Citizens Laboratory (1) (L) SEM

CHEM 108 Fundamentals of Chemistry I (5) (L) SEM

CHEM 111 Principles of Chemistry I (5) (L) SEM

CHEM 114 General Chemistry I (4) IRR

ENST 235 Chemistry and the Environment (2) IRR

MIND 294 Revolutions in Science (3) SEM – (may be used to meet the requirements in Earth Sciences, Life Sciences or Physical Sciences)

PHYS 220 Introductory Physics I (5) (L) 1YR

PHYS 240 General Physics I (5) (L) 1YR

SCI 103 Physical Science for the 21st Century (3) SEM

SCI 106 Introduction to Spaceflight (3) SEM

SCI 109 The Cosmos (3) SEM

SCI 265 Physical Science Concepts (4) (L) SEM

### Category 7. Interdisciplinary and International Studies, and Multicultural Studies — 6 credits (minimum)

Choose 2 courses from two different alphabetical subgroups (a.-b):

- 1 course from either Interdisciplinary and International Studies and
- 1 course from Multicultural Studies

*a. Interdisciplinary and International Studies*

*Interdisciplinary Courses:*

ENST 100 Introduction to Environmental Studies (3) SEM

ENST 225 Energy and the Environment (3) SEM

GERO 205 Introduction to Gerontology (3) SEM

HUM 331 Images of Women in Literature and the Arts (3) 1YR

MIND 295 Global Systems (3) IRR

NURS 200 Women's Health Care (3) SEM

SOC 221 Sociology of Gender (3) SEM

*International Courses:*

ANT 110 Introduction to Cultural Anthropology (3) SEM

ANT 314 Sex Roles in a Cross-Cultural Perspective (3) 1YR

BA 251 International Business (3) SEM

FR 116 Contemporary France (3) 2YR

GEOG 335 Geography of Middle America (3) 1YR

GEOG 365 Russia and Eurasia (3) 1YR

GER 116 Contemporary Germany (3) 2YR

HISP 131 Latin American Civilization and Culture (3) IRR

MAS 141 Mexican Civilization and Culture (3) IRR

HIST 110 African Civilization (3) 1YR

HIST 112 Asian Civilization I: From Prehistory to the 1600s (3) 1YR

HIST 113 Asian Civilization II: The Modern Transformation (3) 1YR

HIST 118 History of Mexico (3) SEM

HIST 283 Russian Civilization (3) 2YR

JAPN 116 Contemporary Japan (3) IRR

MIND 289 Coming of Age in the Twentieth Century (3) 1YR

MIND 292 Ideas in Conflict (3) IRR

MUS 247 Music Cultures of the World (3) 1YR

SPCO 323 Intercultural Communication (3) SEM

*b. Multicultural Studies*

ANT 317 Contemporary Native American Issues (3) 1YR  
AFS 100 Introduction to Africana Studies (3) SEM  
AFS 101 Crisis of Identity (3) SEM  
CH 236 Health and Life-styles Among the Elderly (3) 1YR  
ENG 236 Ethnic American Literature (3) SEM  
HISP 102 Hispanic Cultures in the United States (3) SEM  
HIST 290 American Immigration (3) SEM  
HRS 290 Introduction to Human Rehabilitative Services (3) SEM  
MAS 100 Introduction to Mexican American Studies (3) SEM  
MAS 110 Contemporary Chicano Literature (3) IRR  
MCS 101 Multiculturalism in the United States: Concepts and Issues (3) SEM  
MIND 182 Confluence of Cultures (3) 1YR  
MUS 150 History of Rock and Roll (3) IRR  
SOC 237 Sociology of Minorities (3) SEM  
WS 101 Women in Contemporary Society (3) SEM

Special Notes

- Courses required for the major, but not carrying the major prefix, may count for both General Education and the major.
- Up to six semester credit hours of courses carrying the major prefix may count for General Education, provided such courses are listed above as General Education courses.
- Courses required for a minor or second major may count for both the minor or second major as well as General Education, provided such courses are listed above as General Education courses.
- A course taken before the time it appears in a Catalog as a General Education course will not count for General Education.

**Exceptions to the GenEd Program Requirements**

Transfer students who have completed equivalent programs in General Education as determined by the Admissions Office may be exempted from all or part of the General Education requirements.

A student who has earned a liberal-arts based Associate of Arts or Associate of Science degree or who has completed an equivalent program in General Education as determined by the UNC Admissions Office will receive credit for such work and be excused from the content area of the General Education requirements. Courses required for the skill areas are evaluated course by course and the required number of hours for each skill area must be met.

If a student presents an ACT score of 30.0 or higher in English, or an SAT verbal score of 630 or higher, he or she is exempt from the basic composition area (Skill 1a).

If a student presents an ACT score of 26.0 or higher in mathematics, or an SAT math score of 560 or higher, he or she is exempt from the mathematics area (Skill 2).

Students enrolled in any Army ROTC course and who participate in organized ROTC physical training for at least one session a week during the entire semester may request a waiver to be exempt from the physical activity area (Skill 3).

A student may challenge a General Education course and receive an exemption by registering for the course and passing the challenge examination. Interested students should contact the appropriate department to determine the availability of a challenge examination.

CLEP examinations are available for General Education credit. The student should contact Career Services for information relative to the CLEP program.

**LIFE OF THE MIND: GENERAL EDUCATION OPTION**

Life of the Mind is an interdisciplinary project involving faculty members committed to the belief that the General Education curriculum should include courses that cross the boundaries of traditional academic departments to deal with broad intellectual concerns.

The "Life of the Mind" is the unifying theme of all the courses. Through them students are introduced to the great historical traditions of Western and Oriental thought and to the most provocative ideas of the 20th century. The faculty do not present these ideas as accepted truths, but instead faculty and students together explore them as possible answers to the central human questions. Through this exploration, students come to value the social, ethical and spiritual significance of intellectual activity - of the life of the mind.

Every Life of the Mind course is planned by an interdisciplinary team. Some courses are also team-taught, while others are individually taught, but offered by faculty members from several different departments. (For example, MIND 180 is offered by a history professor in fall and by a philosophy professor in spring.)

All courses involve study of key writings. During most class sessions the faculty and students engage in discussion of the meaning and importance of these writings, both in their own times and in the present. In MIND 181, Great Traditions of Asia, the class discusses the timeless message of the Indian Hindu classic, the Upanishads. In MIND 290, The Search for Meaning, the class debates the historical significance and contemporary relevance of Plato's Apology. Discussions are interspersed with lectures, slide presentations and films. Life of the Mind classes aim to build students' skills in critical thinking, discussion and writing.

Life of the Mind courses are open to both traditional and non-traditional, older students. Non-traditional students from the Greeley community are encouraged to enroll or audit.

In addition to the classes themselves, a public lecture series, featuring Colorado and national speakers, is an integral part of the Life of the Mind project. The lectures link the courses together and contribute to the intellectual life of the community.

# HONORS PROGRAM

## Requirements

The University Honors Program is designed to offer exceptional students both the resources of a comprehensive university and the individual attention traditionally associated with a small college. It asks that they be alive to the life of the mind and pushes them to raise the expectations they have for themselves and their education. It seeks to involve them in learning, heighten their critical awareness, and encourage their independent thinking and research.

## Applying to the Honors Program

Students are urged to join the Honors Program as freshmen, but they may enter up to the second semester of their junior year. All applications must be accompanied by two letters of recommendation from teachers and a statement of intent. Entering freshmen should have a 3.5 high school GPA and either be in the top 10 percent of their graduating class academically or have scored a minimum ACT of 27 or SAT of 1170. Prospective Honors students already enrolled at UNC or transferring from another college need a minimum 3.25 GPA.

Requests for applications and program inquiries should be directed to the Honors Program office. Applications may also be downloaded in PDF format at [www.unco.edu/honors](http://www.unco.edu/honors).

## Overview of Honors Program Requirements

Honors coursework is designed to fit into UNC's general curriculum requirements, with half of Honors' courses eligible to be used in satisfying General Education Program requirements depending on a student's major.

First, students take courses with Life of the Mind (MIND) and Honors Connections Seminar designations. These courses engage students in topics that often cross disciplinary boundaries, explore subjects more deeply, and examine the many diverse ways of knowing.

Select from the following MIND courses:

- MIND 180 Great Ideas of the Western Tradition (3)
- MIND 181 Great Traditions of Asia: India, China and Japan (3)
- MIND 182 Confluence of Cultures (3)
- MIND 286 Value Issues in Political Economy (3)
- MIND 288 Contemporary Arts Connections (3)
- MIND 289 Coming of Age in the Twentieth Century (3)
- MIND 290 Search for Meaning (3)
- MIND 292 Ideas in Conflict (3)
- MIND 293 Play as a Route to Insight and Creation (3)
- MIND 294 Revolutions in Science (3)
- MIND 295 Global Systems (3)
- MIND 297 Creativity in the Arts (3)
- MIND 299 Great Ideas in the History of the Arts (3)

Second, in their junior and senior year, students take additional Honors courses to focus on their own area of study through research culminating in a senior thesis.

## Summary of Honors Program Requirements

3 MIND courses from the General Education Program (9)

Note: Transfer students complete only two MIND courses.

1 HON 100/200 Honors Connections Seminar I or II (2)

1 HON 351 Junior Honors Seminar (2)

1 HON 451 Senior Honors Research Thesis (4)

Note: Honors students are expected to register for full-time studies and are required to maintain at least a 3.25 GPA.

Graduating Honors students will receive recognition during the commencement ceremonies, on their diploma, and a notation on their transcript that they have graduated from the University Honors Program.

Information on the Honors Program is published in the Honors Program Handbook available from the program office.

# PRESIDENT'S LEADERSHIP PROGRAM

## Requirements

The President's Leadership Program (PLP) is open to selected freshmen with demonstrated leadership experience and potential who are also accomplished scholars. PLP has courses of its own, in which scholars are engaged with leadership theory, and General Education choices where leadership dimensions are suggested. The program also sponsors guests to campus who are distinguished leaders in their own fields. The leadership mentor network is accessed through internship opportunities, and students are encouraged to study for a semester abroad. The PLP program can be taken with any major. In PLP 100 the Contract Learning Guide, the scholar's agreed PLP learning contract, is first introduced.

### Semester 1

ID 108 Freshman Workshop (1)

### Semester 2

PLP 100 Foundations of Leadership (3)

HIST 100 Survey of American History from Its Beginnings to 1877 (3)\*

### Semester 3

PSY 265 Social Psychology (3)

ENG 225 Communications on a Theme (3)

### Semester 4

PLP 200 The Entrepreneur in America (2)\*

### Semester 5

BAMG 354 Organizational Behavior (3) (BAMG 350 prerequisite waived for PLP scholars by Management department)

### Semester 6

PLP 492 Internship in PLP (1-3)

### Semester 7

PLP 499 Capstone Course/Project (2)

Though none is required, students are invited to consider other University classes which bear on leadership. A partial list of these includes:

- PHIL 110 Figures in Western Philosophy (3)\*
- PSCI 220 Introduction to International Relations (3)
- MUS 241 Perceiving the Arts (3)
- HIST 260 History of Science and Technology of the West (3)
- HIST 267 Age of Revolution Since the 17th Century (3)
- PHIL 305 Ethics in Theory and Practice (3)
- PSCI 100 United States National Government (3)
- BAMG 350 Management of Organizations (3)
- PSY 366 Industrial Psychology (3)
- AFS 456 Leadership and the Black Church (3)

\*Carries General Education Credit.

## Program Narrative

*Year one.* The highlights of the first year are two classes, ID 108 and PLP 100. ID 108, to be taken in the first semester, will be a special section of the University's freshman orientation class highlighting campus and community leadership opportunities. The Career Center will assist with inventories of student aptitudes and interests, leading to matching of majors with careers.

PLP 100, Foundations of Leadership, will continue to build on the self-assessment inventories developed in ID 108. Students will be asked to begin a plan for their junior year internship, travel and study opportunities. Through readings and discussion with guests, leadership scholars will be asked to explore leadership as a creative process of creating, anticipating and molding change.

*Year Two.* In the second year, students gain a comprehensive introduction to theories of normative human development in PSY 265, and the opportunity to do further reading and writing on leadership issues in ENG 225.

PLP 200, explores the entrepreneurial mind, personality and achievement. Successful entrepreneurs will be invited to campus, and asked to share their perspectives on success and leadership with PLP students. "Entrepreneur" is defined in the broadest sense, and includes leaders who have successfully managed change in education, the arts and government. As the beginning exercise in this seminar, PLP students will be asked to share final plans for their junior year internship/study/travel project and its linkage to the senior paper.

*Year three.* In the junior year, the PLP student's match of junior project and senior paper is developed through an internship, and/or by study and travel abroad. PLP staff will

develop correspondent relationships with universities abroad, in cities where Americans can comfortably live; staff will also develop internships in Denver and throughout Colorado so that students may experience the life of the career they've chosen. The project will be recorded in a final paper, formalized in a contract between the student and the PLP advisor. In the case of students concurrently enrolled in the Honors program, the paper's research design may be coordinated with an Honors advisor in the student's major field.

*Year four.* In the fourth year, the student finishes writing the senior paper in the seventh term, and presents results to colleagues in the capstone course. In the capstone experience, students again assess themselves as leaders, in charge of their own personal, residential and career-development transitions.

## RESERVE OFFICER TRAINING CORPS (ROTC)

Students may earn a minor in either Military Science (Army) or Aerospace Studies (Air Force). The programs are designed to prepare students to assume leadership as officers in the United States Army or Air Force.

The required courses are unique to each service and focus on the development of each cadet's leadership style. Leadership is learned, applied, and evaluated by cadre and cadets through practical exercises, laboratories, and participation in either the Army Advanced Camp or the Air Force Field Training Course. Numerous scholarships are available, and contracted cadets receive a monthly, tax-free allowance.

For further information about ROTC offerings call 970.491.1637 (Army) or 970.491.6496 (Air Force).

### **MILITARY SCIENCE (ARMY)**

Please see "[Military Science \(Army\)](#)" (on page 210)

### **AEROSPACE STUDIES (AIR FORCE)**

Please see "[Aerospace Studies \(Air Force\)](#)" (on page 203)

# TEACHER EDUCATION: PROFESSIONAL TEACHER EDUCATION PROGRAMS (PTEPS)

The University of Northern Colorado offers four Professional Teacher Preparation Programs that are designed to prepare teacher education candidates for Colorado Licensure. The 2003-2004 PTEPs include: Elementary Education (K-6), Secondary Education in specific teaching areas (7-12), and K-12 Education in the areas of Physical Education, Music Education, Visual Arts Education, and Special Education.

A student interested in obtaining a Colorado Provisional License to teach must apply, be admitted to, and complete one of the PTEPs. Students who have completed a baccalaureate degree, but do not hold a Colorado teacher license, are encouraged to contact the Department of Elementary Education and the Department of Educational Foundations and Curriculum Studies in McKee to receive information on post-baccalaureate programs for teacher licensure.

**Application.** All students preparing to be teachers must formally apply for admission to a Professional Teacher Education Program. Applications and more information about specific PTEPs may be obtained in the Department of Elementary Education and the Department of Educational Foundations and Curriculum Studies in McKee.

Please see "[Teacher Education: Professional Teacher Education Programs \(PTEPs\)](#)" (on page 217)

## ADMISSION, PTEP

Full admission requirements may include:

- benchmark experiences specific to each PTEP;
- portfolio review;
- demonstrated competence in written English (At this time, this requirement may be met with a "B" or better from general education category 1a or b);
- demonstrated competence in oral English. This requirement may be met with a "B" or better in SPCO 103. Students enrolled in an elementary, secondary, middle grades or K-12 PTEP also may demonstrate oral proficiency by making an oral presentation before a panel of judges. Contact the Speech Communication Department for information on the oral proficiency presentation. Students without an extensive background in public speaking are highly encouraged to enroll in SPCO 100/SPCO 103;
- recommendation of the program/major department(s) including compliance with program/major department minimum grade point average(s) and specific course and credit requirement.

Teacher Education candidates are not assured admission solely on the attainment of minimum course and grade requirements or test scores. See the Department of Elementary Education and the Department of Educational Foundations and Curriculum Studies in McKee for more information.

## BASIC REQUIREMENTS, PTEP

**Standards of Professional Practice.** Teacher education candidates seeking admission or who have been admitted to a Professional Teacher Education Program are expected to maintain accepted standards of professional ethics in all aspects of their work in their program. These expectations are noted in the Professional Teacher Education Program Outcomes ([http://www.unco.edu/coe/annual\\_sstte.htm](http://www.unco.edu/coe/annual_sstte.htm)) and the program standard of Professional Behavior. The PTEP faculty will periodically review the suitability of teacher education candidates for admission to and continuation in their program. Teacher Education candidates who do not attain or uphold such standards are subject to academic sanctions, including denial, suspension, or dismissal from the program.

**Approvals for Student Teaching.** UNC teacher education candidates must maintain program/major department requirements in their Professional Teacher Education Program.

They must meet all PTEP requirements to be approved for a student-teaching placement.

**Program Assessments.** The State of Colorado has mandated that institutions of higher education undertake assessment of students and their academic programs. It is the responsibility of students to participate in any assessment activities that are determined by the PTEPs and the University to meet this state mandate.

**Program for Licensing Assessments for Colorado Educators (PLACE).** The Colorado Department of Education requires applicants for teacher education licensure to present scores at or above the qualifying score set by the State Board of Education on the PLACE Content Area assessment that has been adopted by the State Board of Education.

In compliance with federal guidelines (Title II) the performance of UNC students on the PLACE is detailed on the College of Education website at [www.unco.edu/coe](http://www.unco.edu/coe) (click on "Links," then click on "Place.")

For more information on the state assessment dates and locations for testing, contact the Department of Elementary Education and the Department of Educational Foundations and Curriculum Studies in McKee.

## LICENSURE APPLICATION

**Application for Colorado Provisional Licensure.** Recommendations are made when teacher education candidates have successfully completed an approved PTEP. Successful completion includes the following: 1) maintenance of program/major department GPA requirements; 2) completion of the PTEP requirements; 3) passing PLACE Content; and 4) any additional requirements imposed by state law or regulation.

Upon successful completion of these requirements, teacher education candidates are eligible for institutional recommendation to the Colorado Department of Education for licensure in the State of Colorado.

The teacher education candidate may apply for a license at the end of the semester in which the PTEP is to be completed. Application forms are available in the Department of Elementary Education and the Department of Educational Foundations and Curriculum Studies in McKee. Completed applications are processed as soon as official transcripts are received from the Registrar.

## PTEPs, Endorsement and Licensure Programs

The UNC Professional Teacher Education Programs (PTEP) prepare teacher education candidates for the following Colorado State Board of Education approved licensure/endorsement:

*PTEP's*

- **Early Childhood Professional Teacher Education Program**
- **Elementary Professional Teacher Education Program**
  - Interdisciplinary Studies
  - English, Mathematics, Social Science, Spanish
- **Secondary Professional Teacher Education Program, 7-12**
  - Biological Sciences; Chemistry, Communication, Earth Sciences, English; Foreign Languages: French, German, Spanish; Geography, History, Mathematics, Physical Science, Physics, Social Science, Theatre Arts
- **K-12 Professional Teacher Education Program**

*Licensure*

- Music Education, K-12.
  - Instrumental Music Education; Vocal Piano and General Education
- Physical Education, K-12.
- Special Education, K-12
- Theatre Art, Secondary
- Visual Arts Education (Art), K-12.

### *Endorsements*

- Bilingual/Bicultural Endorsement, K-6, 5-9, 7-12 (requires completion of the Elementary, Middle Grades or Secondary PTEP).
- English as a Second Language Endorsement, K-6, 5-9, 7-12 (requires completion of the Elementary, Middle Grades or Secondary PTEP).

### **Other Licensure/Endorsement Programs**

The University also provides Colorado State Board of Education approved programs for special services, added endorsements, and school administration in the following areas:

- Administrators' License, K-12.
- Audiologist, K-12.
- Early Childhood Special Education, ages 0-5.
- Moderate Needs, ages 5-21.
- Orientation and Mobility, K-12.
- Profound Needs, ages 5-12.
- Principals' License, K-12.
- Reading Specialist, K-12.
- Reading Teacher, K-6, 7-12.
- School Counselor, K-6, 7-12.
- School Library Media, K-12.
- School Nurse, K-12.
- School Psychologist, K-12.
- Severe Needs, Affective, ages 5-21.
- Severe Needs, Cognitive, ages 5-21.
- Severe Needs, Communication, ages 5-21.
- Severe Needs, Hearing, ages 0-21.
- Severe Needs, Vision, ages 0-21.
- Special Education Administration, K-12.
- Speech/Language Pathology, K-12.

**Licensure in Other States.** Teacher education candidates who successfully complete an approved PTEP may be recommended for licensure in other states too. However, completion of the UNC program or acquisition of a Colorado license does not assure licensure in other states because other states may have specific, additional requirements.

Teacher education candidates who expect to seek licensure in other states may check with the Department of Elementary Education and the Department of Educational Foundations and Curriculum Studies in McKee or correspond with the appropriate state departments of education early in their program to learn of any additional requirements.



# GRADUATE SCHOOL, POLICIES AND PROCEDURES



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# INTRODUCTION

## OFFICE OF THE DEAN

**Location:** Carter Hall 2007    **Telephone:** 970.351.2831

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The Dean of the Graduate School is the administrative representative of the graduate faculty and the Graduate Council and is responsible for all graduate programs. Under the Dean's direction, the Graduate School monitors and enforces the policies and procedures related to graduate education, including those related to admissions, records and graduation.

The first graduate degree, a master's degree, was offered by UNC in 1913. In 1929 the Doctor of Education was added, in 1934 the Doctor of Philosophy, and in 1975, the Doctor of Arts. The most recent degree, the Doctor of Psychology, was added in 1984.

Graduate study at UNC involves the graduate student studying under the direction of a qualified member of the graduate faculty. Thus, graduate credit is awarded for courses of study taught by duly appointed members of the graduate faculty who meet the criteria established by the faculty constitution and the bylaws of the graduate faculty. The exchange of information, ideas, and values that takes place between the graduate faculty and highly qualified students is the essence of graduate education.

Students seeking graduate credit must display evidence of superior academic aptitude, achievement, and motivation. Moreover, the demonstration of competence in the discipline as evidenced by written and oral exams, theses, research projects, directed studies, and internships is an integral part of the graduate education experience. Through cooperative efforts of the graduate faculty, the Graduate Council, and the Graduate School, the University seeks to establish an environment in which the graduate student and the graduate faculty can achieve the traditional goals of graduate education.

Rules and regulations contained herein are intended to help the graduate faculty and the graduate student to accomplish the intent and purposes of graduate education.

**Graduate Council.** The Graduate Council is a representative faculty council established to represent the graduate faculty. It is the responsibility of the Council to recommend policies governing graduate programs and requirements at the University. Members of the Graduate Council are elected from the graduate faculty and serve three-year terms.

The council is comprised of representatives from the graduate faculty and sets minimum standards for admission to the Graduate School at UNC.

**Graduate Faculty.** Graduate faculty are appointed by the University President after being recommended by the academic unit, the academic dean, the Graduate Council, and the Graduate Dean.

At the time of appointment, graduate faculty are authorized to teach graduate courses, act as program advisors for graduate students, serve on doctoral committees, and serve on other University committees pertaining to graduate education at UNC. Graduate credit can be granted for courses taught by a faculty member who has been appointed to the graduate faculty or to the Graduate Lecturer faculty. No graduate credit can be granted for any course taught by a faculty member who is pursuing an advanced degree at this institution. Graduate faculty members are noted in the listing of UNC faculty in this publication.

In addition to the activities established for graduate faculty, members may receive a Doctoral Research endorsement. Only faculty who have the Doctoral Research endorsement may serve as research advisors on doctoral student committees.

Upon approval by the department, the academic dean, and the Vice President for Academic Affairs, for a two-year period, the Dean of the Graduate School may appoint selected individuals as graduate lecturer faculty. These faculty may teach specific courses that are approved and/or perform other designated graduate responsibilities.

## ACADEMIC RECOGNITION (GRADUATE DEAN'S)

### CITATION FOR EXCELLENCE

The Graduate Dean's Citation for Excellence is awarded each semester to students nominated by their department in recognition of superior achievement in their graduate studies. Each department may recommend graduate students completing their programs during a specific term (fall, spring or summer) provided they meet these minimum criteria:

- a cumulative graduate grade point average of at least 3.75, documented evidence of superior accomplishment while a graduate student at UNC.

The nomination should be supported by:

- written recommendations from graduate faculty of the academic program outlining the student's accomplishments and/or,
- special recognition by an agency or organization (outside UNC) for scholarly accomplishment, academic achievement or contributions to society, and a student resume or vita.

Awardees are reviewed by the Executive Committee of the Graduate Council. Their recommendations for awards are forwarded to the Graduate Dean for final selection. The total number of awards will not exceed 3% of the graduating class.

### CITATION FOR OUTSTANDING THESIS AND DISSERTATION

The Graduate Dean's Citation for Outstanding Thesis and Dissertation may have four awards each semester: two for outstanding master's thesis and two for outstanding doctoral dissertation. Faculty may nominate a thesis or dissertation by submitting a letter of nomination that specifies contributions of the study to the discipline.

# GRADUATE ADMISSION

## Application

Faculty members in each degree program establish admissions standards for the specific degree program which often exceed the minimum standards. Applicants should consult program brochures, departmental offices or faculty in the degree program(s) of interest to them for any additional admission requirements.

If departments set deadlines for review of applications for admission for any term, they must allow sufficient time for Graduate School handling and evaluation. This typically means they must ask students to submit materials early enough to allow at least 20 working days for the Graduate School to complete all processing upon receipt of a completed application prior to sending it to the department for screening. It is particularly important for programs requiring GREs and having early admission deadlines to notify applicants of this requirement. (While the Graduate School does not set standard priority admission deadlines, each program is encouraged to determine what program specific deadlines they will use and to work closely with the Graduate School to ensure that these deadlines are feasible).

### Admission Expiration

Admission to any graduate program will remain valid for one calendar year following the first day of the applicant's proposed semester of enrollment. If a student does not begin coursework during that year, the student may be required to submit a new application with the appropriate processing fee and satisfy the new admission requirements.

### Conditional Admission

Conditional admission refers to applicants admitted pending the receipt of application requirements specified by either the Graduate School and/or the major department. No student will be permitted to register for an additional semester, receive financial aid or take the comprehensive examination or its equivalent unless the specified requirement(s) is met during the first semester of the student's program.

## Extended Degree Programs

Students applying for admission to extended degree programs must meet the same criteria for admission as on-campus students. Additional policies regulating extended degree programs can be found in the Statewide Extended Campus Policies and Procedures Manual available at the Office of Extended Studies located in the Center for Professional Development.

## INTERDISCIPLINARY STUDIES: GRADUATE INTERDISCIPLINARY DEGREE

The Graduate Interdisciplinary Degree Program is designed to be a rigorous, quality program which will give an opportunity to qualified students to meet career goals by combining two or more disciplines into a single degree program. To ensure the quality of the program, the student will require close supervision, participation, and coordination from all assigned committee members of each discipline concerned. It is imperative that the program be truly interdisciplinary and represents an integration of the subject matter of the component disciplines. Programs that parallel other degree programs are not acceptable as interdisciplinary degree programs. Applicants for the Graduate Interdisciplinary Degree Program are encouraged to consult with the Graduate School prior to submitting their applications. The applicant must follow the student administered application procedure. The complete application packet should include the following:

### Application Packet

1. The degree application returned with the appropriate non-refundable application fee.
2. Two official copies of the applicant's transcripts from all colleges or universities attended (except UNC).
3. If applying for a doctoral program, one official copy of the applicant's GRE General Test scores (not more than five years - 1,825 calendar days old) be sent from Educational

Testing Service to the Graduate School. A student copy of the GRE results will be accepted in the packet for processing to the program area for screening. No admission will be granted until the official GRE report is received from Educational Testing Service.

4. Three letters of recommendation from appropriate professional sources attesting to the applicant's ability to pursue the intended graduate interdisciplinary program.
5. A detailed written statement of career goals and objectives and a rationale for pursuing the proposed interdisciplinary program. This must be a compelling statement clarifying why no single existing degree program could satisfy these goals.
6. Identification of two primary disciplines which will be combined in the proposed program. At least one of the primary disciplines listed must offer a program leading to the desired degree, (i.e. MA, MAT, MM, MPH, MS, DA, or EdD) Secondary disciplines may also be included.
7. A current resume that summarizes academic and professional experiences, activities, publications, and other pertinent information.

**Preliminary Review.** The Graduate Interdisciplinary Degree Coordinating (GIDP) Committee, comprised of interdisciplinary coordinators from each college, conducts a mid-semester preliminary review of all completed applications from individuals who satisfy the minimum admission requirements of the Graduate School. Applicants who do not meet the minimum admission requirements of the Graduate School will be denied admission (see this Catalog for admission standards for each degree level).

If the GIDP Committee finds the application to have merit, the Graduate School forwards the application materials to the appropriate GIDP College Coordinator who contacts the disciplines for their evaluation and recommendation. If the GIDP Committee finds the application to lack merit or compelling rationale for interdisciplinary studies, the Graduate School notifies the applicant of the committee's concerns. Those applicants who receive such notification may resubmit their application materials after addressing the concerns of the GIDP Committee.

Upon receipt of the application materials from the Graduate School, the GIDP College Coordinator and the faculty in the appropriate disciplines evaluate the application and recommend to the Graduate School that the applicant be granted or denied provisional admission status. Each discipline recommending provisional admission must designate an advisor.

All disciplines included in the proposal must recommend provisional admission and must designate graduate faculty advisors before the Graduate School confers provisional admission status.

**Program Criteria.** The Plan of Study must meet the following criteria:

1. If the graduate faculty advisors determine that a student has any deficiencies in his/her background, the proposal must list the course work necessary to alleviate those deficiencies. (Deficiency courses must be completed at the earliest possible date).
2. SRM 600 (master's) or SRM 700 (doctoral) or one of the research oriented substitute course approved by the Graduate Council must be proposed. The proposal must also contain at least one additional research methods, statistics, or applied research course (i.e. computer science, tests/measurements, etc.).
3. **Secondary disciplines** (departments/divisions/schools) are defined as those disciplines in which nine (9) to eleven (11) semester hours of course work are proposed at the master's levels or those disciplines in which nine (9) to fourteen (14) semester hours of course work are proposed at the doctoral level. If identified in the program proposal, these disciplines must assign an advisor and approve the selected course work.

4. Proposed courses must be offered with sufficient frequency to allow completion of the degree requirements within a reasonable amount of time, e.g. two years for a thirty (30) semester hour program or three to four years for a sixty-four (64) semester hour program. Furthermore, research and library resources must be available to facilitate the completion of the thesis, if applicable, or dissertation.
5. No more than one-third of the proposed courses may be double-numbered courses offered simultaneously toward undergraduate and graduate students.
6. No more than nine (9) semester hours, individually or in combination, of courses numbered 508, 513, or 622 may be proposed or counted in the degree program.
7. Program proposals must conform to all other Graduate School policies and procedures, e.g. transfer of credit. Prior to submission to the Graduate School, the *Graduate Interdisciplinary Degrees Plan of Study* form must be signed by the student, all graduate faculty advisors, and all primary and secondary department chairpersons. Until an approved plan of study is filed with the Graduate School, a hold is placed on an interdisciplinary student's ability to register for classes.
8. **Master's Degree:** Proposed course work must equal at least thirty (30) semester hours of graduate level courses plus any deficiency credits.

At least twelve (12) semester hours of graduate level course work must be proposed in each of at least two primary disciplines. Courses numbered 622 and 699 may not be used to meet this requirement.

If a thesis is proposed, the thesis must be a minimum/maximum of six (6) semester hours.

One of the designated advisors must be named as the Program Advisor.

9. **Doctoral Degree:** Proposed course work must equal at least sixty-four (64) semester hours beyond a master's degree excluding any deficiency credits. If an applicant does not hold a master's degree, the proposed course work must equal at least ninety-four (94) semester hours.

At least fifteen (15) semester hours of graduate-level course work must be proposed in each of at least two primary disciplines. If an applicant does not hold a master's degree, the proposed course work in each of at least two primary disciplines must equal a minimum of eighteen (18) semester hours. Courses numbered 622, 797 and 799 may not be used to meet this requirement.

The plan of study must include four (4) semester hours of proposal (797) and twelve hours (12) semester hours of doctoral dissertation (799).

When there are only two primary disciplines proposed, one of the two designated graduate faculty advisors must be named as the program advisor. In addition, the two designated advisors and the student must recommend at least one additional graduate faculty advisor, subject to approval by his/her department chairperson and the Dean of the Graduate School.

**Regular Admission.** Upon receipt of the completed *Graduate Interdisciplinary Degrees Plan of Study* form, the Graduate School will forward the form and the original application materials to the GIDP Committee for final review. The student, the graduate faculty advisors, and the primary and secondary departments will be notified by letter regarding program approval or disapproval. If approved, the student will be granted regular admission. NOTE: Until such a letter is received, the student remains on provisional admission status. The decision of the GIDP Coordinating Committee and the Dean of the Graduate School shall be final.

**Advising.** Together, the graduate faculty advisors are known as the program advisory committee. It is the responsibility of the program advisory committee to assist the student in planning and coordinating the degree program. Any deviation from the approved proposal must be approved in advance by the program advisory committee and the Graduate School.

**Committees.** At the doctoral level, the Program Advisory Committee plus a graduate faculty representative appointed by the Dean of the Graduate School shall serve as the doctoral committee. The doctoral dissertation proposal and dissertation shall be under the supervision of a Research Advisor who is a member of the graduate faculty and holds doctoral research endorsement.

**Comprehensive Examinations.** Each interdisciplinary degree program student must pass a written comprehensive examination which is designed, administered, and evaluated by the Program Advisory Committee and by other qualified individuals as identified by the program advisor. All doctoral students must also pass an oral comprehensive examination (see the "Comprehensive Examination Sections" of this Catalog for further details).

All Graduate School policies apply to interdisciplinary students.

## INTERNATIONAL EDUCATION ADMISSION

An international student is a student who is not a citizen of the United States or classified by United States Immigration and Naturalization Service as a resident alien. International applicants must meet English proficiency requirements as well as academic and financial requirements before being fully admitted to the University.

All application materials and all related credentials must be received by the Graduate School no later than 90 calendar days before the semester that the student wishes to enroll. All international applicants must take these steps to be considered for admission:

1. Obtain the appropriate International Application for Admission forms from the Graduate School.
2. Complete the forms and return them along with the non-refundable application fee.
3. Submit the "Financial Statement for International Students" and "Affidavit of Support" forms (evidence of adequate financial support). These forms are attached to the application form.
4. Submit all records of previous schooling such as mark sheets, official transcripts, diplomas, and certificates. These records must show courses taken, grades awarded, and degrees earned. An English translation must be included.
5. International students who are not native speakers of English or who have not received their undergraduate degree from an American, British, Canadian, or Australian university are required to provide evidence of English language proficiency by submitting one of the following:
  - a. Official score reports of current Test of English as a Foreign Language (TOEFL) (minimum score for regular admission is 550--Computer Based Test (CBT 213) for a graduate student or 520-Computer Based Test (CBT 190) for an undergraduate student and 550-Computer Based Test (CBT 213) for an undergraduate student applying for business or results of the International English Language Test (IELT) (minimum score of 6.0). Additionally, subscores may not be lower than the equivalent total score.
  - b. Transcripts showing a bachelor's degree in the United States or one year of full-time study at a regionally accredited college or university in the United States with a cumulative GPA of at least 3.0.

Departments may have higher or additional English proficiency requirements including departmental screening or testing for English proficiency. The applicant is responsible for determining whether the department has additional language requirements. Upon application approval, international applicants will be sent a letter of admission and the proper immigration forms will be issued. If an applicant is granted conditional admission pending completion of English language schooling and receipt of English proficiency scores, the immigration forms will be issued by the English language school.

**Housing.** In fall and spring semesters, international students who are admitted to the University and the Language Bridge Program will be given priority for living in the International Living Center. This Center pairs International and U.S. students in a newly renovated dormitory and provides a special cross-cultural living environment for students at the University.

**The Center for International Education.** One of the major goals of the Center for International Education is to enhance the intellectual development of the university community by providing our visiting students and scholars the best opportunities for educational advancement through assessment, advisement and acculturation.

The support services provided by the Center are:

- orientation activities and seminars,
- immigration document processing and counseling,
- tutorial services and
- supplemental language training.

**Conditional Admission - International**

International applicants whose academic record is sound but whose English language proficiency fails to meet the UNC minimum admission standard may be granted a conditional admission to UNC. However, as the condition for admission, they must first study English to improve their proficiency. Based on their TOEFL score at the time of admission and their score on UNC's Bridge Entrance Assessment Test, they will either start with English full-time for one semester, or they will qualify to take six credits of English and six credits toward a degree. Students in this program register as full-time students at the University of Northern Colorado, but may not be released from conditional admission status until approved to do so by the Dean of the Graduate School, the Director of the Center for International Education, and the respective department chair. Students enrolled in this program will receive all the benefits and services provided to full-time students at UNC.

**Language Bridge Program - International**

International applicants for the undergraduate program can benefit from the English Language Bridge Program. The Bridge Program allows international student applicants whose language skills are above the intermediate level to enter the University of Northern Colorado and take three to six credits

of academic coursework while also studying English. The cost of the English Language Bridge Program is \$400 per credit hour.

**Qualification Criteria.** Applicants who have at least a 475 on the paper version of the Test of English as a Foreign Language (TOEFL) or at least a 150 on the Computer-Based Test and are academically admissible can qualify for the Bridge Program. The University also accepts the results of the International English Language Test (IELT) with a minimum score of 4.5. A current TOEFL score is required for all international students applying for admissions to UNC.

**Classes Offered in the Bridge Program.** The purpose of the Language Bridge Program is to increase the language proficiency of students to a level at which they can fully benefit from being a regular student at UNC. Classes offered include: CIE 051 (High-Intermediate Level ESL) and CIE 052 (Advanced Level ESL). Both courses are comprehensive in scope, with instruction including English reading, writing, listening, speaking and grammar. The Bridge program is offered fall semester, spring semester, and during one summer session each year.

**Length of the Bridge Program.** Currently, two semesters of English as a Second Language are offered. The length of the Bridge program varies for each student, depending upon TOEFL score, the score the student achieves on the Bridge Entrance Assessment Test administered by the Center for International Education, and performance in the CIE English classes. Some students are required to take both semesters of ESL and other students may qualify to complete the Bridge program in just one semester.

**Additional Options**

Applicants for admission whose TOEFL scores are below 475 (paper version) or 150 (CBT) cannot apply for conditional admission status at UNC. However, the student may attend an Intensive English Program for one full year and then retake the TOEFL and if an admissible score is achieved, may then apply for admission to UNC. Three Intensive English Programs exist near UNC: 1) Spring International Language Center, 2625 West Church Ave., Littleton, CO 80120 (www.silc-usa.com), 2) Colorado Intensive Language Institute at AIMS Community College, P.O. Box 69, Greeley, CO 80632 (www.aims.edu) and 3) Intensive English Program at Colorado State University, call (970) 491-6616.

## COURSES AND CREDIT HOURS

**Authorized University Credits**

Graduate credit is granted for courses taught by a faculty member who has been appointed to the graduate faculty or appointed as a Graduate Lecturer. With the exception of special assignments for XXX 513 courses approved by the college and Graduate Deans no graduate credit is granted for any course taught by a faculty member who is pursuing an advanced degree at this institution.

**Colorado Reciprocal Course Agreement**

A full-time graduate student on one campus may take one approved course per term without additional tuition at one of the following institutions: the University of Colorado, Colorado State University, and Colorado School of Mines. Such work will count toward the doctoral student residency requirement and will appear on the UNC transcript.

Those students interested in this opportunity may obtain the guidelines and the proper form in the Registrar's Office or from the Graduate School Office. Forms must be completed and approved before the term that a student proposes to take a course.

**Concentrated Delivery Format (Short Courses)**

The following concentrated course delivery format is intended to provide guidance and a clear policy statement for short

courses offered by UNC. All courses of brief duration should be consistent with these requirements. Exceptions to this policy may be granted by the appropriate academic dean for undergraduate courses and the academic and Graduate Dean for graduate courses. However, all courses, regardless of format, are expected to meet minimum CCHÉ requirements (750 minutes of class contact per semester credit hour) and contain sufficient opportunities for reflection and consolidation of course content. Due to the nature of content, certain courses are not appropriate for concentrated delivery.

Contact Minute Requirements	
1 credit hour	750 contact minutes
2 credit hours	1500 contact minutes
3 credit hours	2250 contact minutes
4 credit hours	3000 contact minutes
5 credit hours	3750 contact minutes

<b>Instructional Length of Day, Breaks, Lunches, Travel Time, etc.</b>	
Maximum Daily Contact	8 contact hours maximum instruction hours per day
Blocks	115 minutes maximum continuous block of time
Breaks	2-4 hours must incorporate a 15 minute break
Lunch	4 or more hours must incorporate a lunch break
Travel time	travel time will not be counted in instructional time
Maximum Consecutive	5 days

<b>Consecutive days: Credit Hour/Meeting Days Minimum Requirement</b>	
1 credit hour class	2 1/2 days
2 credit hour class	5 days

Consecutive day formats for courses above 2 credit hours must be proposed to and approved by the academic dean (and Graduate Dean for graduate courses) on a case-by-case basis.

<b>Weekend Format: Credit Hour/Meeting Days Minimum Requirement</b>	
1 credit hour class	2 days
2 credit hour class	4 days over 2 weekends
3 credit hour class	6 days over 3 weekends
4 credit hour class	8 days over 4 weekends
5 credit hour class	10 days over 5 weekends

**Preparation, Study and Reflection Time**

Syllabus should be provided to students a minimum of two weeks before the class meets and should include preparatory readings and assignments needed prior to the first day of the class. Research papers/projects/monitored exams should be due or administered two weeks after the end of class.

**Continuous Registration for Graduate Students**

All graduate students must be enrolled for at least 1 credit hour each academic semester (fall and spring). Students register continuously from the time they first enroll in their graduate degree program until the semester or term in which they graduate. Students must also register for at least 3 semester hours the semester (or summer term) in which they take examinations (including written and oral comprehensive examinations or approved equivalent and dissertation defenses) and the semester (or summer term) in which they graduate.

Exceptions will be considered in these circumstances:

1. Students make a strong case that their life circumstances do not permit them to continue study for a prescribed period of time. These circumstances might include unforeseen financial burdens, family responsibilities, health problems, or other significant disruption or hardship. Leaves of absence are typically not granted for a period exceeding one year.  
However, under extraordinary circumstances, a leave of absence may be extended for a period that exceeds one year; students seeking such a leave are expected to provide documentation.
2. Students who enroll in summer terms may petition for summer term to count as one of the fall or spring semesters.
3. Students in summer-only programs and students in off-campus programs with course offerings not resembling

on-campus term schedules may apply for exception. However, these students are also expected to adhere to the spirit of the policy, which encourages ongoing and sustained progress toward degree completion.

4. Programs, and not just individual students, may also apply for exceptions.

Transfer of credit from other institutions will **not** be considered in lieu of continuous registration.

**Request for Exception.** Students seeking an exception to the Continuous Registration Policy for Graduate Students are encouraged to follow procedures of the *Graduate Student Petition for Exception*. Students should complete the petition in a timely fashion so as to ensure their continued status with the university is protected. The form requires the student's completion and signatures by the student, program advisor, department chair/division director, and Graduate Dean.

**Failure to Follow Continuous Registration Policy for Graduate Students.** Students who fail to register continuously and are not approved for exception will be notified with a letter of warning the first semester during which they fail to enroll. At the end of the second semester of non-enrollment they will be classified as discontinued. Discontinued students will need to re-apply to the Graduate School and be re-accepted by their program and the Graduate Dean if they wish to resume their studies. Acceptance is not guaranteed. Additional coursework and examinations may be required for students who are re-admitted.

**Course Repeat Policy**

Although approved courses may be repeated for credit, some courses may have limits to the amount of credit earned. Repeated courses are recorded on the transcript for every individual registration; all letter grades count toward the cumulative grade point average. A non-repeatable course may be repeated but will be counted in total credits toward graduation only one time.

For repeated courses, grades of "F," "U" and "I" that have not been completed within the allotted time, the credit hours are bracketed on the transcript and not included in total credits.

**Coursework Counted in Next Higher Degree**

See "Coursework Counted in Next Higher Degree" on page 61.

**Distance Delivered Course Credit**

Courses delivered through alternative means (e.g., distance delivery, independent studies, communications technology or computer assisted delivery) must be approved by the sponsoring department, college dean and the Dean of the Graduate School to be considered for graduate program credit. Courses shall have a defined relationship and applicability to degree and/or licensure programs as electives, support courses, or courses that fulfill program requirements.

**Enrichment Credits from Other Institutions**

At the request of the student or the department, the Graduate Dean may send a graduate student to another accredited institution offering graduate degrees to earn a maximum of 10 semester hours of specific course credit.

**Enrollment Prior to Admission to a Graduate Program**

The Graduate School may place holds on the registration of students that have taken the maximum hours and have not been admitted. Course registration will be suspended until an admission decision has been made. Thus, the student's application must be complete and the program faculty must recommend either a regular admission or must deny admission by the end of the first semester or the completion of nine semester hours.

**Multiple Numbered Courses**

Upon approval by the Graduate Council, courses numbered 400-599 may be double- numbered allowing undergraduate and graduate students to enroll simultaneously. All double-numbered courses may also be offered independently at either the graduate or undergraduate level. No course identified as an undergraduate General Education course

may be double-numbered. At least two-thirds of a student's master's degree program must be in courses that are not double-numbered courses or in courses that have been taught solely as 500-level or above graduate courses.

The Graduate Council will utilize the following guidelines in the process of evaluating new course proposals involving multiple numbering:

- All programs requesting approval of multiple numbered courses must demonstrate in the Rationale of the Course Proposal the academic value of and need for the proposed course in this format.
- In situations where a nongraduate degree program is seeking to include a multiple numbered course in its offerings that is intended to serve other units of the University, the requesting program must include supporting materials from those units.
- Nongraduate degree programs requesting approval of multiple numbered courses must demonstrate that the necessary expertise to teach the course exists in the faculty of that program.
- The practice of the Graduate School/Graduate Council will be to limit the number of graduate level courses offered by non-graduate degree programs. The specific number of courses will be determined on a case by case basis.
- All requests for multiple numbered courses must be simultaneously submitted to the Undergraduate Council and the Graduate Council for approval.
- All new requests for multiple numbered courses should try to pair a 500 level course with a 400 level course.
- Many course proposals are submitted with little or no distinction made in the qualitative differences between the graduate and undergraduate components of the course. It is the concern of the Graduate Council that the significant differences in this regard should be clearly articulated in terms of all aspects of the proposed course. It is considered insufficient to require graduate students to perform the same work as undergraduate students, but at a significantly higher level of accomplishment, without a clear delineation of those qualitative criteria. It is also considered insufficient to merely require a research paper/project of a brief nature, as the "graduate" component of the course. Therefore, all new course proposals must clearly distinguish, in the syllabus, the qualitative differences between the graduate and undergraduate components of the course. The significant differences in this regard should be clearly articulated in terms of expectation of outcomes, specific course content, course delivery, and evaluation of work.

Multiple numbered courses are generally discouraged on the grounds that the practice tends to limit the expectations of the graduate component of the course by grouping together undergraduate and graduate level students. While this may be seen to be challenging and advantageous to the undergraduate students, the concern exists that graduate students will not be presented with true graduate-level education because of "watering down" the content to meet the needs of the undergraduate students.

## Transfer Credit

A student who wishes to transfer credit must obtain and complete a "Petition to Count Work in a Degree Program" form and must obtain an official transcript(s) showing the course(s) to be transferred. The student must then present the completed petition and transcript to the program advisor for approval or disapproval. If the program advisor approves and signs the petition, it must be sent to the Graduate School for final approval/disapproval. This process must occur no later than three weeks prior to the end of the semester that the student plans to graduate. Courses requested for transfer must meet all criteria for credit transfer (see general transfer policies) to be approved by the Graduate School.

- Transfer work is not used in the calculation of the graduate grade point average.
- Graduate credit earned in off-campus or extension courses is not transferable unless it is acceptable to the major department and to the Graduate School.
- Transfer credit will not be accepted if the work was used to obtain a degree or is included as part of another degree at any institution.
- Transfer work must be approved by the department and must be "A" or "B" work.
- Transfer credit cannot be used to meet any residency requirement.
- Transfer credit cannot be used to make up "D," "F," or "U" grades received in required courses. Courses graded "S/U" are not transferable unless documentation can be obtained from the originating institution stating that the "S" grade granted is equivalent to an "A" or "B" grade.
- All program requirements, including transfer work, must be completed within the time limits of the degree program, i.e., five years for the master's degree, six years for the specialist degree, or eight years for the doctoral degree.
- Transfer courses must be numbered as graduate level according to the course numbering system at the originating institution.
- Transfer courses must be from accredited institutions of higher education that offer equivalent level degrees (e.g., doctoral degrees if transferring graduate credit into a doctoral program).

## Unclassified Course Credit

A maximum of nine semester hours of course work taken while in an unclassified status may be used toward a graduate degree program (no more than one semester of full time enrollment). Unclassified status refers to a student who has at least a baccalaureate degree and has not been admitted into a graduate degree program or is not seeking admission into a graduate degree program.

## Variable Topic Courses

A maximum of nine semester hours, individually or in combination, of courses numbered 508, 513, or 622 may be counted toward a graduate degree except

- **Masters:** A maximum of three semester credits of 513 (Professional Renewal) may be counted toward the master's degree.
- **Specialist:** For baccalaureate only students, a maximum of 12 semester hours of 508, 513 or 622, individually or in combination, will be counted toward a specialist degree.

# GRADUATE PROGRAMS

## Certificate Programs

Please see "*Certificate Programs*" on page 95

## Doctoral Degrees

Please see "*Doctoral Degrees*" on page 96

## Doctoral Minors

Please see "*Doctoral Minors*" on page 113

## Educational Specialist Degrees

Please see "*Educational Specialist Degrees*" on page 115

## Endorsement Programs

Please see "*Endorsement Programs*" on page 116

## Licensure Programs

Please see "*Licensure Programs*" on page 118

## Master's Degrees

Please see "*Master's Degrees*" on page 122

# PROGRAM REQUIREMENTS

## Advising

Each student will be assigned an academic advisor upon acceptance into a graduate program. Only members of the graduate faculty are authorized to serve as program advisors for graduate students. The program advisor is responsible for helping students understand the expectations and requirements of their academic programs and planning their programs to satisfy all requirements. The program advisor is responsible for assisting students with questions regarding their academic programs such as expectations for comprehensive examinations, theses, or internships, as guided by department, university and Graduate School policies and procedures. The program advisor is also responsible for professional advising and guidance including assisting students with planning for their academic and professional future.

It is the responsibility of the department to notify the Graduate School of the advisor assignment and any change in advisor assignment. Any advisor-approved deviations from published program requirements or plans of study are communicated to the Graduate School, in writing, by the program advisor to assist the graduation check process.

The importance of the program advisor cannot be overstated. Program advisement includes all aspects of students' present and future academic and professional planning. It is often the program advisor who is able to help students conceptualize their academic program within the context of their own professional goals and aspirations. This responsibility is likely to involve extensive discussions of academic or professional goals well beyond the current program.

## Change of Major

Currently enrolled graduate students may change their major from one graduate program to another or from one emphasis to another with the approval of the department for both program areas and final approval by the Graduate School.

If a student is admitted in a degree program and if the student desires to change programs, the student must complete a *Request for Change of Major* form and receive appropriate department approvals.

## English Competency: Spoken and Written

A student is expected to have competency in English usage and speech skills that will enable the student to progress satisfactorily in the chosen curriculum and to perform adequately in the chosen vocation. Consequently, a student may be counseled or required by a department and/or advisor to enroll in an English and/or a speech course(s).

## Graduation Requirements

The student may select any subsequent Catalog up to and including the current one, provided the student was in attendance at the University during that academic year. However, a student may not choose to meet some requirements in one Catalog and other requirements in another Catalog.

## Letter of Completion

Usually, an official transcript is proof of completion of a degree. If a student needs proof of the degree prior to the availability of official transcripts with degree indicated, he/she may contact the Graduate School for a letter of completion. A letter of completion can be issued only after all the degree requirements have been officially verified as completed including posting of grades for the current semester by the Registrar.

## Petition for Exception

Graduate students may petition for exceptions to certain procedures, rules, policies, and requirements.

The Graduate Student Petition for Exception forms are available in department offices. When petitioning for an

exception to a rule, policy or requirement, the student will explain how the exception would enhance the academic program, allow the continuation of a productive academic program, allow recovery from lost opportunity due to health or traumatic events or allow the student to profit from unique educational opportunities impeded by Graduate School regulations. When requesting an extension of program time limit, the student will describe specific steps, proposed scheduling and evidence of progress toward completing program requirements. Signatures of the program advisor and department chair indicating approval of and support for the request will be required on this form prior to submitting the request to the Graduate School.

## Program Termination

A student's degree program may be terminated for one or more of the following reasons:

- Based on an overall evaluation of a student's progress, the major department recommends that the student's program be terminated;
- the department declines to issue a letter of continuation based on an overall evaluation of a specialist or doctoral student's progress;
- in order to remain in a graduate program, a graduate student must maintain a cumulative grade point average of 3.00 in graduate level courses. A graduate student may not graduate with a cumulative grade point average below 3.00. If student's cumulative grade point average drops below 3.00 after taking at least 9 graduate level credit hours, a warning letter will be sent to the student. The degree program of a student who has been sent a warning letter will be terminated if the student's grade point average is below 3.00 after completing an additional 9 or more graduate level credit hours in which grades of "A," "B," "C," "D," or "F" are earned. All grades earned during the semester that the 9th hour is earned are used in the calculation of the grade average;
- fails the retake of the written comprehensive examination or its approved equivalent;
- fails the retake of the oral comprehensive examination; or
- submits an unsatisfactory thesis or dissertation.

## Readmission Subsequent to Program Termination

A student whose degree program has been terminated may be admitted to a different degree program. The following policies apply:

- The student must apply for admission to a different degree program.
- If admitted, the student must complete all standard requirements of the program to which he/she has been admitted.
- A maximum of 9 semester hours from the terminated program may be counted in the new program if approved by the new program advisor and the Graduate School.

If the student's former program was terminated due to failure of the retake of the comprehensive examination or its equivalent, the student will be allowed only one opportunity to pass the comprehensive examination or approved equivalent in the new program.

## Research Issues

### Internal Review Board (IRB)

Before any research involving human subjects can be conducted under the auspices of the University, an Internal Review Board (IRB) review is required. Data from human subjects are not to be collected until written approval is received from the University Internal Review Board. The main considerations and responsibilities of the IRB are to assure that ethical standards and the protection of human rights are maintained in any research conducted while at UNC.



Researchers are advised to obtain and submit an IRB packet early in their research process to allow time for a thorough review. Graduate students and faculty members can request an IRB packet from the Sponsored Programs and Academic Research Center (SPARC) or on the SPARC website.

### Student Liability

To protect against liability claims, all research involving subject consent requires a statement informing potential subjects that their participation is not covered by university liability insurance. The subject consent form must include the following statement:

*If injuries occur during the course of research, subjects are advised that the University of Northern Colorado is a publicly-funded institution of higher education and as such, liability may be limited under and governed by the Colorado Governmental Immunity Act.*

The State of Colorado's Risk Management Division (the unit responsible for UNC's liability insurance) has concluded that student researchers are not protected by the state against claims unless they are student employees, interns, or authorized volunteers assigned to a research project (most student researchers would not be). This means that most graduate students working on their master's theses or doctoral dissertations are not protected by the state of Colorado against claims resulting from their research.

This decision has serious implications for student researchers who are working with human subjects. Any student researcher

who is placing subjects at some level of risk should be concerned. For example, student researchers are engaged in a variety of activities that could potentially harm their subjects (e.g., they draw blood, conduct therapy sessions, evaluate physical conditioning). Regardless of how responsible researchers may be, accidents can happen. Though the researcher is ultimately responsible for the health and safety of research subjects, low risk research, as defined by Health and Human Services (HHS) Guidelines and described in the IRB instruction packet, may not be recommended for special liability insurance coverage.

For moderate to high risk procedures, the IRB committee will strongly recommend that you purchase liability insurance either through your professional association or an alternative source.

### Written Comprehensive Examinations

See specific degree requirements. Records of written comprehensive examinations are maintained in the departmental office for a period of 12 calendar months. These examinations are to be confidential and only available to the student who completed an exam and department faculty to address potential appeals and/or questions of administration and grading procedures. Students may request to review their comprehensive examination but may not be allowed access to written responses of other students. Past comprehensive examination responses with identification removed can be used by program faculty as models for instructional purposes.

## MASTER'S DEGREE, SPECIFIC REQUIREMENTS

Master's degrees (M.A., M.A.T., M.M., M.P.H., M.S.) are awarded for a level of academic accomplishment substantially beyond that required for the baccalaureate degree. Programs consist of a coherent pattern of courses, seminars, and supervised learning experiences that culminate in a comprehensive examination and, in some cases, a thesis. Master's programs require a minimum of 30 semester hours beyond the baccalaureate degree plus additional time in preparation for comprehensive examinations and thesis writing.

### ADMISSION

Each applicant to a master's degree program must possess a baccalaureate degree from an accredited college or university and have a grade point average of 3.00 or better on a [4.00 point scale] on the most recent 60 semester hours.

If someone is recommended for admission who does not meet the Graduate School standard, a rationale must be provided stating the factors which were considered in recommending the student: GPA in the discipline, maturity, letters of recommendation, samples of their work, GRE scores or other compelling factors. All recommendations for admission below the 3.00 will be reviewed by the Graduate Dean or his/her designee.

### Double Major

Only one degree will be awarded (e.g. M.A., M.A.T., M.M., M.P.H., M.S.) and only one degree will be reflected on the transcript, but both majors will be noted. The student must specify, therefore, which degree is to be used for degree purposes. Double majors must meet all requirements and must apply for, take, and pass the comprehensive examination or approved equivalent in each major. No degree will be awarded until all requirements for both majors are complete.

If a student is interested in obtaining two master's degrees, it is recommended that they complete one degree program completely before applying to the other. Students are commonly advised that it is most often to their advantage to seek a higher degree (specialist or doctorate) upon completion of a master's degree rather than obtaining two master's degrees. Additional consultation from the student's program advisor or the Graduate School regarding a decision to declare

a double major or to seek two master's degrees should be pursued.

### Drop of Double Major

A student with a double major may drop one of the majors before taking either comprehensive examination only if he/she has a UNC grade point average of 3.00 in the major being dropped. Once a student has taken the comprehensive examination for one of the majors, the other major cannot be dropped.

### Program Time Limit

The maximum time allowed for the completion of the master's degree is five calendar years beginning with the first semester of enrollment after admission has been granted. However, program time limits are adjusted to reflect approval of transfer credit or unclassified hours. Student must complete the degree within five calendar years beginning with the earliest work counted in the program (which would include transfer credit and unclassified hours).

### Transfer Credit

**Master's and Specialist Degree Policy.** Students must complete a minimum of 24 credits through the University of Northern Colorado as part of their master's degree or post-master's specialist degree. Thus, students can transfer up to six (6) credits from another accredited institution, that offers graduate degrees, into a 30 credit hour master's or specialist degree program. If the program requirements exceed the minimum 30 credits, students are allowed to transfer additional credits as determined by the department or program faculty. Students without a master's degree must complete 48 semester credit hours at UNC of the 60 required credits for a specialist degree. Students are encouraged to check departmental policies regarding transfer of credit.

These policies allow programs that exceed the 30 credit minimum for a master's/specialist to establish departmental transfer limits and guidelines that exceed minimum requirements. As long as the minimum number of credits through UNC are observed, transfer credit allowances to students will be determined by program faculty and can vary on a case by case basis. The Graduate School will not approve students for graduation with fewer than the required UNC credits.

## COURSES AND CREDIT HOURS

The university requires a minimum of 30 semester hours for a master's degree. This includes at least 24 semester hours of discipline content courses. Chemistry and Biological Sciences master's programs require a minimum of 20 semester hours of discipline content courses. Departments may have requirements that exceed the minimum standards established by the university.

A maximum of three semester credits of 513 (Professional Renewal) may be counted toward the master's degree.

## PROGRAM REQUIREMENTS

### Comprehensive Examinations

#### Master's Thesis in Lieu of Comps

Whether the master's thesis is to be completed as an additional program requirement or as a project in lieu of the written comprehensive examination, a thesis committee of at least two graduate faculty members is required. If the thesis is in lieu of the written comprehensive examination, departmental procedures for determining comprehensive examination eligibility are to be used prior to conducting the thesis research and at least two signatures from graduate faculty members must be obtained to indicate the successful completion of the thesis.

If the master's thesis is required in addition to the comprehensive examinations, the student needs only to submit the thesis signed by two graduate faculty members to the Graduate School upon completion. The Graduate Dean will be the final approval signature on the thesis.

If the student plans to complete a thesis, whether in lieu of the comprehensive examination or in addition, the student must register for a minimum of six (6) semester hours of 699-Thesis. No more than six hours of thesis may be applied to the minimum credit requirements of a student's program.

#### Written Comprehensive Examinations

Each master's degree and specialist degree student must pass a written comprehensive examination or otherwise show competency in the discipline by successfully completing a department specified equivalent that has been approved by the Graduate Council (thesis or project in lieu of comprehensive examinations). Defense of a project or thesis in lieu of comprehensive examinations is equivalent to administering the comprehensive examination.

The major department is responsible for determining the student's eligibility for taking the examination as well as scheduling the time, date, and place of the examination. This examination or its approved equivalent may not be taken until the student has:

- been granted regular admission to the program
- completed departmentally specified course requirements
- maintained a GPA of at least 3.0 in their program
- received approval from the program advisor.

**Application.** The student will apply in the academic department office for the written comprehensive examination or to defend the thesis before the thesis committee. The comprehensive examination permit is valid only for the semester that it is issued. The program advisor must be consulted for information regarding examination format, procedures, time, date, and place.

If the student plans to graduate at the end of the semester in which he/she takes the comprehensive examination or completes the project/thesis in lieu of comprehensive examination, the student must apply for graduation during the preceding semester or very early in the semester in which the graduation is to occur. Students should not wait until they have been notified of comprehensive examination results before applying for graduation.

Once the comprehensive examination session begins, it is considered a take of the examination. If the student leaves the examination session and does not return, the examination will be considered taken and the exam will be evaluated accordingly and reported to the Graduate School.

#### Results.

Once the examination has been evaluated or the project/thesis has been defended, the program advisor must return the signed report form to the Graduate School indicating a pass or failure of the examination. This must be done on or before the published deadline to submit the results of the written comprehensive examination for that semester.

A retake may not be scheduled during the same semester that the original examination was completed. Failure of the retake of the examination or its equivalent will result in the termination of the student's degree program.

**Filing the Thesis.** One original and three copies of the thesis plus an additional copy of the abstract (150 words) must be submitted to the Graduate School along with a non-plagiarism affirmation form. If a project in lieu of the comprehensive exam is to be copyrighted, Proquest Information and Learning requires an abstract of the project. These items must be submitted to the Graduate School at least four weeks (28 calendar days) before the student's anticipated graduation date. Upon filing a thesis, the Graduate School will require each student to complete specific forms related to the thesis and will be billed the current fees for binding, mailing, publishing, and microfilming, as applicable.

All four copies of the thesis will be bound. After binding, the original and one copy will be filed in the university library, one copy will be forwarded to the student's research advisor, and one copy will be sent to the student.

### Graduation

All master's and specialist students must apply for graduation no later than the end of the semester preceding the semester that a student plans to graduate. A late fee will be assessed for late applications. The student has the responsibility for determining that the application has been filed with the Graduate School. The Graduate School will not process a graduation application that is not signed by the student and program advisor.

If the student does not complete all requirements for the degree and, therefore, does not graduate at the end of the proposed semester, the application will be placed in the deferred file. The student must give written notice to the Graduate School when he/she wishes to appear again on the tentative list of graduates.

Graduation requirements are checked in accordance with one specific University Catalog. The Catalog used to meet graduation requirements is normally the one published for the academic year during which the student first enrolls after admission to the University. The student must specify the Catalog under which he/she wishes to be evaluated and must meet all requirements in that Catalog.

### Plan of Study

The program listed in the University Catalog will serve as the plan of study for master's programs.

Written requests for changes or substitutions in the plan of study must be signed by the program advisor and submitted to the Graduate School. Students should take the responsibility to make sure any deviations from the Catalog are documented in their Graduate School file. Departments are also encouraged to identify any deficiency courses a student must complete, at the time of screening for admission.

## SPECIALIST DEGREES, SPECIFIC REQUIREMENTS

**Specialist in Education degrees (Ed.S.)** are awarded for concentrated study and investigation beyond the master's degree. Programs are designed on an individual basis and are sharply focused on a particular academic goal. Specialist's programs may cut across departmental lines but are not offered in all discipline areas. Typically the degree requires a minimum of 30 semester hours beyond the master's degree.

### ADMISSION

Each applicant to a specialist degree program must possess a baccalaureate degree from an accredited college or university and have a grade point average of 3.00 or better [4.00 point scale] on the most recent 60 semester hours and an adequate academic background in the proposed area of specialization as defined by the program through which the specialist degree is to be awarded. Those applicants having a GPA less than 3.00 may be considered for admission. If someone is recommended for admission who does not meet the Graduate School standard, a rationale must be provided stating the factors which were considered in recommending the student: GPA in the discipline, maturity, letters of recommendation, samples of their work, GRE scores or other compelling factors. All recommendations for admission below the 3.00 will be reviewed by the Graduate Dean and his/her designee.

#### Transfer Credit

See "Transfer Credit" on page 83.

### COURSES AND CREDIT HOURS

A student entering a specialist degree program who possesses a master's degree must earn a minimum of 30 semester hours of graduate credit beyond the master's degree. A student entering a specialist degree program who possesses only a baccalaureate degree must earn a minimum of 60 semester hours of graduate credit beyond the baccalaureate degree. Departments may have requirements that exceed the minimum standards established by the university.

See "Variable Topic Courses" on page 81.

### PROGRAM REQUIREMENTS

See "Comprehensive Examinations" on page 84.

See "Graduation" on page 84.

#### Plan of Study

In conjunction with the supervising committee, each specialist degree student must prepare a plan of study that clearly specifies core requirements and identifies elective, transfer, and double numbered course work.

The plan must be formalized on a *Plan of Study* form and the completed form, including the signature of the program advisor, must be filed with the Graduate School by the end of the student's first semester of enrollment after admission. Upon receipt of a properly signed *Plan of Study* form the Dean of the Graduate School or his/her designee shall review the plan and approve or disapprove the plan. If approved, the *Plan of Study* form will be filed in the student's folder. If disapproved, the *Plan of Study* form will be returned to the student for correction and re-submission. Because the plan of study will be the basis for the graduation check, any deviation from the plan of study must be approved by the program advisor and the Dean of the Graduate School or his/her designee. Requests for changes to the plan of study must be approved by the advisor and submitted in writing to the Graduate School with copies sent to all committee members.

#### Supervising Committee

A two-person specialist supervising committee, recommended by the department, will supervise a student's specialist degree program. The supervising committee will assist the student in preparing a plan of study, oversee comprehensive examinations where appropriate, and direct the student's practicum.

#### Time Limit

The maximum time allowed for completion of the Specialist in Education degree is six calendar years beginning with the first semester of enrollment after admission has been granted. However, program time limits are adjusted to reflect approval of transfer credit or unclassified hours. Student must complete the degree within six calendar years beginning with the earliest work counted in the program (which would include transfer credit and unclassified hours).

#### Written Comprehensive Examinations

Each specialist student must pass a written comprehensive examination in the area of specialization and pass any other examination(s) the supervising committee may require. The written comprehensive examination may not be taken until the student has:

- been granted regular admission to the program
- filed an approved plan of study
- completed at least 20 semester hours (50 semester hours if baccalaureate only student) of work applicable toward the degree, not including the practicum
- maintained a GPA of at least 3.0 in their program
- received approval from the program advisor.
- See "received approval from the program advisor." on page 84.
- See "Results." on page 84.
- See "Written Comprehensive Examinations" on page 84.

## DOCTORAL DEGREES, SPECIFIC REQUIREMENTS

**Doctor of Arts degrees (D.A.)** are awarded for completion of content-oriented programs to prepare the candidate for a career in college or university teaching. The student is expected to specialize in a specific field of study but is not expected to specialize in a single facet of the chosen field. General components of the program include coursework in the major area, supervised practica in college teaching, and a dissertation involving a significant teaching/education problem(s) or a traditional research topic. Students are offered considerable flexibility in program development. The degree is not research-oriented, but the recipient will demonstrate research competence by preparing a dissertation designed to support college/university teaching.

**Doctor of Education degrees (Ed.D.)** are awarded for completion of professional or practitioner programs designed to prepare candidates for positions of leadership in all fields including elementary and secondary education, higher education, business, industry, government, and the military. These doctoral programs prepare graduates for service in instructional, supervisory, and administrative capacities.

**Doctor of Philosophy degrees (Ph.D.)** are awarded for completion of the research degree granted only to students who have 1) mastery of definite fields of knowledge to the extent they are familiar both with what has been done in their specific field and with the potentialities and opportunities for further advances, 2) a demonstrated capacity to do original and independent scholarly investigation or creative work in their specific field, and 3) the ability to integrate their specific field or specialization with the larger domains of knowledge and understanding.

**Doctor of Psychology degrees (Psy.D.)** are awarded for completion of the professional psychology program. A Psy.D. in counseling psychology indicates that the degree holder has specialized training in the area of psychological aspects of counseling/therapy and human behavior. The degree is a professional/practitioner degree at the highest level of university training.

**Post-Doctoral Programs** of research and advanced study are available in selected areas to persons holding the earned Doctor of Arts, Doctor of Education, Doctor of Philosophy, or Doctor of Psychology degree. Work at the post-doctoral level may be taken in areas such as educational leadership and policy studies, educational technology, educational psychology, counseling psychology, elementary education, special education, applied statistics, and other disciplines.

The specific research project or program of study is planned by the post-doctoral student in conference with a faculty committee appointed to advise the student throughout the program and to assess the student's progress at the end of the program.

Admission information is available in the Graduate School. Post-doctoral admission is granted on an individual basis.

## ADMISSION

Each applicant for the doctoral degree must:

- Possess a baccalaureate degree from an accredited college or university,
- Submit three letters of recommendation confirming that the applicant has the ability to do doctoral work in the proposed discipline(s),
- Have a minimum level of achievement combining GPA and GRE performance.
- GRE scores must be less than five years old.

Doctoral applicants meet the Graduate School minimum criteria for admission if they have a GPA of at least 3.0 on a 4.0 scale on the most recently completed degree, scores of at least 400 on both the verbal and quantitative sections of the GRE-General Test with a combined score of at least 1000 and an analytical writing score of at least 3.5. A higher GRE score can compensate for a lower GPA and a higher GPA can compensate for a lower test score. For doctoral applicants who do not meet Graduate School requirements, the Graduate School will consider departmental recommendation for admission. A written explanation must accompany the recommendation explaining circumstances and factors considered justifying acceptance of the applicant.

The doctoral programs at the University of Northern Colorado do not utilize quantitative rating systems and standard criteria weightings as sole determining factors for decisions concerning the acceptance of doctoral applicants. Quantitative information such as GPA or GRE scores is considered in combination with qualitative information derived from letters of recommendation, applicant goal statements, as well as past academic and professional accomplishments. Because of the specialized nature of doctoral work, it is incumbent on the faculty to utilize their professional judgment in determining to what extent a student is qualified for entry into a particular program. The information requested by each department upon which their decision is to be based, gives the faculty the opportunity to thoroughly and carefully evaluate the strengths and potential of each applicant.

Each application introduces a unique combination of qualifications for a program of doctoral study. Decisions to accept or not accept a potential doctoral student must thoroughly consider all of the information pertinent to the applicant's qualifications including sensitivity to diverse applicant backgrounds. Only in this way can strict adherence to and consideration of affirmative action policies be maintained. The doctoral student selection process thus avoids undesirable, restrictive, and potentially capricious decisions that can arise from over-reliance on purely quantitative selection criteria.

Departments offering doctoral programs may recommend admission based upon supplemental/alternate criteria that have been established by the major department and approved by the Graduate Council.

## Doctoral Minor

Doctoral minors consist of a minimum of 15 semester hours of course work in a discipline different from the doctoral program. Any department with at least one approved graduate degree program (master's, specialist, or doctorate) is eligible to offer doctoral minor(s). With department and college approval to offer the doctoral minor the proposal is submitted through the university curriculum approval process. Upon approval, the doctoral minor will be listed in the university Catalog.

Graduate students admitted to doctoral programs may, upon approval of their doctoral program advisor, select a minor program of study for inclusion in their doctoral program. Completion of the doctoral minor will be indicated on the student's transcript. Doctoral students who have been approved by the department to pursue a doctoral minor will include the requirements for completion of the minor in their doctoral plan of study.

The credit hours associated with an approved doctoral minor would count toward the total doctoral degree program hours required only when they overlap with electives or research core requirements. No course would be allowed to count for double credit hours. Students would not be allowed to pursue a minor offered under the same program name as the doctoral program to which they are admitted. To complete a minor, the student must first be officially admitted to a doctoral degree program.

## Master's Enroute to the Doctoral Degree

Students who have been admitted to a doctoral program may complete a master's degree in the same discipline enroute to completion of the doctoral degree if this option has been previously requested by the department and approved as a program modification for this degree program through the curriculum approval process. Students should contact the Graduate School for details concerning this policy.

## Second Doctorate Guidelines

Double majors are not permitted at the doctoral level. A student may receive a second doctoral degree from UNC provided that the requirements for the first doctoral degree have been completed before initiating the second degree program and provided that no course work from the first degree is counted toward the second degree.

## COURSES AND CREDIT HOURS

### Credit Hours

A student entering a doctoral program who possesses a master's degree must earn a minimum of 64 semester hours of graduate credit beyond the master's degree. This includes a minimum of 48 semester hours of graduate level discipline content courses and 16 semester hours of research credit.

A student who possesses only a baccalaureate degree must earn a minimum of 94 semester hours of graduate credit beyond the baccalaureate degree. This includes a minimum of 78 semester hours of graduate level discipline content courses and 16 semester hours of research credit.

A student who possesses a master's degree but who is attempting to obtain a second master's degree enroute to a doctoral degree must meet the same credit hour requirements as the baccalaureate only student.

A student who possesses a specialist degree may count a maximum of 21 semester hours of specialist work in the doctoral program with the approval of the Graduate School, the program advisor, and all members of the doctoral committee. Departments may have requirements that exceed the minimums established by the University.

## Transfer Credit

Doctoral students must complete a minimum of 40 semester hours through UNC of the 64 minimum required for a doctoral degree. If the program requirements exceed the 64 credit minimum, students are allowed to transfer additional credits, as determined by their advisor, from another accredited institution that grants doctoral degrees. Doctoral students without a master's degree must complete 64 of the 94 required credits at UNC for a doctoral degree. The plan of study will indicate transfer credits to be included in a student's program. Students are encouraged to check department policies regarding transfer of credit.

These policies allow programs that exceed the 64 credit minimum for a doctoral degree to establish departmental transfer limits and guidelines that exceed minimums. As long as the minimum number of credits through UNC are observed, transfer credit allowances to students will be determined by program faculty and can vary on a case by case basis. The Graduate School will not approve students for graduation with fewer than the required UNC credits.

## PROGRAM REQUIREMENTS

### Comprehensive Examinations

Each doctoral student must pass a written comprehensive examination that is designed, administered, and evaluated by the graduate faculty of the major department and by other qualified individuals as specified by the program advisor. This examination may not be taken until the student has:

- been granted regular admission to the degree program;
- filed an approved plan of study;
- completed at least 36 semester hours (60 semester hours if baccalaureate only student) of work applicable toward the degree -- at least 24 semester hours must have been completed on-campus;
- maintained a grade average of at least 3.00 in his/her graduate degree program;
- had a doctoral committee appointed;
- obtained approval from the program advisor to take the exam.

The major department is responsible for scheduling the date, time, and place of the examination(s). Each student must check the departmental requirements at the beginning of his/her program.

Once the comprehensive examination session begins, it is considered a take of the examination. If the student leaves the examination session and does not return, the examination will be considered taken and the exam will be evaluated accordingly.

Once the examination has been evaluated, the program advisor must return the signed report form to the Graduate School indicating a pass or failure of the examination.

A retake may not be scheduled during the same semester that the original examination was completed.

Failure of the retake of the examination or its equivalent will result in the termination of the student's degree program.

### Comprehensive Examinations, Oral

After passing the written comprehensive examination, each doctoral student must pass an oral comprehensive examination. Permits for the oral comprehensive examination will not be released and the oral examination will not be authorized until the written examination report is filed with the Graduate School indicating that the student passed the written examination.

The results of the written comprehensive examination must be on file in the Graduate School two weeks prior to the scheduling of the oral comprehensive examination.

The program advisor, who will serve as chairperson of the oral comprehensive examination committee, should direct the student to arrange the date, time, and place of the oral examination. After all arrangements have been made, the student or program advisor will notify the Graduate School by forwarding a completed *Request to Schedule Doctoral Examinations* form two weeks (14 calendar days) before the exam date. Requests submitted with greater advance notice are encouraged and appreciated. The student's performance on the examination will be evaluated as (a) pass, (b) will pass if meets stated conditions, (c) unsatisfactory, retake permitted, (d) fail, retake not permitted, program terminated. At least three-fourths of the committee members must agree on the final evaluation.

The Graduate School will approve and publicize the examination date, time and place in the UNC REPORT or in any other appropriate university publication.

All members of the faculty are invited to attend and may ask questions of the student after the committee members finish their questioning. Other graduate students may also attend with permission from the chairperson of the committee.

**Passed.** If the student passes the examination, the program advisor must obtain the signatures of at least three-fourths of the committee members on the *Report of the Oral Comprehensive Examination* form and return the form to the Graduate School.

**Passed With Conditions.** If the student is evaluated will pass if meets stated conditions, the report stating the conditions must be signed and returned to the Graduate School. The student must subsequently meet the stated conditions. No student will be admitted to candidacy until at least three-fourths of the committee affirm that the conditions have been met.

**Failed.** If the student's performance was unsatisfactory, the report must be signed and returned to the Graduate School. The student may retake the oral examination during a subsequent semester. At this point, the membership of the student's committee may not be altered without approval by the Graduate School. Failure to pass the oral retest or failure to meet conditions specified after an oral retest will terminate the student's degree program. If the student failed the examination with no retake permitted, the report must be signed and returned to the Graduate School. The Graduate School will terminate the degree program, and the student will not be permitted to do further work or take further examinations in that degree program.

### Faculty Committee Load Policy

An individual graduate faculty member may serve on ten active doctoral research committees at any one time and may serve as the dissertation director or research advisor for no more than five of these ten committees. Exceptions to the committee maximums may be permitted only if agreed to by the graduate faculty member, department chair and College Dean as follows:

- The faculty member involved agrees that his or her load (current or projected) allows adequate time to take on an additional student without adversely affecting the responsibility of the department to other students and to programs offered by the department.
- The department chairperson approves the additional student. Approval indicates that the chairperson has reviewed the current load of the faculty member and does not feel the additional load will adversely affect the responsibility of the department to other students and to programs offered by the department.
- The Graduate Dean has approved the exception(s).

An individual department may elect to impose more stringent limitations on its faculty with respect to the number of committees on which they may serve. An active doctoral student will be defined as one who is currently enrolled.

## Graduation

Upon admission to doctoral candidacy, the Graduate School will conduct a preliminary graduation check of those doctoral students newly admitted to candidacy. Any discrepancies between the transcript and the plan of study must be corrected with either a new plan of study or a correction memo initiated by the advisor. Upon receipt of the preliminary graduation check, the student must thereafter notify the Graduate School IN WRITING the semester he/she wishes to graduate. Therefore, doctoral students will not need to file an application for graduation.

All graduating students are encouraged to attend graduation. Those students participating in the graduation ceremony are required to wear appropriate academic regalia. Diplomas are not issued at the graduation ceremony. They will be mailed to addresses supplied by the students to the Graduate School. Failure to supply the mailing address could result in a delay in receipt of the diploma. No diploma will be issued until all requirements for graduation have been met.

**Hooding.** The candidate's research advisor shall hood the candidate at the graduation ceremony.

## Plagiarism

The following is the approved definition of plagiarism: Plagiarism is the act of appropriating the written, artistic, or musical composition of another, or portions thereof; or the ideas, language, or symbols of same and passing them off as the product of one's own mind. Plagiarism includes not only the exact duplication of another's work but also the lifting of a substantial or essential portion thereof.

Regarding written work in particular, direct quotations, statements which are a result of paraphrasing or summarizing the work of another, and other information which is not considered common knowledge must be cited or acknowledged, usually in the form of a footnote. Quotation marks or a proper form of indentation shall be used to indicate all direct quotes.

As long as a student adequately acknowledges his/her sources and as long as there is no reason to believe that the student has attempted to pose as the originator, the student will not be charged with plagiarism even though the form of the acknowledgment may be unacceptable. However, students should be aware that most professors require certain forms of acknowledgment and some may evaluate a project on the basis of form.

## Plan of Study

A committee of at least three persons appointed and approved by the major department and, if applicable, by any supporting area department shall supervise the planning of a student's doctoral degree program. In conjunction with the doctoral committee, each doctoral student must prepare a long-range plan of study that clearly specifies core requirements, elective, transfer, double-numbered course work, research tools (if applicable), and doctoral minor (if applicable).

The plan must be formalized on a *Plan of Study* form and the completed form, including the signatures of the program advisor and committee members, if required by the department, must be filed with the Graduate School by the end of the student's first semester of enrollment after admission. Upon receipt of a properly signed *Plan of Study* form, the Dean of the Graduate School or his/her designee shall review the plan and approve or disapprove the plan. If approved, the *Plan of Study* form will be filed in the student's folder. If disapproved, the *Plan of Study* form will be returned to the student for correction and re-submission. Because the plan of study will be the basis for the graduation check, any deviation from the plan of study must be approved by the program advisor and the Dean of the Graduate School or his/her designee. Requests for changes to the plan of study must be approved by the advisor and submitted in writing to the Graduate School with copies sent to all committee members.

## Program Time Limit

The maximum time allowed for completion of a doctoral degree is eight calendar years beginning with the student's first semester of enrollment after admission has been granted.

However, if a student has approval to count work taken before first enrollment after admission, the student must complete the degree within eight calendar years beginning with the earliest work counted in the program.

If a student has completed a Specialist in Education degree at the time he/she begins a doctoral degree program and if the student is permitted to include 21 semester hours of his/her specialist degree credit in the doctoral program, the student shall have a maximum time limit of five calendar years to earn the doctoral degree.

## Progress Review

Departments are to evaluate and provide an annual program progress report for each doctoral student until the student passes the oral comprehensive examination.

Doctoral student advisors will be responsible for obtaining and reporting at least the following information for each assigned advisee:

- Student's self evaluations of their academic performance and professional development.
- Student's grades in all graduate courses during the evaluation period.
- Performance ratings from instructors for all graduate courses during the evaluation period.
- Assessment of the student's professional development from appropriate departmental faculty. Based on the data collected, each doctoral advisor will meet with each student's doctoral committee to develop and provide a summary of the student's strengths and area(s) for improvement. Emphasis should be placed on acknowledging accomplishments and professional growth where appropriate.

Recommendations for improvement should include specific changes expected in the student's performance or behavior, means of assessing the changes, and the time period by which the change is expected to occur. Improvements or lack of change in areas recommended from prior progress reports should be documented. Signatures of the advisor and all committee members are required on the progress report.

The progress report will include a clear recommendation to the chair of the Department Graduate Program Committee (DGPC) of whether the student is to be continued each year without conditions, continued with conditions, or not supported for continuation. If conditions for improvement are stipulated, the student must be informed by the Department Graduate Program Committee (DGPC), in writing, of the conditions and specific changes required to satisfy the conditions. If the department does not have a DGPC, the report will be submitted directly to the chair of the department.

The following procedures must be followed prior to submitting a recommendation to discontinue a doctoral student's program for causes other than poor academic performance:

- The student must be informed of the pattern of behavior or incident(s) that has given rise to concern among the departmental faculty members and that led to the recommendation for program discontinuation.
- The student must be given an opportunity to meet with and address the observed behavior or incident with the Department Graduate Program Committee (DGPC) or with the student's doctoral committee for departments with no graduate program committee. Following the meeting, the DGPC or doctoral committee must either reassert the concerns or withdraw the concerns in writing to the department chairperson.

If the complaint arises from an unprofessional behavior or other behavioral concerns, the student will be given a clearly defined probationary period during which clear behavioral objectives are provided to either rectify the concerns or change the behavior. Clear means of assessing improvement will be provided.

If the complaint results from an egregious violation of laws or published university or departmental policy, rules or professional ethics, clear documented evidence of the incident(s) must be provided with the recommendation.

Copies of the progress report are to be provided by the DGPC or student doctoral committee to the department chair/division director no later than April 15 of each year and copied to the student. A chair/division director may agree or disagree with the DGPC's or doctoral committee recommendation. If in agreement with the recommendation, the chair/division director will approve and submit the progress report to the Dean of the Graduate School and a copy to the college dean by May 1. The student and DGPC or doctoral committee will be informed in writing of the approval. If in disagreement with the DGPC's or doctoral committee's recommendation, the department chair will invite the student's program advisor and the DGPC chair or doctoral committee members to discuss the disagreement. After the meeting, the DGPC chair or student's doctoral advisor will approve and submit the original progress report recommendation to the Graduate Dean with a copy to the college dean and student. Modify and submit the recommendation to include conditions agreed to by the department chair/division director and DGPC or doctoral committee (or add conditions) to the Graduate Dean with a copy to the college dean and student;

or

Change and submit the recommendation as agreed to by the department chair/division director and DGPC or doctoral committee with explanation any additional documentation and signed acknowledgement from the department chair/division director and DGPC chair or doctoral committee members. The advisor and DGPC members or doctoral committee members may submit additional comments or documentation to support the DGPC chair's decision or to express opposition to the chair's decision. The changed recommendation will then be submitted to the Dean of the Graduate School with a copy to the college dean and student.

### Proposal and Dissertation

A dissertation pertaining to a significant topic in the candidate's major subject field is required for each doctoral program. The dissertation proposal (797) is 4 semester hours. Minimum credit for the doctoral dissertation is 12 semester hours. Any program requirement exceeding 12 credits of dissertation hours must first be approved by the Graduate Council and Graduate Dean.

A dissertation proposal is to be developed and presented to the student's doctoral committee for approval and submitted to the Graduate School prior to engaging in final data collection. Preliminary data collection necessary for developing appropriate skills and methods pertaining to the project is acceptable prior to approval of the proposal.

All 797 and 799 hours will result in a grade of "NR" until completion of the proposal and final dissertation. Upon successful completion of the dissertation and submitting the Report of the Dissertation Defense form to the Graduate School with approval signatures, the Graduate School and Registrar are authorized to change all prior grades for 799 to "S".

The proposal is a crucial step in the dissertation process and should culminate with a formal and public dissertation proposal hearing with the full committee present. Approval of the dissertation proposal establishes the expectations for the final dissertation and assures agreement among the committee with the student's methods and research strategy prior to proceeding to the final stages of the project. The proposal hearing also allows the committee to introduce required changes or additions to a student's proposed project while changes are still possible. The student should consult department procedures for scheduling the defense of the proposal.

**Candidacy.** Doctoral students advance to candidacy upon passing the written and oral comprehensive examinations and filing an approved dissertation proposal in the Graduate School.

See "Plagiarism" on page 88.

**Research Proposal.** The student should confirm the composition of the research committee prior to registering for 797. This same committee will serve as research and oral comprehensive examination committee unless a change is deemed appropriate by the student and student's research

advisor. If there is to be a difference in the doctoral committee structure for the oral comprehensive examination and the dissertation research, the student must submit a change of committee membership form to the Graduate School.

Students should prepare their dissertation proposal in collaboration with their research advisors. Dissertation proposals and proposal hearings are required for all doctoral students. Other committee members are to be consulted when appropriate but the major interaction and editorial work should be with the student's research advisor. Students should avoid sending portions of the dissertation proposal to all committee members for their review and comment. Unless otherwise agreed by the committee members, only completed copies of the proposal or dissertation are to be distributed and reviewed by the committee.

The proposal is then presented to the student's entire committee at least three weeks prior to the scheduled formal proposal hearing. Arrangements for a room are made with the research advisor. Students must make sure all committee members are available and aware of the time and place. The faculty representative must be present at both the proposal hearing and the final dissertation defense which will be a public hearing open to the academic community.

After the proposal hearing, the proposal is to be revised according to committee requirements. During the proposal hearing, committee members will direct questions to the student and point out concerns regarding the proposed project. It is a good idea for the student to take careful notes of all comments and concerns made and then review the notes with the committee before the hearing is over to insure that all the requested changes are included on the list. It will be the student's responsibility, in consultation with the research advisor, to address those concerns in a revised proposal. It is recommended that the student summarize the changes that have been incorporated into the revised proposal to assist the committee in identifying and locating the changes that have been made.

The revised proposal should then be circulated with a signature page to the committee for review and signature if they approve of the revisions. A second committee meeting is optional but could be required by the committee due to the extensive nature of the expected changes or to expedite the approval process. All committee members' signatures are required.

**Filing Proposal.** The approved proposal is then submitted to the Graduate School. The student shall sign the non-plagiarism affirmation when the proposal is filed and shall be told that another affirmation must be signed and filed in the Graduate School Office with the corrected dissertation following the defense. All doctoral students must submit a paper copy of the signature page with signatures of all committee members. Students must also assume responsibility for maintaining their own paper copy of the entire proposal in a secure location until the time of their graduation.

**Electronic submission.** Students have the option of submitting a paper copy or electronic copy of the proposal narrative to the Graduate School. Doctoral students who elect to submit an electronic copy of their proposals must remain prepared to submit a paper copy at any time if requested to do so by the Graduate School or by a member of their committee. Students wishing to submit electronic copies should submit the proposal on high-quality floppy, zip, or compact disk and send the proposal as an e-mail attachment to the Graduate School (check with Graduate School regarding particular e-mail address). A description of the operating system and word processing system should accompany electronic submissions.

The Graduate School will consider the proposal to be accepted unless the Graduate Dean would object to the proposal. If the Dean objects, the proposal would be sent to the student and Research Advisor with specific written requests for revision. After submitting the dissertation proposal to the Graduate School, students may then register for departmental prefix 799, Doctoral Dissertation. Approval from the appropriate institutional review board (IRB for human subject research or IACUC for animal research) must be obtained prior to collecting data for the dissertation.

**Dissertation Defense.** The student will complete the project and write the dissertation in close collaboration with the research advisor. The student will submit a *Request to Schedule a Doctoral Examination* form to the Graduate School to request a defense date. The Graduate School will send the research advisor a copy of the confirmed schedule and a defense evaluation. The scheduled defense date must be at least two weeks (14 calendar days) following the request to allow for publicizing the defense to the academic community. Requests for defense submitted more than two weeks in advance are welcomed and appreciated.

The defense must occur at least five weeks (35 calendar days) before the anticipated graduation date or the student cannot graduate until the following semester.

All members of the graduate faculty may attend the defense and may ask questions of the student after the committee members finish their questioning. Other graduate students may attend with permission from the research advisor.

The research advisor should discuss the nature and purpose of the dissertation defense with the student. Generally, the student is instructed to prepare a brief description of the entire study from the purpose to the results and discussion.

The committee is free to ask any questions pertaining to the dissertation. The student is expected to understand all aspects of the study including the data analyses and theoretical implications and should avoid being unaware of the procedure or logic followed in the data analyses even if he/she contracted the services of a statistical consultant to complete the analyses. The committee will expect the student to demonstrate himself/herself as an expert on the topic and thesis of the dissertation. It should be recommended that the student bring copies of the signature pages for the dissertation to the defense in the event that the committee evaluates the performance as pass. They can then sign the evaluation form and the signature pages. The dissertation committee will evaluate the student's performance at the defense as well as the written dissertation as a "pass," "pass with conditions," or "failure" on the *Report of Defense of Dissertation* form. If a student fails the defense, the research advisor shall obtain the signatures of the research committee members on the *Report of Defense of Dissertation* form and submit the form to the Graduate School. The Graduate School shall then notify the student that the degree program is terminated.

If the student passes the defense, the research advisor shall obtain the signatures of the research committee members on the *Report of Defense of Dissertation* form and submit the form to the Graduate School. The student shall proceed to make any corrections required by the research committee and submit the corrected dissertation to the committee members for their signatures. The student must provide all necessary copies of the signature page.

If the research committee requires the student to meet stated conditions, the research advisor shall list the conditions on the *Report of Defense of Dissertation* form, obtain the signatures of the committee members on the form, and submit the form to the Graduate School. The list of conditions must include a statement regarding the number of additional defense meetings authorized and the amount of additional time allowed by the research committee.

If the student subsequently satisfies the stated conditions, the research advisor shall obtain the original *Report of Defense of Dissertation* form from the Graduate School, shall obtain the signatures of the research committee members on SECTION II of the form indicating approval, and resubmit the form to the Graduate School. The student shall proceed to make any corrections required by the research committee and submit the corrected dissertation to the committee members for their signatures.

If the student does not meet the stated conditions, the research advisor shall obtain the original *Report of Defense of Dissertation* form from the Graduate School, shall obtain the signatures of the research committee members on SECTION II of the form indicating that they do not approve, and resubmit the form to the Graduate School. The Graduate School shall then notify the student that the degree program is terminated.

**Dissertation Filing.** Upon completing any necessary revisions and successful approval of the dissertation by the student's committee, one copy of the final dissertation is to be submitted to the Graduate School. The Graduate School will conduct an editorial review to check for grammar, spelling and formatting. The student will then be asked to make revisions and/or submit the additional three copies of the final dissertation for the Dean of the Graduate School to sign. The dissertation is not approved until signed by the Graduate Dean.

The original and each additional copy must contain an originally signed approval sheet and a 350 word abstract. (Proquest Information and Learning will not publish an abstract that exceeds the 350 word limitation.) Furthermore, the student must submit one extra copy of the abstract to the Graduate School for publication purposes.

If the dissertation is not filed with the Graduate School at least four weeks (28 calendar days) before the student's anticipated graduation date, the student may not graduate until the following semester.

Upon filing the dissertation, the Graduate School will require each doctoral student to complete specific forms relating to the dissertation and will bill the current fees for binding, mailing, microfilming, and publishing the dissertation. All four copies of the dissertation will be bound by the university. The dissertation will be microfilmed and the abstract will be published in Dissertation Abstracts.

After binding, the original and one copy will be filed in the university library, one copy will be forwarded to the student's research advisor, and one copy will be sent to the student.

**Dissertation Objection.** If a dissertation is filed with all but one of the signatures of the research committee members, the Dean of the Graduate School or his/her designee will ask the non-signing member if he/she wishes to enter a formal objection(s). If a formal objection is filed, the Dean of the Graduate School will appoint a review committee to assess the specific objection(s) of the dissenting dissertation committee member. If the review committee rules that the objection(s) does not justify the rejection of the study, the chairperson of the review committee will sign the dissertation in place of the dissenting faculty member. If the review committee rules that the objection(s) is valid, the student must take appropriate steps to modify the dissertation in order to gain the approval of the original dissertation committee.

## Research Requirements

**Research Core.** Doctoral students must complete a departmentally prescribed core of at least 12 semester hours of research courses or methods of inquiry designated as appropriate to the discipline and approved by the Graduate Council. Departmental courses numbered XXX 622 (Directed Studies) shall not be used to substitute for courses in the research core.

The Graduate School will not waive this requirement but can approve appropriate substitute research courses or methods up to the full 12 semester hours. The program advisor must provide a written request to substitute an alternative course, a syllabus for each course, and rationale for the requested substitute(s) to the Graduate Dean.

**Research Tools.** All Ph.D. students must demonstrate competency in two acceptable research tools. A research tool is defined as advanced knowledge and/or set of skills related to a specifiable technique or method that contributes to the student's ability to conduct doctoral level research in the discipline. Departments will determine acceptable research tools such as languages, applied statistics, mathematical statistics, and computer languages/applications.

**Collateral Field.** With the approval of the major department and the Dean of the Graduate School, however, doctoral students may use a collateral field of study as a substitute for one of the research tools. A collateral field of at least 12 credit hours is defined as advanced and specialized or focused knowledge and competence within a specifiable content area or skill area from a related discipline that contributes to the student's ability to conduct doctoral level research in their major discipline (e.g., advanced cognitive



theory) applications of distance education technology or multimedia technology to the classroom. The level of competency and the assessment of competency is established by each department and must be approved by the Dean of the Graduate School.

Means of evaluating the student's knowledge or skill must be included on the plan of study to indicate how each research tool requirement is to be satisfied. Acceptable evaluation of research tools might include examinations in academic courses, competency demonstrations evaluated by advisors and committee members, or alternative testing or competency demonstration procedures developed within the department or program.

### Residency Requirement

Each student must complete at least two terms of full-time study in residence after having been admitted to the doctoral degree program. A term in residence is defined as an academic term during which a student completes nine or more credit hours of on-campus course work applicable to the doctoral degree. Non-scheduled courses (e.g., internships, externships, directed studies and doctoral research) will not be counted in the nine or more credit hours unless a student also completes at least six other credit hours of on-campus course work applicable to the doctoral degree.

Departments may request approval of alternative requirements. Proposals for alternative residency requirements must assure extensive immersion in discipline research or practice under close supervision of departmental graduate faculty or field professionals approved for graduate faculty equivalent status. Further, alternative proposals should address how the requirements promote appropriate values and professional motivation of a doctoral student beyond the training or academic experience that the individual will receive. Approvals will be applicable only to the program(s) specified in the proposal. Proposals should be submitted as a program curriculum request in accordance with the current curriculum review process. Alternative proposals must be approved by Graduate Council and Graduate Dean prior to implementation for any individual student.

The purpose for this residency requirement is to encourage immersion of the doctoral student in the program of study, the department and the discipline. Part-time or sporadic participation in a doctoral program is discouraged. A residency requirement does not guarantee total focus on doctoral studies. It does extend the message that a doctoral program involves more than attending some classes and completing program requirements. It also includes refinement of professional values and developing the intrinsic motivation required to contribute to the discipline.

If a UNC or Aims Community College employee cannot meet the above prescribed residency requirement due to employment restrictions, he/she may satisfy the requirement by completing 20 or more credit hours of on-campus work applicable to the degree during consecutive, academic year terms. Such a student must receive written permission from his/her immediate supervisor and a recommendation from his/her major department to fulfill the residency requirements in this manner. The supervisor's permission and the department's recommendation must be filed with the Graduate School.

### Supervising Committee

Besides the doctoral program advisor appointed by the department, each doctoral student will have a doctoral committee. At minimum, a doctoral committee must consist of a chair or co-chair who holds doctoral research endorsement; a faculty representative who has graduate faculty status (with or without DR); and two additional faculty members from within the area of inquiry, at least one of whom must have graduate faculty equivalent.

The Dean of the Graduate School or his/her designee will appoint a faculty representative from another department. The faculty representative is a full voting member with all the rights and responsibilities of any other member and must be present at the student's doctoral oral examination and dissertation defense. The faculty member must hold graduate faculty status and should be in a tenure track position in a department program unit different from that of the student's program. The student may nominate a faculty representative from outside the program discipline. The nomination should be based upon the methodological, theoretical, or content expertise that this person will bring to the committee. The final approval of the faculty representative is the responsibility of the Graduate Dean.

No faculty member will be appointed to a doctoral committee without his/her consent. University employees who are not members of the graduate faculty shall not be appointed as members of doctoral committees.

The doctoral committee must be appointed before the written comprehensive examination is taken; the appointment shall occur no later than the end of the semester prior to the scheduled comprehensive examination. The student and all member of the doctoral committee will receive confirmation of the approved committee assignments.

Unless the student or committee chairperson otherwise informs the Graduate School or the Graduate School informs the student of the need for a change, the doctoral committee membership will remain the same from the oral comprehensive examination through the dissertation research stages of the program. The Graduate School will confirm that the student's committee membership is appropriate as a doctoral research committee upon receipt of the results of the oral examination. The research committee is comprised of a chair who is doctoral research endorsed or is a graduate faculty member who is co-chairing with a doctoral research endorsed member of the graduate faculty, at least two departmental graduate faculty members (or a representative from a supporting area if applicable and a departmental/program member), and a faculty representative. The faculty representative is expected to contribute conceptual, theoretical, methodological, and/or academic expertise from an alternative disciplinary perspective.

If a committee member other than the faculty representative is absent during the semester that an oral examination or defense is scheduled, the major department will appoint a replacement subject to approval by the Dean of the Graduate School. If the faculty representative is absent during the semester that an oral examination or defense is scheduled, the advisor shall notify the Graduate School at least three weeks (21 calendar days) before the exam or defense. The Graduate School will select an appropriate replacement for the faculty representative.

The concerns and recommendations of all committee members, including the faculty representative, are crucial to the dissertation approval process. The student and all members of the research committee will receive confirmation of the approved committee assignments.



# GRADUATE PROGRAMS, 2003-2004



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## CERTIFICATE PROGRAMS

### FAMILY NURSE PRACTITIONER (FNP) GRADUATE CERTIFICATE PROGRAM

(Non-Degree)

#### Certificate Requirements — 33 Credits

The certificate in FNP at the graduate level provides the nurse who has a master's in nursing for advanced clinical practice in primary care of families. The graduate is eligible to apply for ANA certification upon program completion.

**Prerequisites: Undergraduate physical assessment course, Master's degree in nursing.**

#### Required FNP Certificate Credits — 33 hours

NURS 610 Health Assessment (3)  
NURS 612 Advanced Pharmacology (4)  
NURS 614 Advanced Pathophysiology (3)  
NURS 640 Health Care of Families I (4)  
NURS 645 Health Care of Families II (4)  
NURS 650 Health Care of Families III (4)  
NURS 680 Advanced Practice Role Practicum (1-9)  
NURS 690 Advanced Clinical Role (2)

### GERONTOLOGY GRADUATE CERTIFICATE PROGRAM (NON-DEGREE)

#### Certificate Requirements — 22 Credits

The certificate in gerontology at the graduate level provides the individual with a broad overview of the field of gerontology.

The certificate is designed for those individuals with a master's degree in a different discipline or other professional designation (i.e. R.N., B.S.W.) or a bachelor's degree and several years of experience in the human services area. It is offered either on-campus or online by independent study.

#### Required Credits — 22 hours

GERO 560 Community Resources for the Elderly (4)  
GERO 625 Psychosocial Aspects of Aging (3)  
GERO 630 Intervention Strategies with the Elderly (3)  
GERO 635 Social Policies of Aging (3)  
GERO 640 Health Aspects of Gerontology (3)  
GERO 694 Practicum in Gerontology (3)  
Advisor approved elective (3)

### NURSING EDUCATION GRADUATE CERTIFICATE PROGRAM

(Non-Degree)

#### Certificate Requirements — 9 Credits

The certificate in nursing education is intended to provide nurses with master's or doctoral preparation with advanced knowledge in nursing education and the academic role as an option for required doctoral electives/area of concentration.

Master's prepared nurses and matriculated master's in nursing or doctoral students from other academic institutions may apply for admission. Candidates must possess the baccalaureate degree in nursing and be currently licensed as a registered nurse. Students must complete the required coursework with a grade of "B" or better. Application materials include a cover page with a statement of intent relative to nursing education and are available on the UNC School of Nursing home page at <http://www.unco.edu/HHS/son/son.htm>. Under school news click on new programs: Doctoral Minor or Certificate in Nursing Education. Completed applications should be submitted electronically prior to enrollment in the online nursing education course work. Applications will be considered on an open schedule.

#### Required Credit — 9 hours

NURS 630 Teaching Strategies in Nursing (3)  
NURS 660 Nursing Education Seminar (4)  
NURS 790 Advanced Academic Nursing Roles (2)

### TRANSCULTURAL NURSING GRADUATE CERTIFICATE PROGRAM (NON-DEGREE)

#### Certificate Requirements — 10-11 Credits

Using Leininger's theory, the certificate in transcultural nursing prepares the nurse to provide culturally congruent and competent nursing care based upon qualitative analysis and other research methodology. Field experiences are a required component of the program offered in a summers only format. The certificate option is designed for master's in nursing students, post-baccalaureate or post-master's students and senior level undergraduate nursing students.

#### Required Courses — 7-8 hours

*Transcultural Nursing Courses (7-8 hours)*  
NURS 510 Concepts in Transcultural Nursing (3)  
NURS 511 Advanced Transcultural Nursing and Research (2)  
NURS 512 Transcultural Nursing Field Experience (2-3)

#### Graduate Elective — 3 hours

SRM 680 Introduction to Qualitative Research (3)  
*or One additional elective with instructor approval.*

## DOCTORAL DEGREES



### APPLIED STATISTICS AND RESEARCH METHODS, PH.D.

#### Degree Requirements — 64 Credits

The Doctor of Philosophy degree program produces critical thinkers with conceptual and methodological tools for conducting meaningful research. The focus is on the application of statistical concepts and methodology to the solution of practical problems in a variety of disciplines including, but not limited to, educational research.

This program is designed to qualify individuals to teach courses at the university level in applied statistics or research methodology, to provide leadership in the conduct of research studies, and to serve as consultants in research methodology and data analysis in education, industry, or government.

#### Master's en route to the Ph.D.

A student may apply for admission to the Ph.D. program in Applied Statistics and Research Methods and obtain the M.S. in Applied Statistics and Research Methods on the way to completion of the doctoral degree. The application process and admission criteria are the same as for the Ph.D. program. The student must complete all program requirements for the M.S. degree in addition to the minimum 64 hours required for the Ph.D. The student must be conferred with the M.S. degree prior to admission to doctoral candidacy.

See "Applied Statistics and Research Methods (Ph.D.) Requirements" on page 22.

#### Required Credits — 35 hours

- SRM 610 Statistical Methods III (3)
- SRM 611 Advanced Statistical Data Analysis (3)
- SRM 650 Research and Statistics Colloquium (4) (1 credit/term)
- SRM 689 Internship in Applied Statistics (3)
- or
- SRM 694 Practicum (3)
- SRM 700 Advanced Research Methods (3)
- SRM 763 Apprenticeship (3)
- SRM 797 Doctoral Proposal Research (4)
- SRM 799 Doctoral Dissertation (12)

#### Complete one of the following Concentration Areas:

##### Applied Statistics Concentration — 29 hours

- SRM 606 Multiple Linear Regression Analysis (3)
- SRM 607 Non-Parametric Statistics (3)
- SRM 609 Sampling Methods (3)
- SRM 619 Resampling Methods (3)
- SRM 635 Categorical Data Analysis (3)
- SRM 645 Statistical Process Control (3)
- SRM 731 Multivariate Analysis (3)
- Elective Credits (8)

##### Research Methods Concentration — 29 hours

- SRM 521 Statistical Computing with SPSS (1)
- SRM 625 Applied Multiple Regression Analysis (3)
- SRM 627 Survey Research Methods (3)
- SRM 670 Evaluation: Models and Designs (3)
- SRM 680 Introduction to Qualitative Research (3)
- SRM 705 Advanced Issues in Research Methods (3)
- EPSY 675 Measurement II: Advanced Techniques (3)
- \*Elective Credits (10)

#### \*Elective Credits

A student in the research methods concentration may elect to complete 15 semester hours within a cognate area in lieu of the elective credits requirement. These hours must be at the graduate level and approved by the student's advisor. The intent of the cognate is to equip the student in a substantive discipline within which the dissertation may be written.

Students who enter the doctoral program without a working knowledge of SAS programming must take SRM 520 early in their doctoral program.

Approved electives may be substituted for required courses completed during a masters program.



### BIOLOGICAL EDUCATION, PH.D.

#### Degree Requirements — 64 Credits

This program is designed for graduate students interested in post-secondary discipline-based education in the biological sciences. Areas of emphasis prepare students to conduct and to supervise discipline-based pedagogical research at the university or college level or in content instruction at the two-and four year college level.

See "Biological Education (Ph.D.) Requirements" on page 3.

#### Master's en route to the Ph.D.

Students who have been admitted to the Ph.D. program in Biological Education may complete a thesis master's degree in Biology en route to completion of the doctoral degree. A request for a simultaneous master's degree in a discipline other than Biology will not be accepted. The student, in collaboration with the student's advisor, will develop a dual plan of study that includes clearly distinct master's and doctoral requirements. The student will be required to meet all of the requirements of both the master's and the doctoral degrees. The student must graduate from the master's degree program a minimum of one semester prior to conferring of the doctoral degree. The maximum time allowed for completion of the doctorate degree is eight calendar years beginning with the students' first semester of enrollment after admission has been granted.

#### Required Research Core — 23-31 hours

- BIO 691 Seminar in Biological Sciences (1)
- BIO 792 Doctoral Supervised Teaching (4)
- BIO 797 Doctoral Research Proposal (4)
- BIO 799 Doctoral Dissertation (12)
- SRM 502 Applied Statistics (4)
- SRM 700 Advanced Research Methods (3)

and select one of the following two courses:

- BIO 694 Foundations of Biological Research (2)
- SCED 694 Science Education Research (3)

#### Pedagogical Elective Credits — 11-13 hours

- SCED 678 Science Education Seminar (1-2)
- SCED 680 Science Curricula in Secondary/College Settings (3)
- EPSY 540 Theories and Principles of Learning (3)
- SCI 591 Computer Applications in Science (2)
- BIO 682 Problems in Teaching College Biology (3)

#### Content Elective Credits — 20-21 hours

*Basic Electives — 8 hrs-maximum (double numbered courses)*

*With committee approval support science courses may be included.*

- BIO 525 Molecular Genetics (3)
- BIO 530 Plant Taxonomy (4)
- BIO 533 General Parasitology (4)
- BIO 534 Mammalogy (4)
- BIO 535 Survey of Fishes, Amphibians and Reptiles (4)
- BIO 537 Morphogenesis of Algae and Fungi (4)
- BIO 540 Anatomy and Morphogenesis of Plants (4)
- BIO 550 Cell Physiology (4)
- BIO 554 General Plant Physiology (4)

*Advanced Electives (13-14 hours — minimum)*

- BIO 512 TA Development Seminar (1)
- BIO 545 Cytology (3)
- BIO 552 Mammalian Physiology I (3)
- BIO 553 Mammalian Physiology II (3)
- BIO 555 Reproductive and Developmental Biology (3)
- BIO 556 Current Topics in Biomedical Research (2).
- BIO 557 Mammalian Physiology I Laboratory (1)
- BIO 558 Mammalian Physiology II Laboratory (1)
- BIO 560 Animal Ecology (4)
- BIO 561 Plant Ecology (4)
- BIO 569 Conceptual Issues in Evolution (2)
- BIO 571 Teaching Strategies for Biology Teachers (1)
- BIO 521 Advanced Genetics (3)
- BIO 636 Advanced Invertebrate Zoology (4)
- BIO 645 Comparative Vertebrate Adaptations (4)
- BIO 654 Plant Reproductive Growth and Development (3)
- BIO 682 Problems in Teaching College Biology (3)



## CHEMICAL EDUCATION, PH.D.

### Degree Requirements — 64 Credits

This program prepares versatile, well-informed chemistry teachers by providing advanced training for chemistry teachers or chemists who wish to pursue educational opportunities beyond the master's degree. Students completing this program are qualified to work in the chemical education field at a variety of levels; such as, science coordinator or supervisor in the secondary school, chemistry instructor at two- and four-year colleges or chemistry educators at a university. At the professional level, program graduates are qualified to do fundamental research in chemical education and to direct chemistry research at the undergraduate level.

See "Chemical Education (Ph.D.) Requirements" on page 4.

#### Master's en route to the Ph.D.

Students who have been admitted to the Ph.D. program in Chemical Education may complete a master's degree in Chemistry en route to completion of the doctoral degree. A request for a simultaneous master's degree in a discipline other than Chemistry will not be accepted. The student, in collaboration with the student's advisor, will develop a plan of study that includes clearly distinct master's and doctoral requirements. The student must graduate from the master's degree program in a minimum of one semester prior to conferring of the doctoral degree. The maximum time allowed for completion of the doctorate is eight calendar years beginning with the student's first semester of enrollment after admission has been granted.

#### Research Component — minimum 29 hours

CHEM 600 Seminar in Chemistry (1)  
SCED 694 Science Education Research (3)  
SRM 610 Statistical Methods III (3)

and select one of the following courses:

CHEM 793 Doctoral Research Practicum-Chemistry (1-4)  
CHED 793 Doctoral Research Practicum-Chemical Education (1-4)

and select one of the following courses:

SRM 502 Applied Statistics (4)  
SRM 603 Statistical Methods II (3)

and select one of the following courses:

CHEM 693 Chemical Research (1-10)  
CHED 693 Chemical Education Research (1-10)

and select one of the following groups:

CHEM 797 Doctoral Research Proposal-Chemistry (4)  
CHEM 799 Doctoral Dissertation - Chemistry (12)

or

CHED 797 Doctoral Research Proposal-Chemical Education (1-4)  
CHED 799 Doctoral Dissertation-Chemical Education (12)

Additional electives as stipulated in Plan of Study:

CHED 793 Doctoral Research Practicum-Chemical Education (1-4)  
CHEM 793 Doctoral Research Practicum-Chemistry (1-4)  
SRM 731 Multivariate Analysis (3)  
SRM 670 Evaluation: Models and Designs (3)  
SRM 770 Evaluation: Advanced Methods (3)  
SRM 680 Introduction to Qualitative Research (3)  
SRM 700 Advanced Research Methods (3)

Advanced research methods - select one of the following courses:

SRM 700 Advanced Research Methods (3)  
SCED 694 Science Education Research (3)

**Research tools** - Students must demonstrate research skills in areas pertinent to the dissertation research topic. The student's competence in these skills will be assessed by the student's dissertation committee members. The skills may include statistical analysis, analytical instrument operation, background and experience in both field-based and quantitative studies in chemical education research, current technology in education and collateral fields of study such as mathematics, computer science, biology and physics. Courses which are recommended to assist in the development of these skills include SCED 694, CHEM 520, SRM 610 and

either SRM 502 or SRM 603, Departmental Graduate Committee-approved courses in one or more of the following areas: educational technology, statistics and chemistry/chemical education research (CHEM 693, CHED 693, CHEM 793 or CHED 793), and collateral fields of study (computer science, mathematics, biology and physics).

#### Chemistry Component — minimum 12 hours

CHEM 520 Theory and Use of Analytical Instruments (1)  
CHEM 522 Advanced Analytical Chemistry (3)  
CHEM 523 Chemical Spectroscopy (3)  
CHEM 533 Organic Synthesis and Stereochemistry (3)  
CHEM 534 Theory and Mechanisms of Organic Reactions (3)  
CHEM 543 Organometallic Chemistry (3)  
CHEM 551 Physical Chemistry I (4)  
CHEM 552 Physical Chemistry II (4)  
CHEM 556 Physical Chemistry of Atomic and Microscopic Systems (3)  
CHEM 557 Physical Chemistry of Macroscopic Systems (3)  
CHEM 560 Environmental Chemistry (2)  
CHEM 581 General Biochemistry I (4)  
CHEM 582 General Biochemistry II (4)  
CHEM 587 Toxicology (3)  
CHEM 590 Advanced Topics in Chemistry (3)  
CHEM 622 Directed Studies (1-3)

#### Pedagogy Component Required — minimum 7 hours

CHED 682 Problems in Teaching Chemistry (3)  
CHED 755 Supervised Practicum in College Teaching (4)

#### Electives

EPSY 540 Theories and Principles of Learning (3)  
EPSY 674 Measurement I: Educational Testing (3)  
EPSY 675 Measurement II: Advanced Techniques (3)  
EPSY 682 Cognition and Instruction (3)  
SCED 678 Science Education Seminar (1-2)  
SCED 680 Science Curricula in Secondary/College Settings (3)  
SRM 670 Evaluation: Models and Designs (3)  
SRM 770 Evaluation: Advanced Methods (3)  
ET 502 Instructional Design (3)  
ET 503 Computers in Education (3)  
ET 602 Instructional Analysis and Design (3)  
ET 627 Computer Assisted Instruction Authoring Systems (3)  
ET 702 Instructional Design Theory and Research (3)

**Notes:** Students must complete courses in a minimum of three areas of chemistry: (analytical, biological, inorganic, organic or physical chemistry). One course in biochemistry is required if not previously taken.

**Comprehensive Examinations:** Students must pass written and oral comprehensive examinations in chemical education and in two of five chemistry content areas (analytical, biological, inorganic, organic or physical chemistry).

Students without a master's degree must take a minimum of 24 hours in the Chemistry Component, 16 hours in the Pedagogy Component, and a minimum of 38 hours in the Research Component (all required hours and electives).

Select sufficient electives to complete degree program. Additional electives in the Research, Pedagogy or Chemistry Components may be selected; electives in supporting sciences, mathematics, computer science and education are also recommended. All electives will be selected in consultation with the candidate's graduate committee.

**Research Requirements:** must demonstrate competence in the research aspects of both basic chemistry and chemical education.

Students entering with a bachelor's degree are required to complete original research projects in chemistry and chemical education. One project must be equivalent to a master's project and written in thesis format and the other will be written and defended as the candidate's doctoral dissertation.

Students who have written and defended a thesis as part of a master's degree, the thesis, if approved by the candidate's graduate committee, will substitute for the appropriate research requirement.

Candidates must write a scholarly paper and submit it for publication in a refereed journal as a requirement for this degree.



## COMMUNICATION DISORDERS, AU.D.

### Degree Requirements — 130 Credits

This program is designed to prepare students for entry level activity as audiologist. Audiologists are professional practitioners responsible for the prevention, diagnosis, treatment and management of hearing disorders in children and adults.

See “Communication Disorders: Audiology (Au.D.) Requirements” on page 34.

### Program Requirements — 55 hours

CMDS 555 Neuroanatomy and Neurophysiology of Communication (3)  
CMDS 570 Rehabilitative Audiology (3)  
CMDS 571 Speech and Hearing Science (4)  
CMDS 572 Industrial Audiology (2)  
CMDS 573 Auditory Physiology and Pathology (3)  
CMDS 582 Educational Audiology (3)  
CMDS 671 Psychoacoustics (2)  
CMDS 675 Differential Diagnosis of Auditory Problems (3)  
CMDS 677 Medical Aspects of Audiology (3)  
CMDS 678 Hearing Aids and Uses of Amplification (3)  
CMDS 685 Advanced Differential Diagnosis of Auditory Problems (4)  
CMDS 668 Cochlear Implants (3)  
CMDS 688 Hearing Aids II (3)  
CMDS 771 Speech Perception and Advanced Signal Processing (2)  
CMDS 774 Professional Issues in Audiology (3)  
CMDS 775 Advanced Electro-diagnosis (3)  
CMDS 782 Pediatric Audiology (3)  
NURS 612 Advanced Pharmacology (4)

### Research Courses — 12 hours

CMDS 515 Foundations of Research and Writing (1)  
CMDS 615 Research in Communication Sciences and Disorders (1) (4 credits required)  
CMDS 715 Applied Research in Audiology (1-2) (4 credits required)  
SRM 602 Statistical Methods I (3)

### Teaching Requirements — 2 hours

CMDS 720 Supervised Teaching in Communication Disorders (2)

### Clinical Practicum — 12 hours

CMDS 574 Clinical Practicum in Audiology (1)  
CMDS 580 Practicum in Rehabilitative Audiology (1-2) (2 credits required)  
CMDS 594 Practicum and Advanced Topics in Audiology (1-2)

*Internships — 16 hours (CMDS 692 or a combination of CMDS 592 and CMDS 692 with a minimum of 6 hours in CMDS 692)*

CMDS 592 Internship in Public Schools (2-15)  
CMDS 692 Internship in Medical Settings (2-16)

### Clinical Residency — 27 hours

\*CMDS 792 Clinical Residency in Audiology (9-14)

### Elective Courses — 6 hours

Students will choose at least 6 credits from courses approved by the program advisor. Electives will be chosen so that students may focus on specialized career needs. For example, some students may elect to become proficient in American Sign Language; others who desire more of a medical emphasis may elect to take additional courses in genetics and pharmacology.

**Notes:** Six semester hours of practicum in School Audiology (CMDS 592 or CMDS 673) are required for licensure as an Education Audiologist by the Colorado Department of Education.

\*Students may complete CMDS 792, Clinical Residency, in three semesters of nine credits each or in two semesters totaling 27 credits.





## COUNSELING PSYCHOLOGY, PSY.D.

### Degree Requirements — 91-150\* Credits

*(Accredited by the American Psychological Association)*

\*A student entering with previously completed graduate coursework equivalent to coursework required for the Psy.D. degree may have course(s) waived with advisor consent and may significantly reduce the total number of hours required to complete the program. A plan of study for the degree must contain a *minimum of 72 hours* of coursework in addition to doctoral research (16) and internship hours (3-18).

#### Objectives

This program is designed to develop individuals who will be effective counseling psychologists in community, agency or system settings. The program focuses primarily on training effective persons for therapy and assessment of individuals and groups, supervising others in the helping professions and researching and evaluating programs relative to counseling. Secondly, the objectives are to teach and train professionals and paraprofessionals in psychology and to develop skills in documenting the effectiveness of these programs and consulting in prevention and treatment models.

All graduates of the Psy.D. program will meet APA standards which lead to eligibility for licensing as a psychologist.

In addition to formal course requirements, students are required to successfully complete a doctoral comprehensive examination, a dissertation and a one-year, 2000-hour internship.

See “Counseling Psychology (Psy.D.) Requirements” on page 29.

### Required Credits — 91-150 hours

*Introductory Core Required - 34 hours*

SRM 600 Introduction to Graduate Research (3)  
 EPSY 530 Life Span Developmental Psychology (3)  
 PPSY 558 Abnormal Psychology (3)  
 PPSY 605 Group Laboratory Experience (1)  
 PPSY 607 Theories of Counseling (3)  
 PPSY 610 Theories of Personality (2)  
 PPSY 612 Practicum in Individual Counseling (5)  
 PPSY 616 Career Theory, Counseling and Assessment (3)  
 PPSY 662 Group Dynamics and Facilitation (3)  
 PPSY 665 Family Systems (3)  
 PPSY 669 Advanced Methods: Couples and Family Therapy (3)  
 PPSY 670 Psychological Testing and Measurement (2)

*Seminar Requirement - 1 hour*

PPSY 701 Professional Development Seminar in Counseling Psychology (1)

*Research Core Required - 14 hours*

SRM 602 Statistical Methods I (3)  
 SRM 603 Statistical Methods II (3)  
 SRM 700 Advanced Research Methods (3)  
 PPSY 733 Research Apprenticeship (2) (1 hour each)  
 PPSY 781 Evaluation of Psychological Services (3)

*Practica Required - 24 hours*

PPSY 694 Practicum in Family Therapy (4)  
 PPSY 702 Practicum in Counseling (4)  
 PPSY 712 Advanced Practicum in Individual Counseling (4)  
 PPSY 714 Practicum in Supervision of Counseling (3)  
 PPSY 715 Seminar in Counselor Supervision and Theory (2)  
 PPSY 762 Practicum in Group Facilitation (4)  
 PPSY 793 Psychological Services Clinic I (1)  
 PPSY 794 Psychological Services Clinic II (2)

*Suggested Electives*

PPSY 773 Practicum in Supervision of Group Facilitation (3)  
 PPSY 774 Practicum in Supervision of Family Therapy (3)

*Assessment Core Required - 10 hours*

PPSY 674 Assessment for Intervention: Cognitive and Academic (5)  
 PPSY 678 Assessment for Intervention: Personality and Behavior (5)

*Suggested Electives*

PPSY 782 Introduction to Rorschach Administration and Scoring (2)

*Licensing Core - 24-25 hours*

PPSY 657 Legal and Ethical Aspects of Counseling and Psychology (3)  
 PPSY 707 Seminar in Personality and Counseling Theories (3)  
 PPSY 758 Advanced Psychopathology (3)  
 PPSY 590 Seminar in History and Systems (3)

*and select one of the following courses:*

PPSY 625 Principles of Neuropsychology (3)  
 PPSY 777 Applied Neuropsychology (4)

*and select one of the following courses:*

PPSY 643 Theories of Motivation (3)  
 EPSY 540 Theories and Principles of Learning (3)

*and select one of the following courses:*

PPSY 655 Community Psychology and Social Systems (3)  
 PPSY 664 Advanced Social Psychology (3)

*and select one of the following courses:*

PPSY 565 Psychology of Prejudice (3)  
 PPSY 623 Counseling Diverse Populations (3)

*Internship*

PPSY 791 Internship in Counseling Psychology (3-18)

*Dissertation*

PPSY 797 Doctoral Proposal Research (4)  
 PPSY 799 Doctoral Dissertation (12)



## COUNSELOR EDUCATION AND SUPERVISION, PH.D.

### Degree Requirements — 90 Credits (minimum)

A student entering with previously completed graduate coursework equivalent to coursework required for the Ph.D. degree may have course(s) waived with advisor consent. A plan of study for the degree must contain a minimum of 67 hours of coursework in addition to proposal, dissertation and internship hours. All students are required to complete all of the courses listed below; most students have already completed some of these hours in their M.A. program.

This program is accredited by the Council for Accreditation of Counseling and Related Educational Programs.

The Counseling faculty are committed to the development of broadly based competent counselor educators skilled in teaching, supervision, counseling and research. The requirements of the program are conceptualized within the framework and standards set forth by the counseling profession, Colorado state law, the Graduate School, and job requirements.

This program prepares an individual for employment as a counselor educator and supervisor for colleges and universities offering training in school counseling, community counseling, marriage and family counseling/therapy, and counseling with children and adolescents. Graduates are also qualified for licensure as professional counselors, and may be employed in such sites as community agencies, schools, counseling centers, employee assistance programs, and private practice.

See “Counselor Education and Supervision (Ph.D.) Requirements” on page 29.

### Required Credits — 90 hours

#### *Counseling Core (12 hours)*

- PPSY 702 Practicum in Counseling (4)
- PPSY 712 Advanced Practicum in Individual Counseling (4)
- PPSY 762 Practicum in Group Facilitation (4)

#### *Supervision Core (11 hours)*

- PPSY 714 Practicum in Supervision of Counseling (6)
- PPSY 715 Seminar in Counselor Supervision and Theory (2)
- PPSY 773 Practicum in Supervision of Group Facilitation (3)

#### *Theory and Instruction Core (23-27 hours)*

- EPSY 654 Seminar in College Teaching (3)
- PPSY 660 Psychological Consultation: Theory and Practice (3)
- PPSY 707 Seminar in Personality and Counseling Theories (3)
- PPSY 746 Seminar: Advanced Career Counseling, Theory and Assessment (3)
- PPSY 755 Supervised Practicum in College Teaching (6)
- PPSY 758 Advanced Psychopathology (3)
- PPSY 792 Internship in Counselor Education and Supervision (2-6)

#### *Research and Evaluation Core (41 hours)*

- SRM 700 Advanced Research Methods (3)
- PPSY 797 Doctoral Proposal Research (4)
- PPSY 799 Doctoral Dissertation (12)

#### *Research Tool 1: Applied Statistics*

- SRM 602 Statistical Methods I (3)
- SRM 603 Statistical Methods II (3)
- SRM 610 Statistical Methods III (3)

#### *Research Tool 2: Applied Research*

- PPSY 703 Professional Development Seminar in Counselor Education (1) (take twice)
- PPSY 716 Research Seminar in Counselor Education (3)
- PPSY 733 Research Apprenticeship (1) (take twice)
- SRM 680 Introduction to Qualitative Research (3)
- SRM 670 Evaluation: Models and Designs (3)

or

- PPSY 781 Evaluation of Psychological Services (3)

#### *Special Populations (3 hours)*

- PPSY 623 Counseling Diverse Populations (3)

### Interest Areas (Select One) — 18-20 hours minimum

#### *Marriage and Family (19 hours)*

- PPSY 603 Counseling Children and Adolescents (3)
- PPSY 668 Sexuality Counseling (3)

- PPSY 669 Advanced Methods: Couples and Family Therapy (3)
- PPSY 694 Practicum in Family Therapy (4)
- PPSY 695 Seminar: Contemporary Issues in Couples and Family Therapy (3)
- PPSY 774 Practicum in Supervision of Family Therapy (3)
- Children and Adolescents (18 hours)*

- EPSY 630 Child and Adolescent Psychology (3)
- PPSY 566 At Risk Students: Opportunities and Strategies (3)
- PPSY 603 Counseling Children and Adolescents (3)
- PPSY 617 Play Therapy: Theory and Practicum (3)
- PPSY 654 Child Abuse and Neglect (3)
- PPSY 713 Practicum in Supervision of Play Therapy (3)

#### *School Counseling (20 hours)*

- PPSY 566 At Risk Students: Opportunities and Strategies (3)
- PPSY 585 Family Counseling and Education in School Settings (2)
- PPSY 602 Foundations of School Guidance (3)
- PPSY 603 Counseling Children and Adolescents (3)
- PPSY 608 Organization, Administration and Consultation in Guidance Services (3)
- PPSY 654 Child Abuse and Neglect (3)
- PPSY 748 Instruction, Supervision and Leadership in School Counseling (3)

**Note:** Students will submit a proposal to present at least one time at a juried state, regional, national or international conference. This presentation can be done alone, with faculty, or with peers. Students must submit a copy of the presentation proposal for their files. Accepted presentations: students must submit a copy of the letter of proposal acceptance and copies of presentation handouts. It is highly recommended that students have manuscripts published, in press, and/or in submission prior to graduation, and that students have been involved in grant writing as a part of their education.



## EDUCATIONAL LEADERSHIP, Ed.D.

### Degree Requirements — 64 Credits

(minimum, beyond M.A.)

The University of Northern Colorado has a long history of preparing individuals to assume leadership roles in education. Over the years, superintendents, principals, deans, program directors, professors, presidents and other persons in leadership positions in Colorado and across the nation have received academic degrees from the University. The current focus of the Ed.D. is preparing P-12 leaders for public and private schools and other educational organizations.

See “Educational Leadership (Ed.D.) Requirements” on page 24.

#### Educational Leadership Core (21 hours)

ELPS 751 Doctoral Core I (6)

ELPS 752 Doctoral Core II (6)

ELPS 608 Issues in Educational Leadership: Implications for Practice (3)

ELPS 666 Planning and Change in Education (3)

ELPS 747 Leadership at the School District Level (3)

#### Specialization Area (9 hours)

Coursework that relates directly to goals as educational leaders (e.g. building level leadership, central office leadership, special education, educational technology).

#### Research Core (12 hours minimum)

SRM 602 Statistical Methods I (3)

ELPS 754 Research in Educational Leadership (3)

*and complete additional Research Electives (6 hours)*

Select research electives from the following courses (or equivalents approved by the doctoral program committee):

EPSY 674 Measurement I: Educational Testing (3)

SRM 603 Statistical Methods II (3)

SRM 670 Evaluation: Models and Designs (3)

SRM 680 Introduction to Qualitative Research (3)

SRM 700 Advanced Research Methods (3)

#### Field Based Learning (6 hours)

*Select one or both of the following courses:*

ELPS 606 Internship in Educational Leadership (3-6)

ELPS 695 Practicum in Educational Leadership (3-6)

#### Dissertation — 16 hours

ELPS 797 Doctoral Proposal Research (4)

ELPS 799 Doctoral Dissertation (12)

#### Residency

Students may complete the UNC residency requirement without leaving their employment.

#### Elective Courses in Educational Leadership

ELPS 650 School Finance and Budgeting (3)

ELPS 651 School Business Management (3)

ELPS 654 Instructional Leadership and Supervision (3)

ELPS 655 Seminar in Learning in Adulthood (3)

ELPS 660 Law and the Administrator (3)

ELPS 662 Design and Delivery of Professional Development (3)

ELPS 663 Developing Grants and Contracts (3)

ELPS 665 Policy Analysis and Development (3)

ELPS 670 The Principalship: Leadership at the School Site Level (3)

ELPS 711 Advanced Theories for Changing Organizations (3)



## EDUCATIONAL MATHEMATICS, PH.D.

### Degree Requirements — 70 Credits

This program offers an innovative approach to mathematical pedagogy. A basic tenet of the program is that mathematical content is fundamental to methods, research and reform in mathematics education. The program has three major strands: mathematics, mathematics education, and cognition.

Graduates of the program will be prepared to lead the reform of mathematics education. They will be able to teach mathematics at several levels; perform research; and administer and supervise the reform of mathematics education.

See “Educational Mathematics (Ph.D.) Requirements” on page 9.

### Master’s Degree en route to the Ph.D.

Students may apply for admission to the Ph.D. in Educational Mathematics and complete their M.A. in Mathematics with either a Liberal Arts Emphasis or Teaching Emphasis on the way to completion of the doctoral program. Once admitted, the student will work closely with their academic advisor to develop a Plan of Study that meets both M.A. and Ph.D. program requirements. Students must complete all program requirements for the M.A. in addition to the hours required for the Ph.D. Students must be conferred with the M.A. degree prior to admission to doctoral candidacy.

### Content Core — 26 semester hours

#### A. Required Courses - 14 hours

MATH 609 Abstract Algebra I (3)  
 MATH 623 Abstract Algebra II (3)  
 MATH 632 Complex Variables (3)  
 MATH 635 Real Analysis (3)  
 MATH 700 Advanced Seminar (2)

#### B. Minimum of 12 hours chosen from the following courses:

MATH 633 Geometric Analysis (3)  
 MATH 664 Difference Equations and Chaos (3)  
 MATH 678 Mathematical Logic (3)  
 MATH 691 Number Theory (3)  
 MATH 695 Special Topics (3)  
 MATH 727 Representation Theory (3)  
 MATH 728 Topics in Discrete Mathematics (3)  
 MATH 736 Real Analysis II (3)

At most, one of the following may be included:

MATH 525 Linear Algebra I (3)  
 MATH 528 Discrete Mathematics (3)  
 MATH 529 Mathematical Problem Solving (3)  
 MATH 540 Introduction to Topology (3)

### Educational Core — 22 hours (minimum)

#### A. Required Courses — 16 hours

Research Core. The four courses MED 610, MED 700, MED 701 and MED 702 constitute the required 12-hour research core. The content of these courses forms the main portion of the material for the mathematics education portion of the comprehensive examination.

MED 610 Survey of Research in Mathematics Education (3)  
 MED 700 Cognitive Processes in Mathematics (3)  
 MED 701 Educational Mathematics Research (3)  
 MED 702 Qualitative Research in Mathematics Education (3)  
 MED 703 Teaching and Learning K-12 Mathematics (3)  
 MED 710 Seminar in Post-Secondary Mathematics Teaching (1)

#### B. Elective Courses (Advisor must approve elective courses-6 hours)

MED 622 Directed Studies (1-3)  
 MED 630 Technology in Mathematics Education (2)  
 MED 673 Teaching and Learning Mathematics on the Elementary Level (3)  
 MED 674 Teaching and Learning Mathematics on the Secondary Level (3)  
 MED 675 Teaching and Learning Mathematics on the Post-Secondary Level (3)  
 MED 678 Special Topics in Mathematics Education (1-3)  
 MED 750 History and Philosophy of Mathematics Education (3)

### Dissertation — 16 hours

MATH 797 Doctoral Research Proposal (4)  
 MATH 799 Doctoral Dissertation (12)

### Additional Electives — 6 hours

Electives in this category can include any approved 600 or 700 level courses or any two approved additional 500 level courses. Courses taken for one of the two research tools may be counted for these electives.

### Research Tools

Credits to satisfy the first research tool count as elective hours for the 70 hour total; credits for the second research tool do not count in that total. A student must complete research tool “option A” and may select any one of the remaining three options.

### Required

#### A. Applied Statistics and Research Methods — 10 hours

SRM 502 Applied Statistics (4) (or approved equivalent)  
 SRM 608 Experimental Design (3) (or approved equivalent)  
 or  
 SRM 610 Statistical Methods III (3)  
 MED 701 Educational Mathematics Research (3)

### Select One Additional Tool

B. *Qualitative Research Methods.* Student's doctoral committee will approve a combination of coursework (including at least SRM 631 and MED 702) and experience (evaluated by the committee) to appropriately support the student's proposed dissertation research.

C. *Collateral Field.* Contact the departmental graduate coordinator for a detailed list of approved courses in cognition, instruction, measurement and evaluation, psychology and human development and curricula.

D. *Computer Science.* Student's doctoral committee will approve and evaluate a combination of advanced computer experience, proficiency and/or coursework only if relevant to the proposed dissertation research.

E. *Foreign Language.* Student's doctoral committee will approve and evaluate a combination of foreign language experience, proficiency and/or coursework only if relevant to the proposed dissertation research.

**Notes:** Electives must have the approval of the student's advisor and doctoral committee.

MED 701 may be used as a substitute for the Graduate School's SRM 700 requirement. MED 710 is normally taken the first semester of your program.

The department written comprehensive examination consists of two parts: mathematics and mathematics education. The mathematics portion of the comprehensive examination will consist of a four-hour examination over either: a) the Math 635, Math 632 sequence or b) the MATH 609, MATH 623 sequence. The mathematics education portion will consist of a four-hour examination over the material in the research core (MED 610, MED 700, MED 701 and MED 702) and a list of required readings. The oral examination will be given upon successful completion of the written examination and will cover the entire program of the candidate.

Students must receive a grade of “B” or better in both courses of the required mathematics sequence over which they do NOT take the comprehensive examination. A student who does not receive at least a “B” may, in lieu of repeating the course, elect to take an examination over that sequence.

A student in this program is required to write a scholarly dissertation. Dissertation topics may range from mathematics with pedagogical applications to topics in educational mathematics such as cognitive processes, educational reform and instructional issues.



## EDUCATIONAL PSYCHOLOGY, PH.D.

### Degree Requirements — 66 Credits

The overall goal of the program is to produce scholars capable of undertaking original basic and applied research in psychological processes as they apply to education.

There is considerable emphasis on research training within the program. Research topics of the faculty pertain to fundamental processes in learning and development, to research design and statistics and to applications of the findings from educational psychology to educational settings.

See "Educational Psychology (Ph.D.) Requirements" on page 25.

#### M.A. Degree en route to the Ph.D.

Students may apply for admission to the Ph.D. in Educational Psychology and complete their M.A. in Educational Psychology on the way to the doctoral degree. The application process and the admission criteria are the same as for the Ph.D. program. Once admitted, the student will work with their academic advisor to develop a plan of study that meets both M.A. and Ph.D. program requirements. Students must complete all program requirements (including Comprehensive Examination) for the M.A. in addition to the minimum 66 hours required for the Ph.D. Students must be conferred with the M.A. degree prior to admission to doctoral candidacy.

#### Program Requirements — 45 hours

##### *Learning and Cognitive Processes*

EPSY 682 Cognition and Instruction (3)

EPSY 685 Advanced Seminar in Learning and Cognition (3)

##### *Human Development*

EPSY 630 Child and Adolescent Psychology (3)

EPSY 631 Psychology of Youth, Adulthood and Aging (3)

##### *Research, Statistics and Measurement*

SRM 603 Statistical Methods II (3)

SRM 610 Statistical Methods III (3)

SRM 670 Evaluation: Models and Designs (3)

or

EPSY 675 Measurement II: Advanced Techniques (3)

or

SRM 680 Introduction to Qualitative Research (3)

SRM 700 Advanced Research Methods (3)

##### *Professional Development*

EPSY 661 Trends and Issues in Educational Psychology (3)

EPSY 663 Apprenticeship (2)

##### *Dissertation*

EPSY 797 Doctoral Proposal Research (4)

EPSY 799 Doctoral Dissertation (12)

### Select One of the Three Concentration Areas:

#### 1) Learning and Cognitive Processes — 18 hours

##### *Required Credits (9 hours)*

PSY 625 Principles of Neuropsychology (3)

EPSY 635 Individual Differences in Cognition (3)

EPSY 685 Advanced Seminar in Learning and Cognition (3)

##### *Required Elective Credits — 9 semester hours*

Students electing to specialize in learning and cognitive processes must select 9 additional hours of courses. Selection of elective hours must be done in consultation with the student's advisor to develop a program of study with a specific focus.

#### 2) Human Development — 18 hours

##### *Required Credits (9 hours)*

EPSY 684 Advanced Seminar in Human Development (3)

EPSY 694 Practicum (3-9)

PSY 664 Advanced Social Psychology (3)

PSY 625 Principles of Neuropsychology (3)

##### *Required Elective Credits (9 hours)*

EDEC 539 Parent Education and Involvement in Early Childhood/Primary (3)

GERO 625 Psychosocial Aspects of Aging (3)

PPSY 758 Advanced Psychopathology (3)

EPSY 654 Seminar in College Teaching (3)

#### 3) Research, Statistics and Measurement — 18 hours

##### *Required Credits (9 hours)*

SRM 770 Evaluation: Advanced Methods (3)

EPSY 675 Measurement II: Advanced Techniques (3)

SRM 680 Introduction to Qualitative Research (3)

##### *Required Elective Credits (9 hours)*

EPSY 654 Seminar in College Teaching (3)

EPSY 686 Advanced Seminar in Measurement and Assessment (3)

EPSY 692 Internship in Educational Psychology (3)

EPSY 694 Practicum (3)

SRM 608 Experimental Design (3)

SRM 731 Multivariate Analysis (3)

SRM 606 Multiple Linear Regression Analysis (3)

SRM 607 Non-Parametric Statistics (3)

SRM 609 Sampling Methods (3)

#### Program Electives — 3 hours

Chosen in consultation with student's advisor.

#### Research Tools

Ph.D. students in Educational Psychology must demonstrate competency in two out of the four areas listed below. The following details each research tool and the level of competency required for each:

- Research Design/Applied Statistics – Students must complete the requirements in the Research, Statistics and Measurement concentration with grades of B or better (directed research studies and research-related practica can be counted).
- Computer Applications – Students must complete a minimum of 8 semester hours in courses relating to computer use at the graduate level with grades of B or better.

or

A student can develop and demonstrate a computer program written to meet a specific educational research application. This program will be judged as "acceptable" or "unacceptable" by the student's advisor.

- Evaluation – Demonstration of competency in evaluation will involve completing a minimum of 12 hours in evaluation courses, e.g., SRM 670, SRM 671 and PPSY 781 (or their equivalent in transfer credits) with grades of B or better.
- Foreign Language – Students must pass the ETS (or other faculty approved) examination in any major modern foreign language with a score at the 50th percentile or better. Upon entrance, a candidate must be able to satisfy the core course requirements for the M.A. degree in educational psychology, or must take additional courses to meet those requirements. M.A. core courses that will not count toward the doctoral degree requirements include SRM 600, SRM 602, EPSY 530, EPSY 540 and EPSY 674. The remaining core courses may count as electives in the doctoral program: EPSY 661, SRM 670 and EPSY 663.

Program concentration areas are distinguished on three criteria: course emphasis, dissertation focus and practicum experience. For example, a student selecting the learning and cognition concentration would take the required coursework in the learning and cognition area, write a dissertation on a problem related to learning and cognition and do a practicum related to that specialty area. Student competencies in the core and specialty areas are examined by both oral and written comprehensive examinations. Written exams are administered twice a year during fall and spring semesters. Specific procedures for comprehensive examinations are available from the program secretary. In addition, students will submit a written paper and give an oral presentation to the program faculty before the second letter of encouragement will be sent to the student as part of the review process.



## EDUCATIONAL TECHNOLOGY, PH.D.

### Degree Requirements — 67 Credits

The Doctor of Philosophy in Educational Technology program focuses around the convergence of three major communication and information industries (broadcasting and motion picture, print and publishing and computer) into a single industry. Educational Technology professionals must be prepared to function within the converged industries rather than in only one historically distinct industry. The UNC doctoral program in educational technology prepares graduates who will be leaders after the convergence. The doctoral program uses a community of scholars model of interaction among the students and the faculty members. The students are viewed as developing colleagues with progressively higher levels of responsibility as they move through the program. Cooperative research and other scholarly projects are encouraged among faculty members and students. The doctoral program in educational technology provides the students with a broad base of knowledge in the use of technology in educational and training settings.

See “Educational Technology (Ph.D.) Requirements” on page 26.

### Master’s Degree en Route to the Ph.D.

Students may apply for admission to the Ph.D. in Educational Technology and complete their M.A. in Educational Technology or Educational Media on the way to completion of the doctoral degree. The application process and the admission criteria are the same as for the Ph.D. program. Once admitted, the student will work closely with their academic advisor to develop a Plan of Study that meets both M.A. and Ph.D. program requirements. Students must complete all program requirements (including comprehensive examination) for the M.A. in addition to the minimum 67 hours required for the Ph.D. Students must be conferred with the M.A. degree prior to admission to doctoral candidacy.

### Program and Graduation Requirements

Once admitted to a program, students must maintain a satisfactory grade point average of 3.2. The student must complete a minimum of two consecutive semesters as a full-time student (9 semester hours) and be registered for resident credit offered on-campus and applicable to the doctoral degree. A minimum of 67 semester hours beyond the master's degree is required for the doctorate in educational technology.

Students will receive an annual letter of progress providing feedback regarding their individual progress toward completion of their doctoral program.

Each doctoral student must pass a written comprehensive examination for the degree. This examination cannot be taken until the student has completed the residency requirement and at least 36 semester hours beyond the master's degree with a grade point average of 3.2 or higher. The oral examination may include questions from any part of the student's program and is designed to test the student's understanding of the field of educational technology.

The dissertation research advisor and the research committee for the dissertation are appointed after the student has passed both written and oral comprehensive examinations. The dissertation proposal and dissertation are completed under the supervision of the research advisor and research committee.

### Required Credits — 52 hours (minimum)

Since the program of study builds upon the requirements for the M.A. degree in educational technology, students must have taken comparable coursework to satisfy the educational technology core requirements of the UNC M.A. degree in educational technology or must take these courses as electives in the doctoral program. All doctoral students must complete the common educational technology core, the research methodology core, and specialize in at least one of the four emphasis areas.

#### Educational Technology Core

ET 524 Design of Computer Assisted Instruction (3)  
ET 602 Instructional Analysis and Design (3)  
ET 604 Advanced Design of Instructional Materials (3)  
ET 692 Internship (3)

or

ET 693 Practicum (3)  
ET 784 Doctoral Seminar in Educational Technology (3)  
ET 797 Doctoral Proposal Seminar (4)  
EPSY 682 Cognition and Instruction (3)

or

ELPS 655 Seminar in Learning in Adulthood (3)

#### Research Methodology Core

SRM 602 Statistical Methods I (3)  
SRM 603 Statistical Methods II (3)  
SRM 610 Statistical Methods III (3)

or

SRM 680 Introduction to Qualitative Research (3)  
SRM 700 Advanced Research Methods (3)

#### Dissertation

ET 799 Doctoral Dissertation (12)

Each student will complete at least 6 semester hours of coursework in at least one of the four concentration areas.

#### Emphasis Area: Instructional Development/Design

ET 650 Corporate Course Design (3)  
ET 702 Instructional Design Theory and Research (3)

#### Concentration Area: Interactive Technologies

ET 627 Computer Assisted Instruction Authoring Systems (3)  
ET 628 Design of Multimedia Learning Environments (3)

#### Concentration Area: Technology Integration

ET 680 Integration of Technology into Curricula (3)  
ET 735 Design of Complex Technology Systems (3)  
ET 780 Diffusion of Technological Innovations (3)

#### Concentration Area: Distance Education

ET 613 Instructional Telecommunications (3)  
ET 615 Distance Education: Theories and Practice (3)

### Elective Courses — 15 hours

General Electives (9)

Electives outside ET courses and program requirements.

### Research Tools

Doctoral students in educational technology must demonstrate competency in two out of the four research tools listed below:

1. Research Design/Applied Statistics/Quantitative Methods – Students must complete the 12 semester hours (excluding ET 797) in research methodology courses with an overall GPA of 3.0 or better.

2. Computer Applications – Students must complete a minimum of 9 semester hours in graduate courses relating to computer use with grades of “A” or “B.”

or

A student can develop and demonstrate a computer program written to meet a specific application in education. This program will be judged as “acceptable” or “unacceptable” by the student's doctoral committee.

3. Evaluation – Students must complete a minimum of 9 semester hours in evaluation courses (e.g., SRM 670, SRM 671 and PPSY 781) with grades of “A” or “B.”

4. Foreign Language – Students must pass the Educational Testing Service or other faculty approved examination in any major modern foreign language with a score at the 50th percentile or higher.



## EDUCATIONAL STUDIES, ED.D.

### Degree Requirements — 70-72 Credit

Students who complete the Ed.D. in Elementary Education are prepared for positions of leadership in public and private schools and for colleges, universities, agencies, businesses and government entities. Graduates reflect expertise for teaching, consulting, publishing, research and other professional services.

Graduate applicants for this degree must have evaluations by the Department of Elementary Education, in addition to the Graduate School, in order to determine admissibility. Applicants must be licensed or eligible for the same to enter this program. Programs of study for degree candidates will be individualized to meet candidate's career goals. A minimum of 64 semester hours are required for the completion of this program. The extent of an individual's program will be dependent upon previous college work and professional experience.

See "Elementary Education (Ed.D.) Requirements" on page 26.

### Required Research Credits — 12 hours

SRM 602 Statistical Methods I (3)

SRM 603 Statistical Methods II (3)

SRM 680 Introduction to Qualitative Research (3)

or

3 hours of approved core related electives

SRM 700 Advanced Research Methods (3)

### Dissertation Hours — 16 hours

EDEL 797 Doctoral Proposal Research (4)

EDEL 799 Doctoral Dissertation (12)

Students will be required to demonstrate appropriate literacy and competency in computer applications as part of this program. ET 503: Computer Based Education (3) is a recommended course.

### Required Doctoral Credits — 21-23 hours

\*EDEL 725 Seminar in Elementary School Mathematics (2)

\*EDEL 745 Seminar in Elementary School English (2)

\*EDEL 755 Seminar in Elementary Education Social Studies (2)

\*EDEL 790 Supervised Practicum in College Teaching (3)

\*EDRD 745 Topical Seminar in Reading (2-4)

\*EDRD 750 The Contributing Professional in Reading (2-4)

Other credits to be determined in consultation with advisor.

### Elective Credits — 21 hours

There are two categories of elective coursework, general and external. Students must complete a minimum of 21 hours of elective coursework from one or both categories. Most students choose to balance their elective coursework by selecting electives in both categories.

#### General Electives

SRM 680 Introduction to Qualitative Research (3)

EPSY 674 Measurement I: Educational Testing (3)

ET 503 Computer-Based Education (3)

\*EDEL 612 Elementary School Curriculum (3)

\*EDEL 619 Pluralism in Education (3)

\*EDEL 612 Elementary School Curriculum (3)

\*EDEL 601 Practicum in Elementary Education (3)

\*EDEL 620 Researched Applications for Instruction in Mathematics, K-9 (3)

EDEL 640 Instruction in Language Arts and Literacy in the Elementary School (3)

\*EDEL 650 Researched Application for Instruction in Social Studies, K-9 (3)

SCED 671 Elementary and Middle School Science Curriculum (3)

EDEC 660 Critical Issues in Early Childhood (3)

EDEC 662 Research in Early Childhood and Primary Education (3)

EDEC 663 Educational Assessment, Evaluation and Prescription for the Young Child (3)

EDEC 664 Seminar in Early Childhood and Primary Education (3)

EDEC 675 Play and Psychosocial Development in Early Childhood (3)

EDEL 508 Workshop (1-3)(maximum 4)

EDEL 622 Directed Studies (1-3)

EDRD 614 Literature for Children, Adolescents and Young Adults (3)

EDRD 645 Reading Research (3)

Students are responsible for course content, for the above \*courses, on doctoral comprehensive exams. In consultation with advisor, students may include 10-21 semester hours from these courses in the doctoral program of study or may elect other approaches to acquire the knowledge and application bases inherent within contexts of formal courses listed.

### External Electives

In consultation with advisor, students may select 10-16 graduate semester hours from other program support areas in the College of Education (i.e., EDEC, EDRD, EDMS, EDSE, ET, EDF, etc.) or within other colleges/areas in the University that would strengthen professional skills (i.e., sciences, foreign languages, visual arts, community health, communication, social sciences, mathematics, music, higher education and student affairs leadership, English, psychology, etc.).

Applicants must have an overall 3.0 GPA on the last 60 semester hours for full admission to this program.



## HIGHER EDUCATION AND STUDENT AFFAIRS LEADERSHIP, PH.D.

### Degree Requirements — 75 Credits

The program of studies is designed to prepare professionals for college and university leadership positions in higher education and student affairs. The educational model on which the program is based maintains that student affairs professionals must possess a broad knowledge base, a variety of specific skills and be persons oriented toward personal growth. A strong background in the liberal arts, basic helping skills and an interest in research evaluation and statistics are desirable assets for those wishing to enter the program. The curriculum is based on a process-outcome model that prepares leaders for higher education and student affairs positions at the highest levels.

See “Higher Education/Student Affairs Leadership (Ph.D.) Requirements” on page 24.

#### Required Credits — 64 hours

##### *I. Core Courses Required (15 hours)*

ELPS 751 Doctoral Core I (6)

ELPS 752 Doctoral Core II (6)

ELPS 754 Research in Educational Leadership (3)

##### *II. Concentration Required (15 hours with ELPS or HESA prefix - 18 hours)*

Students identify one of two concentration areas of study related directly to their goals as leaders of educational programs. A concentration area, in either Higher Education Leadership or Student Affairs Leadership, is defined as a body of knowledge represented by 18 hours of course work. A minimum of 15 semester hours must be taken that have a HESA or ELPS prefix.

##### *III. Research Core Required (12 hours)*

At least 12 hours of doctoral level work (beyond SRM 600 or its equivalent) are directed toward research design and data analysis skills. Nine hours include a background in a combination of both qualitative and quantitative methods courses including SRM 602, SRM 603, SRM 680 or the equivalent approved by the doctoral program planning committee. The other course (research electives) may be selected from Nursing, Educational Psychology, Psychology or other Applied Statistics and Research Methods (SRM) graduate research courses.

SRM 602 Statistical Methods I (3)

SRM 603 Statistical Methods II (3)

SRM 680 Introduction to Qualitative Research (3)

For the additional three hours, students may elect courses from Nursing, Educational Psychology or other Applied Statistics and Research graduate courses or HESA courses with a research emphasis including:

HESA 753 Evaluative Strategies for Student Affairs (2)

HESA 758 Seminar in College Student Personnel Administration (1)

##### *IV. Field Based Learning Required (3 hours)*

Students engage in field based learning experience(s) to enhance their theoretical and practical knowledge and skills. Learning experiences can be role specific as in ELPS 606 or HESA 675 (e.g., examining the role and responsibilities of a university or student affairs leader) or task specific such as HESA 661 or ELPS 695 (e.g., college teaching or conducting a small research study).

HESA 661 Practicum in College Teaching for Student Development (2)

HESA 670 Internship in Student Affairs (6)

HESA 675 Field Experience in Student Affairs (2)

ELPS 606 Internship in Educational Leadership (1-9)

ELPS 695 Practicum in Educational Leadership (1-3)

##### *V. Dissertation and Proposal Required (16 hours)*

Before the dissertation, students identify needed resources and refine their skills in order to develop a dissertation proposal. As part of the development process, students enroll in 4 hours of Doctoral Proposal Research (HESA 797 or ELPS 797). Twelve semester hours of Doctoral Dissertation credit

(HESA 799 or ELPS 799) must be taken after committee approval of the proposal.

HESA 797 Doctoral Proposal Research (4)

ELPS 797 Doctoral Proposal Research (4)

HESA 799 Doctoral Dissertation (12)

ELPS 799 Doctoral Dissertation in Educational Leadership and Policy Studies (1-12)

##### *VI. Elective Courses in Higher Education and Student Affairs Leadership (11 hours)*

Students select additional course(s) as needed, with the guidance of their program committee, to meet their specialized career needs:

HESA 622 Directed Studies (1-4)

HESA 650 College Student Development: Theory and Research (3)

HESA 651 Philosophical, Historical and Cultural Foundations of Student Affairs in Higher Education (3)

HESA 652 Enrollment Management Services (3)

HESA 653 Services for Environmental and Student Development (3)

HESA 655 Multiculturalism in Higher Education (3)

HESA 658 Management and Administration in Student Affairs (3)

HESA 682 Legal Issues in Student Affairs (3)

HESA 750 College Students: Culture, Characteristics, Campus Life (3)

HESA 752 Current Issues in College Student Personnel Administration (2)

HESA 771 Administrative Leadership in Student Affairs (3)

HESA 758 Seminar in College Student Personnel Administration (1)

HESA 685 Human Resources in Higher Education (3)

HESA 683 Finance and Resource Management in Higher Education (3)

ELPS 655 Seminar in Learning in Adulthood (3)

HESA 680 Law and Higher Education (3)

ELPS 662 Design and Delivery of Professional Development (3)

ELPS 665 Policy Analysis and Development (3)

HESA 668 Higher Education in the United States (3)

HESA 669 College and University Curriculum (3)

ELPS 711 Advanced Theories for Changing Organizations (3)

##### *VII Research Tools*

Doctoral students in Higher Education and Student Affairs Leadership must demonstrate competency in two of the four research tools listed below:

- 1. Research Design.** (Applied Statistics/Quantitative Methods and/or Qualitative Methods). Complete 12 semester hours (excluding HESA 797 and ELPS 797) in research methodology courses with an overall G.P.A. of 3.0 or better.
- 2. Computer Applications.** Complete a minimum of 9 semester hours in graduate courses related to computer use with grades of “B” or better **OR** students can develop and demonstrate a computer program to meet a specific application in higher education or student affairs. This program is judged acceptable or unacceptable by the student’s doctoral committee.
- 3. Evaluation.** Complete a minimum of 9 semester hours in evaluation courses (e.g. SRM 670, SRM 671, ELPS 662 or PPSY 781) with grades if “B” or better.
- 4. Foreign Language.** Pass the Educational Testing Service or other faculty approved examination in any major modern foreign language with a score at the 50th percentile or higher.





## HUMAN REHABILITATION, PH.D.

### Degree Requirements — 72 Credits

Admission into the doctoral program in Human Rehabilitation is determined by the graduate faculty of the department, with final approval of the graduate dean.

See “Human Rehabilitation (Ph.D.) Requirements” on page 37.

#### Required Major Courses — 39 hours

HHS 758 Seminar in Collaborative Research in Human Sciences (3)  
 SES 696 College Teaching (3)  
 HRS 650 Human Resources System (3)  
 HRS 659 Seminar in Rehabilitation Counseling Supervision (2)  
 HRS 660 Advanced Seminar in Client Assessment (3)  
 HRS 695 Seminar in Foundations of Human Rehabilitation (3)  
 HRS 696 Advanced Rehabilitation Counseling Theories and Approaches (3)  
 HRS 706 Advanced Seminar in Psychosocial Aspects of Disability (3)  
 HRS 797 Doctoral Proposal Research (4)  
 HRS 799 Doctoral Dissertation (12)

#### Research and Statistics Requirements — 15 hours

All doctoral students are required to take the following 15 graduate level hours in statistics and research in order to satisfy one of the two university required research tools. These 15 hours may count toward the 69 credits required in the doctoral curriculum.

SRM 602 Statistical Methods I (3)  
 SRM 603 Statistical Methods II (3)  
 SRM 610 Statistical Methods III (3)  
 SRM 680 Introduction to Qualitative Research (3)  
 SRM 700 Advanced Research Methods (3)  
 or  
 SES 703 Research Seminar in Sport and Exercise Science (3)

#### Select One Additional Tool:

##### Computer Applications — 12 hours

Satisfactorily complete with a grade of “B” or better a minimum of 12 hours of committee approved computer application courses. These hours, if graduate level, may count toward the required total credits for graduation.

or

The student may prepare and demonstrate a computer program written to meet a specific application need in the Department of Human Services. This program must be judged as acceptable by the student's doctoral program committee.

##### Foreign Language

Pass the E.T.S. examination in any major foreign language (i.e., other than English) with a score not less than the 30th percentile. Students whose native language is other than English may be determined to have satisfied this requirement by unanimous vote of the student's doctoral program committee.

##### Collateral Field(s) — 12 hours minimum

Students will identify a concentration area of study that relates directly to their goals as scholars in the field of rehabilitation. The concentration area and specific courses must be approved by their doctoral committee. A concentration area is defined as a body of knowledge represented by a minimum of 12 hours of course work. Examples of a collateral field could include, but are not limited to the following: gerontology, community health, nursing, sociology and special education.

##### Elective Credits — 6 hours

HRS 755 Supervised Practicum in College Teaching (3)  
 HRS 757 Advanced Seminar in Rehabilitation Administration (3)  
 HRS 759 Advanced Practicum in Rehabilitation Counseling Supervision (3)

**Note:** Completion of a detailed portfolio that addresses all areas of the doctoral matrix of competencies is submitted and must receive a passing evaluation prior to scheduling of the oral comprehensive examination.



## MUSIC, D.A.

Degree Requirements for all Emphasis Areas: Conducting, Music History and Literature, Music Performance, Music Theory and Composition, Performance and Pedagogy or Music Education Emphasis

### Degree Requirements — 66-70 Credits

Doctor of Arts in Music candidates will take written and oral comprehensive examinations at a time approved by the major advisor.

For additional information, see "Doctor of Arts Sequence and Check List" published by the School of Music.

See "Graduate Admission Requirements" on page 43.

### Conducting, Music History and Literature, Music Performance, Music Theory and Composition, Performance and Pedagogy Emphases

#### Program Requirements — 66-70 Credit

The Doctor of Arts degree provides options for advanced study in the areas of music history and literature, theory and composition, music performance, conducting or performance and pedagogy.

#### Required Major Credits — 24-28 hours

MUS 623 Individual Studies in Effective Teaching (3)  
 MUS 700 Introduction to Doctoral Research (3)  
 MUS 794 Supervised Practicum in College Teaching (2-6)  
 MUS 797 Doctoral Proposal Research (4)  
 MUS 799 Doctoral Dissertation (12)

#### Primary Emphasis — 18 hours

The primary emphasis area develops a major scholarly and/or performing function for the college and university level in Conducting, Music History and Literature, Theory and Composition, Music Performance, or Music Performance and Pedagogy. Courses are selected by advisement based upon candidate's area of focus and upon the candidate's needs identified through the advisory examination.

#### Secondary Emphasis — 10 hours

This area develops a secondary scholarly and/or performing emphasis in one of the degree emphasis areas (Music History and Literature, Theory and Composition, Music Performance, Conducting, Performance and Pedagogy), or in Jazz Pedagogy, Music Education, Opera/Theatre, or related areas outside Music. It is normally expected that a creative project of some type will be undertaken as part of the concentration. The concentration area and its courses are selected by the candidate with the approval of the program advisor and the advisor for the Secondary Area of Concentration.

#### Elective Credits — 14 hours

**Note:** The hours allotted to the doctoral dissertation may be divided between performance and dissertation requirements according to the degree plan as outlined and approved by the candidate's committee.

Performance and Conducting majors will perform two recitals for 8 semester hours and complete a four semester hour dissertation. Performance and Pedagogy majors will perform one recital for four semester hours and complete an eight-hour dissertation. Students seeking the D.A. in Music Education, Music History and Literature or Theory and Composition will complete a 12-hour dissertation.

Doctor of Arts Majors in Theory and Composition and will present a recital of their composition written as part of their degree program.

A reading knowledge of one foreign language (French, German or Italian) is required by the following areas: Brass, History and Literature (a second language may be required through advisement), Piano, Strings, Theory and Composition, Vocal, Woodwinds and Instrumental

Conducting. Students in the areas of Choral Conducting and Vocal Performance should have skills in translation of vocal literature in one foreign language (French, German or Italian) as well as diction mastery of all three. In the woodwind area, a substitute research tool may be permitted after consultation and approval by the candidate's committee. Students should contact the Graduate Coordinator or appropriate department to clarify language requirements.

The candidate must complete two consecutive semesters (minimum of 10 semester credit hours per semester) of graduate work on the University of Northern Colorado campus in order to satisfy the Doctor of Arts residency requirement.

The Program Advisor or Graduate Coordinator will provide information concerning how the student's oral and research committees are formed, the student's responsibility in the committee process and the means of scheduling comprehensive examinations and the doctoral defense.

### Music Education Emphasis

#### Program Requirements — 66 Credits

This program emphasizes philosophy, psychology, contemporary and past history, research and includes scholarship and musicianship through study in the areas of music history and literature, theory, composition and performance.

This emphasis area places primary emphasis on a comprehensive working knowledge of contemporary music education practices in public schools and college music programs and community cultural life.

#### Required Credits — 53 hours

MUS 700 Introduction to Doctoral Research (3)  
 MUS 797 Doctoral Proposal Research (4)  
 MUS 799 Doctoral Dissertation (12)

#### Primary Emphasis

MUS 519 Foundations of Music Education (3)  
 MUS 533 Curriculum Trends in Music Education (3)  
 MUS 610 Research in Music Education (3)  
 MUS 622 Directed Studies in Music (3)  
 SRM 602 Statistical Methods I (3)  
 SRM 603 Statistical Methods II (3)  
 EDF 640 Psychological Foundations of Education (3)  
 EDF 685 Philosophical Foundations of Education (3)

#### Secondary Emphasis (10 hours)

#### Elective Credits — 13 hours

Electives will be selected by advisement based on candidate's needs identified through advisory examination and special interests. Electives may be selected from courses offered by the School of Music, or from areas outside of music, such as Educational Administration, Special Education or Psychology.

**Note:** The dissertation should include goals such as extension of the student's knowledge and improvement of his teaching ability in the field, development of new knowledge that will contribute to Music Education and implementation of Music Education theory to the practical aspects of ongoing school music programs.

Secondary Emphasis courses may be selected from courses offered by the School of Music, or from areas outside of music, such as Educational Administration, Special Education or Psychology. A project integrating one or more subject areas with Music Education will be part of the secondary emphasis expectation. The project is given on a directed study basis and may be extended into the framework of the dissertation.



## SCHOOL PSYCHOLOGY, PH.D.

### Degree Requirements — 125-135 Credits

The Ph.D. program is fully accredited by the American Psychological Association and the National Association of School Psychologists.

The principal goal of the doctoral program is the training of a professional psychologist who, in addition to possessing general practitioner skills, has developed proficiency in the areas of psychological intervention, psychological assessment, consultation, systems change, research and evaluation. Doctoral graduates, in addition to being eligible for state and national licensure as school psychologists, may also be qualified to assume positions as therapists, university professors, educational evaluators and private consultants.

Doctoral students in School Psychology are required to engage in research with a school psychology faculty member for five hours per week (equivalent, one semester hour) for a minimum of two semesters.

See "School Psychology (Ph.D.) Requirements" on page 30.

#### Required Credits — 125-135 hours

\*Recommended to meet State of Colorado School Psychologist licensure requirements.

##### Psychological Foundations

- PSY 590 Seminar in History and Systems (3)
- \*PPSY 655 Community Psychology and Social Systems (3)
- \*PPSY 658 Ethics and Law in Schools for Psychologists and Counselors (3)
- \*PPSY 660 Psychological Consultation: Theory and Practice (3)
- PPSY 667 Crisis Intervention in the Schools (2)
- PPSY 763 Seminar in School Psychology (3)
- PPSY 758 Advanced Psychopathology (3)
- PPSY 777 Applied Neuropsychology (4)

and select one of the following two courses:

- \*EPSY 540 Theories and Principles of Learning (3)
- \*PPSY 638 Behavioral Approaches to Professional Psychology (3)

and select one of the following courses:

- \*EPSY 630 Child and Adolescent Psychology (3)
- \*PSY 550 Cognitive Development (3)
- \*EPSY 684 Advanced Seminar in Human Development (3)

and select one of the following two courses:

- \*PPSY 607 Theories of Counseling (3)
- \*PPSY 707 Seminar in Personality and Counseling Theories (3)

##### Assessment for Intervention

- \*PPSY 618 Practicum in Child, Adolescent, and Family Interventions (5)
- \*PPSY 674 Assessment for Intervention: Cognitive and Academic (5)
- \*PPSY 676 Assessment for Intervention: Infant and Toddler (3)
- \*PPSY 678 Assessment for Intervention: Personality and Behavior (5)
- \*PPSY 775 Supervision of Psychological Testing (3-9)
- \*PPSY 779 Practicum in School Psychology (3)

and select two of the following courses:

- \*PPSY 559 Introduction to Clinical Hypnosis (2)
- \*PPSY 617 Play Therapy: Theory and Practicum (3)
- \*PPSY 681 Practicum in Consultation (3)
- \*PPSY 694 Practicum in Family Therapy (4)
- \*PSY 626 Introduction to Neuropsychological Assessment (3)
- \*PPSY 605 Group Laboratory Experience (1) and
- \*PPSY 606 Theories and Practices in Group Guidance (3)
- PPSY 738 Practicum in Evidenced-Based Interventions (3)
- PPSY 778 Clinical Neuropsychology Practicum (2)

##### Multicultural Understanding

Select one of the following courses:

- \*PPSY 565 Psychology of Prejudice (3)
- PPSY 623 Counseling Diverse Populations (3)

##### Research

- \*SRM 700 Advanced Research Methods (3)
- PPSY 797 Doctoral Proposal Research (4)
- PPSY 799 Doctoral Dissertation (12)

##### Research Tools

#### 1. Applied Statistics (choose one of the two options)

##### Option one

- \*SRM 602 Statistical Methods I (3)
- SRM 603 Statistical Methods II (3)
- SRM 610 Statistical Methods III (3)

##### Option two

- \*SRM 501 Applied Statistics I (4)
- SRM 502 Applied Statistics (4)

and select one of the following three courses:

- SRM 605 Multivariate Analysis (3)
- SRM 606 Multiple Linear Regression Analysis (3)
- SRM 610 Statistical Methods III (3)

#### 2. Applied Research

PPSY 580 Computer Applications to Professional Psychology (2)

PPSY 663 Research Apprenticeship: School Psychology (2)

PPSY 781 Evaluation of Psychological Services (3)

and select one of the following courses:

- EPSY 675 Measurement II: Advanced Techniques (3)
- SRM 680 Introduction to Qualitative Research (3)

##### Supervised Field Work

\*PPSY 789 Internship in School Psychology (12) (3 semesters)

Professional Education – (minimum of 9 hours required)

- PPSY 568 Psychology of Women (2)
- PPSY 603 Counseling Children and Adolescents (3)
- \*PPSY 672 Neuropsychology of Learning Disabilities and Traumatic Brain Injuries (3)
- \*EDRD 617 Evaluation and Correction of Individual Reading Problems (4)

Electives in Professional Education (1 hour)

With Advisor approval other courses from ELPS, EDF, or EDSE, may be substituted to meet State of Colorado Licensure Standards.

#### Elective Credits

If additional hours are needed, students may choose courses in consultation with their advisors.

**Note:** Written and oral comprehensive examinations and a dissertation are requirements of this program. Students must successfully complete the National School Psychology Certification Examination (NCSPE) to pass the written comprehensive exam.

#### School Psychologist Licensure

Institutional recommendation for endorsement in School Psychology is based on the completion of the Ed.S. or the Ph.D. programs in School Psychology. No prior teaching experience is necessary.

Students wishing to obtain Colorado licensure in this area are required to pass a proficiency examination(s). Students should contact the Teaching/Special Services Licensing Office in McKee 216 for information.

Students desiring licensure in states other than Colorado should note that requirements for licensure are set by each state's Department of Education and should become familiar with the requirements for any other state from which they seek licensure.

Near the end of the semester that the licensure program is to be completed, the candidate should complete application forms in the Teaching/Special Services Licensing Office in McKee 216. Applications are processed as soon as official transcripts, ordered by the applicant, are received from the Registrar showing completion of requirements. Departmental recommendations are required before institutional endorsement is granted.



## SPECIAL EDUCATION, ED.D.

### Degree Requirements — 65-71 Credits

The Ed.D. in Special Education is a flexible doctoral program with provisions for individual planning to prepare special education professionals for positions of leadership in public and private schools and for colleges, universities, agencies, businesses and government entities. Major emphases are internally flexible and may be established to fit a variety of interests in the field of special education. Graduates develop leadership knowledge and skills in special education related to five major themes: theory, effective teaching, inquiry, scholarly production and intra-interpersonal skills. The program is designed to prepare students for creative leadership in a rapidly changing world that is experiencing increasing cultural diversity, curriculum and structural reforms in schools and pedagogical innovations across the educational spectrum.

#### Required Credits — 56-62 hours

Note that students will be required to demonstrate literacy and competency in computer applications as part of the program.

##### *Doctoral Core Courses (13 hours)*

EDSE 720 Professional Development (1)  
 EDSE 721 Theoretical Foundations of Special Education I (3)  
 EDSE 723 Seminar in Facilitating Personal and Professional Development in Special Education (3)  
 EDSE 727 Seminar in Exceptionalities (3)  
 EDSE 728 Seminar in Professional Writing (3)

##### *Apprenticeships (9 hours)*

EDSE 729 Apprenticeship in Special Education (9)  
 Apprenticeships are typically taken in two hour blocks, beginning with the first semester on campus. Variable titles related to inquiry, university teaching and administration are selected based on the nature of the apprenticeship.

##### *Externships (3 hours - minimum)*

EDSE 730 Externship in Special Education (3)  
 Externships are taken in one to twelve hour blocks and involve an off-campus experience. Variable titles related to inquiry, university teaching and administration are selected based on the nature of the externship.

##### *Topical Seminars (3 hours - minimum)*

EDSE 731 Topical Seminar in Special Education (3-9)  
 Topical seminars are offered as three hour courses. A minimum of one topical seminar is required, and up to three topical seminars may be included in the program of study.

##### *Methods of Inquiry Courses (12 hours)*

SRM 602 Statistical Methods I (3)  
 SRM 603 Statistical Methods II (3)  
 SRM 680 Introduction to Qualitative Research (3)  
 SRM 700 Advanced Research Methods (3)

##### *Doctoral Proposal and Dissertation (16 hours)*

EDSE 797 Doctoral Proposal Research (4)  
 EDSE 799 Doctoral Dissertation (12)

#### Elective Credits — 9 hours (minimum)

Students are to select 9 semester hours of courses from outside of the Division of Exceptionalities and Bilingual/ESL Education. Electives are chosen in consultation with the major advisor and are an integral part of the program plan.

##### *Areas of Special Interest*

The student may select an area of interest (one or more), in conference with his or her advisor, from the following areas: transition of children and youth with exceptionalities; education of preschool children with exceptionalities; one of the categorical areas of special education (autism, learning disabilities, deaf or hard of hearing, blind or visually impaired, emotionally disturbed, gifted, mental retardation, etc.); curriculum development, special education administration; university teaching/research; or other areas as designed by the student and his or her advisor.



## SPORT AND EXERCISE SCIENCE, PH.D.

Select One Emphasis Area: Exercise Science, Sport Administration, or Sport Pedagogy

### Degree Requirements — 64-68 Credits

The Doctor of Philosophy in Sport and Exercise Science is offered through the School of Sport and Exercise Science.

### Program Requirements — 28 hours

#### Required Research Credits — 12 hours

SRM 602 Statistical Methods I (3)  
SRM 603 Statistical Methods II (3)  
SRM 610 Statistical Methods III (3)

or

SRM 680 Introduction to Qualitative Research (3)  
SES 703 Research Seminar in Sport and Exercise Science (3)  
*Exercise Science and Sport Pedagogy: In addition to the above, SRM 600 Introduction to Graduate Research (3) or SES 602 Introduction to Research in Sport and Exercise Science (3) may be required if not taken during a student's Masters program.*

*Sport Administration: In addition to the above, SES 703 Research Seminar in Sport and Exercise Science (3) or a graduate research course from Educational Psychology (EPSY), Psychology (PSY) or Applied Statistics and Research Methods (SRM). Advisor approval is required for this choice. Students in this emphasis are required to successfully complete, with a grade of "B" or better in each course, the doctoral minor in Applied Statistics and Research Methods.*

#### Research Tools

Doctoral students in this degree must demonstrate competency in two research tools. Five possibilities are listed below:

1. **Research Design.** Applied Statistics/Quantitative Methods. Complete 9-12 hours (excluding SRM 600 and SRM 700).
2. **Research Design.** Applied Statistics/Qualitative Methods. Complete 9-12 hours (excluding SRM 600 and SRM 700).
3. **Discipline-Specific Laboratory Techniques.** Exhibit competency in laboratory-based research work, which is specific to a student's concentration area. Coursework supporting this requirement is acceptable, but not required.
4. **Computer Applications.** Complete a minimum of 9 hours in graduate courses related to computer use with grades of "B" or better OR students can develop and demonstrate computer proficiency to satisfy a specific need in sport and exercise science. The students' doctoral committee judges this program or proficiency acceptable or unacceptable.
5. A collateral field of study may be used as a substitute for a research tool. See Graduate School policies for details.

#### Required Dissertation Credits — 16 hours

SES 797 Doctoral Proposal Research (4)  
SES 799 Doctoral Dissertation (12)

**Note:** In order to advance to candidacy, students must demonstrate proficiency in theoretical and research foundations, teaching and communication, scholarship and professional service. Criteria for proficiency are identified in the School of Sport and Exercise Science Doctoral Evaluation Matrix.

## Exercise Science Emphasis

### Degree Requirements — 64 hours

Students pursuing the Exercise Science emphasis select one concentration area: 1) biomechanics, 2) exercise physiology, and 3) social psychology of sport and physical activity.

#### 1) Biomechanics

### Program Requirements — 28 hours

#### Concentration Area Credits — 24 hours

SES 620 Advanced Anatomical Kinesiology (3)  
SES 621 Advanced Biomechanics (3)

SES 622 Directed Studies: Research in Biomechanics (6)  
SES 623 Advanced Neuromotor Kinesiology (3)  
SES 626 Advanced Physiological Kinesiology I (3)  
SES 627 Advanced Physiological Kinesiology II (3)  
SES 690 Graduate Seminar in Kinesiology (1) (3hrs required)

#### Elective Credits (with advisor approval) — 12 hours

SES 624 Advanced Developmental Kinesiology (3)  
SES 629 Concepts in Kinesiology (3)  
SES 635 Exercise and Sports Psychology (3)  
SES 665 Advanced Sociological Kinesiology (3)  
SES 692 Graduate Internship in Sport and Exercise Science (1-6)  
SES 694 Special Topics in Kinesiology (3)  
SES 755 Supervised Practicum in College Teaching (3)

### 2) Exercise Physiology

### Program Requirements — 28 hours

#### Required Concentration Area Credits — 18 hours

SES 625 Laboratory Techniques in Kinesiological Research (3)  
SES 626 Advanced Physiological Kinesiology I (3)  
SES 627 Advanced Physiological Kinesiology II (3)  
SES 629 Concepts in Kinesiology (3) (Cardiopulmonary)  
SES 690 Graduate Seminar in Kinesiology (1) (3hrs required)  
SES 755 Supervised Practicum in College Teaching (3)

#### Elective Credits (with advisor approval) — 18 hours

SES 620 Advanced Anatomical Kinesiology (3)  
SES 621 Advanced Biomechanics (3)  
SES 622 Directed Studies (1-4)  
SES 623 Advanced Neuromotor Kinesiology (3)  
SES 624 Advanced Developmental Kinesiology (3)  
SES 635 Exercise and Sports Psychology (3)  
SES 665 Advanced Sociological Kinesiology (3)  
SES 692 Graduate Internship in Sport and Exercise Science (1-6)  
SES 694 Special Topics in Kinesiology (3)  
SES 705 Seminar in Sport Administration (2)  
SES 755 Supervised Practicum in College Teaching (1-3)  
BIO 550 Cell Physiology (4)  
BIO 552 Mammalian Physiology I (3)  
BIO 553 Mammalian Physiology II (3)  
CHEM 581 General Biochemistry I (4)  
CHEM 582 General Biochemistry II (4)  
GERO 665 Grant Development and Administration (3)

### 3) Social Psychology of Sport and Physical Activity

### Program Requirements — 28 hours

#### Required Concentration Area Credits — 15 hours

SES 624 Advanced Developmental Kinesiology (3)  
SES 629 Concepts in Kinesiology (3) (Motivation)  
SES 635 Exercise and Sports Psychology (3)  
SES 665 Advanced Sociological Kinesiology (3)  
SES 690 Graduate Seminar in Kinesiology (1) (3hrs required)

#### Elective Credits (with advisor approval) — 21 hours

GERO 625 Psychosocial Aspects of Aging (3)  
SES 620 Advanced Anatomical Kinesiology (3)  
SES 621 Advanced Biomechanics (3)  
SES 622 Directed Studies (1-4)  
SES 623 Advanced Neuromotor Kinesiology (3)  
SES 626 Advanced Physiological Kinesiology I (3)  
SES 627 Advanced Physiological Kinesiology II (3)  
SES 692 Graduate Internship in Sport and Exercise Science (1-6)  
SES 755 Supervised Practicum in College Teaching (1-6)  
SES 670 Sport and Higher Education (3)  
SES 680 Perspectives in Sport Pedagogy (3)  
SES 696 College Teaching (3)  
PSY 643 Theories of Motivation (3)  
PSY 664 Advanced Social Psychology (3)  
SOC 532 Social Psychology and Group Dynamics (3)  
SOC 552 Applied Social Theory (3)

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## **Sport Administration Emphasis**

### **Degree Requirements — 64 hours**

This curriculum follows the guidelines set for the preparation of students in Sport Management by the National Association for Sport and Physical Education and the North American Society for Sport Management. The program is designed primarily to prepare students for academic positions in higher education. Some students may choose to apply their doctoral course work in careers in the management of sport in secondary and collegiate athletic programs and professional, Olympic and commercial sport business.

See "Sport Administration Emphasis (Ph.D.) Admission Requirements" on page 39.

### **Program Requirements — 28 hours**

#### **Required Credits — 26 hours**

SES 576 Sport Promotion and Marketing (3)  
 SES 650 Financial Management for Sport Organizations (3)  
 SES 660 Sport Personnel Management (3)  
 SES 665 Advanced Sociological Kinesiology (3)  
 SES 675 Management of Sports Facilities and Equipment (3)  
 SES 676 Sport Public Relations and Information Systems (3)  
 SES 678 Event Development and Management (3)  
 SES 688 Legal Aspects of Sport (3)  
 SES 705 Seminar in Sport Administration (2)

#### **Elective Credits — 10 hours**

Students are allowed 10 hours of electives in the doctoral program (64 credits beyond the Master's is required for graduation). After consulting with their advisor, students should select courses which contribute to their academic and research goals. The following courses are offered as a guide for elective course selection. Students should also review the *Catalog* for course options in other cognate areas.

ET 501 Introduction to Applications of Educational Technology (3)  
 ET 504 Instructional Materials Design (3)  
 ELPS 601 Leadership Development Through Inquiry (3)  
 ELPS 663 Developing Grants and Contracts (3)  
 SES 755 Supervised Practicum in College Teaching (1-6)  
 ELPS 650 School Finance and Budgeting (3)  
 HESA 680 Law and Higher Education (3)  
 SES 670 Sport and Higher Education (3)  
 SES 692 Graduate Internship in Sport and Exercise Science (1-6)  
 SES 696 College Teaching (3)  
 SRM 610 Statistical Methods III (3)  
 SRM 611 Advanced Statistical Data Analysis (3)  
 SRM 627 Survey Research Methods (3)  
 SRM 680 Introduction to Qualitative Research (3)

**Note:** The course SES 692 Graduate Internship in Sport and Exercise Science may be used for up to 6 hours of electives and is designed to assist students in gaining experience in the sport industry and/or to bridge the gap between theory and practice. To be eligible to register for SES 692, a student must have 1) a GPA of 3.0, 2) completed (or currently enrolled) five required courses, and 3) completed 20 graduate credits.

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## **Sport Pedagogy Emphasis**

### **Degree Requirements — 65 Credits**

Students who successfully complete this emphasis will have varied career opportunities including teaching and research positions in colleges and universities throughout the United States. Graduates often seek and obtain positions involving teaching and research in teaching methodology, curriculum design, measurement, administrative theory and practice and supervision.

Students will have the opportunity to gain practical experience in pedagogy and administration. They will also have opportunities to participate in ongoing research efforts within the School of Sport and Exercise Science (SES). SES has a well-equipped research laboratory for the study of teaching and various forms of graduate experiences are available in this area.

### **Deficiencies**

Students may be required to have graduate coursework as a part of their program of study in the following kinesiology areas as determined by the program advisor and candidate:

SES 620 Advanced Anatomical Kinesiology (3)  
 SES 621 Advanced Biomechanics (3)  
 SES 623 Advanced Neuromotor Kinesiology (3)  
 SES 624 Advanced Developmental Kinesiology (3)  
 SES 626 Advanced Physiological Kinesiology I (3)

### **Program Requirements — 28 hours**

#### **Required Credits — 22 hours**

SES 614 Analysis of Teaching in Physical Education (3)  
 SES 640 Curriculum in Physical Education (3)  
 SES 641 Instructional Strategies for Elementary School Physical Education (3)  
 SES 642 Instructional Strategies for Secondary School Physical Education (3)  
 SES 685 Critical Pedagogy (3)  
 SES 695 Seminar in Physical Education (2) (take twice)  
 SES 696 College Teaching (3)

#### **Elective Credits — 15 hours**

**Note:** Electives are to be based upon program and career goals and must be related to the study of pedagogy. Must have approval of advisor and program committee.

## DOCTORAL MINORS



### APPLIED STATISTICS AND RESEARCH METHODS

#### Doctoral Minor Requirements — 15 Credits

A Doctoral Minor in Applied Statistics and Research Methods is available to students in any UNC doctoral program with the approval of their doctoral program advisor.

##### Required courses — 15 hours

A minimum of five (5) courses completed during the student's UNC doctoral program with grades of "B" or better from the following courses:

- SRM 602 Statistical Methods I (3)
- SRM 603 Statistical Methods II (3)
- SRM 606 Multiple Linear Regression Analysis (3)
- SRM 607 Non-Parametric Statistics (3)
- SRM 608 Experimental Design (3)
- SRM 609 Sampling Methods (3)
- SRM 610 Statistical Methods III (3)
- SRM 611 Advanced Statistical Data Analysis (3)
- SRM 619 Resampling Methods (3)
- SRM 625 Applied Multiple Regression Analysis (3)
- SRM 627 Survey Research Methods (3)
- SRM 635 Categorical Data Analysis (3)
- SRM 670 Evaluation: Models and Designs (3)
- SRM 680 Introduction to Qualitative Research (3)
- SRM 685 Educational Ethnography (3)
- SRM 686 Qualitative Case Study Research (3)
- SRM 687 Narrative Inquiry (3)
- SRM 688 Writing as Analysis of Qualitative Research (3)

Note: SRM 502 or SRM 617 may be substituted for SRM 602.

##### Features and Conditions

1. Completion of the minor will be noted in the student's transcript as Minor in Applied Statistics and Research Methods.
2. No other course substitutions are permitted.
3. This minor is not available to students in the Applied Statistics and Research Methods degree program.
4. Some or all of the SRM courses used for the minor may be part of a student's program of required or elective classes.

No application to the Applied Statistics and Research methods department is required. In consultation with their doctoral program advisors, students may include sufficient SRM courses in their programs of study to meet the requirements for the minor.



### EDUCATIONAL PSYCHOLOGY

#### Doctoral Minor Requirements — 15 Credits

##### Admission Requirements

The minor will be open to all students who are enrolled in a doctoral degree program at the University of Northern Colorado. Doctoral students must apply for admission to this minor by submitting a written request to the chair of the Department of Educational Psychology stating: 1) their intent to obtain a minor in Educational Psychology, 2) the emphasis area in Educational Psychology in which they intend to concentrate, 3) their name, their student ID#, 4) the doctoral program in which they are enrolled, 5) the name of their doctoral program advisor, 6) the student's mailing address, and 7) their E-mail address. The application may be sent at any time.

The student must complete a minimum of 15 semester hours of coursework with a grade of "B" or higher. All students enrolled in the minor must abide by the code of Ethics of the American Psychological Association (APA) and the American Education Research Association (AERA).

The student must select one of three concentration areas in Educational Psychology: *Human Development, Learning and Cognition* and *Research and Measurement*. Each concentration area consists of a minimum of 15 semester credit hours (five three-credit hour courses). Substitutions of courses with the EPSY prefix will be allowed, if they are approved by the chair of the Department of Educational Psychology. The required courses in the emphasis area will consist of:

##### Learning and Cognition Concentration Courses

- EPSY 540 Theories and Principles of Learning (3)
- EPSY 635 Individual Differences in Cognition (3)
- EPSY 661 Trends and Issues in Educational Psychology (3)
- EPSY 682 Cognition and Instruction (3)
- EPSY 685 Advanced Seminar in Learning and Cognition (3)

##### Human Development Concentration Courses

- EPSY 530 Life Span Developmental Psychology (3)
- EPSY 630 Child and Adolescent Psychology (3)
- EPSY 631 Psychology of Youth, Adulthood and Aging (3)
- EPSY 661 Trends and Issues in Educational Psychology (3)
- EPSY 684 Advanced Seminar in Human Development (3)

##### Research and Measurement Concentration Courses

- EPSY 661 Trends and Issues in Educational Psychology (3)
- EPSY 674 Measurement I: Educational Testing (3)
- EPSY 675 Measurement II: Advanced Techniques (3)
- EPSY 682 Cognition and Instruction (3)
- EPSY 684 Advanced Seminar in Human Development (3)

or

- EPSY 685 Advanced Seminar in Learning and Cognition (3)



### EDUCATIONAL TECHNOLOGY

#### Doctoral Minor Requirements — 15 Credits

##### Admission Requirements

Doctoral students must apply for admission to this minor. The application materials and admission criteria are the same as those required for the Ph.D. in Educational Technology: cover page, GRE (minimum scores: 1650 composite, 550 in each section), 3 letters of recommendation, statement of professional goals relevant to this minor. Completed applications packets should be submitted to the department chair **prior to the completion of 6 hours of coursework within the minor**. Applications will be considered on an open schedule.

The student must complete a minimum of 15 semester hours of coursework with a grade of "B" or better in each course for this Doctoral Minor. All coursework for the minor must carry an ET prefix. Course substitutions are allowed within this minor only if they have ET prefixes and are approved by both the student's minor advisor and Educational Technology department chairperson. Internships, practica and directed studies may **not** be counted in the 15 hour minimum. Doctoral students completing the Educational Technology minor will include an Educational Technology faculty member on their doctoral research committee.

##### Required Coursework — 15 hours

- ET 502 Instructional Design (3)
- ET 503 Computers in Education (3)

and/or

- ET 504 Instructional Materials Design (3)

Total of at least 15 semester hours of ET prefix coursework approved by the student's minor advisor and the Educational Technology department chairperson.

At least 6 hours of ET coursework at the 600 or 700 level. All prerequisite course requirements must be met.



## NURSING EDUCATION

### Doctoral Minor Requirements — 15-16 Credits

Matriculated UNC doctoral students may apply for admission to the minor. Candidates must possess the baccalaureate degree in nursing, have a master's degree and be currently licensed as a registered nurse.

The application materials include a cover page, 3 letters of recommendation and a statement of professional intent relevant to the doctoral nursing minor. Completed packets will be submitted to the School of Nursing prior to enrollment in the nursing minor coursework. Applications will be considered on an open schedule.

#### Required Credits — 15-16 hours

NURS 630 Teaching Strategies in Nursing (3)  
 NURS 660 Nursing Education Seminar (4)  
 NURS 691 Applied Nursing Research (3)  
 NURS 780 The Professorial Role in Nursing Education (3)  
 NURS 695 Advanced Academic Nursing Roles (2-3)

Students must complete a minimum of 15 semester hours with a grade of "B" or better in all courses in the doctoral minor. All coursework for the minor will carry a NURS prefix. Course substitutions may be allowed by the student's advisor within the minor, prior to taking the course.

EDSE 611 Seminar in Severe Affective Needs (3)  
 EDSE 621 Seminar in Severe Cognitive Needs (3)  
 EDSE 641 Medical and Educational Implications of Visual Handicaps (1-3)  
 EDSE 642 Advanced Seminar in Education of Students with Visual Handicaps (3)  
 EDSE 652 Speechreading, Auditory Training and Amplification (3)  
 EDSE 653 Speech, Severe Needs: Hearing (3)  
 EDSE 654 Language, Severe Needs: Hearing (3)  
 EDSE 655 Reading, Severe Needs: Hearing (3)  
 EDSE 656 Methods of Teaching Content: Severe Needs Hearing (3)  
*and select one of the following courses (3 hours)*  
 EDSE 721 Theoretical Foundations of Special Education I (3)  
 EDSE 723 Seminar in Facilitating Personal and Professional Development in Special Education (3)  
 EDSE 727 Seminar in Exceptionalities (3)  
 EDSE 728 Seminar in Professional Writing (3)  
 EDSE 731 Topical Seminar in Special Education (3)



## SPECIAL EDUCATION

### Doctoral Minor Requirements — 15 Credits

A Doctoral Minor in Special Education is available to students in any UNC doctoral program with the approval of their doctoral program advisor. The intent of this program is to encourage doctoral students throughout the University to increase and expand their understanding of the field of special education and disability issues. Completion of the minor will be noted in the student's transcripts as Minor in Special Education. No application to the Division of Exceptionalities and Bilingual/ESL Education is required. In consultation with their doctoral program advisors, students may include sufficient EDSE courses in their programs of study to meet the requirements for the minor. Some or all of the courses used for this minor may be part of a student's program of required or elective classes. The minor consists of additional courses completed with a "B" or better.

This minor is not available to students in the Special Education doctoral program.

#### Required Courses — 6 hours

EDSE 500 Field of Special Education (3)  
*or*  
 EDSE 615 Special Education Law: Cases and Trends (3)  
*and*  
 EDSE 503 Effective School Environments for Learners with Exceptional Needs (3)  
*or*  
 EDSE 505 Assessment of Exceptional Individuals (3)  
*and select two of the following courses (6 hours):*  
 EDSE 524 Seminar in Education of Learners with Profound Needs (3)  
 EDSE 525 Research and Policy for Learners with Profound Needs (3)  
 EDSE 601 Supporting Special Students in the Mainstream (3)  
 EDSE 602 Behavioral Disorders: Characteristics, Identification and Intervention (3)  
 EDSE 606 Instructional Methods for Students with Special Needs (3)  
 EDSE 608 Case Studies with Students with Special Needs (3)  
 EDSE 609 Language Development: Disorders of Individuals with Special Needs (3)  
 EDSE 610 Interventions for Students with Severe Affective Needs (3)



## EDUCATIONAL SPECIALIST DEGREES



### EDUCATIONAL LEADERSHIP, ED.S.

#### Degree Requirements — 30 Credits

The Ed.S. Degree requires 30 hours beyond the master's degree and represents advanced study in educational leadership and policy. Completion of the program may satisfy requirements for the Colorado Principal or Administrator (central office including superintendent) license or provide advanced study for students preparing for leadership roles in post-secondary education.

See "Educational Leadership (Ed.S.) Requirements" on page 23.

#### Educational Leadership — minimum 15 hours

*ELPS Prefix Courses (15)*

*Research (minimum - 3 hours)*

*Select one of the following courses:*

SRM 602 Statistical Methods I (3)

SRM 670 Evaluation: Models and Designs (3)

SRM 680 Introduction to Qualitative Research (3)

EPSY 674 Measurement I: Educational Testing (3)

*Field-Based Learning (minimum - 3 hours)*

*Select one of the following two courses:*

ELPS 606 Internship (3)

ELPS 695 Practicum in Educational Leadership (1-3)

*Electives (minimum - 9 hours)*

Courses Fulfilling Professional Needs and Interests (9)

**Note:** Satisfactory performance on a concluding activity approved by division faculty, in accordance with Graduate School policy, must be demonstrated.



### SCHOOL PSYCHOLOGY, ED.S.

#### Degree Requirements — 79-81 Credits

*The Ed.S. program is fully accredited by the National Association of School Psychologists.*

The specialist program in School Psychology is designed for those persons who wish to become practitioners meeting state and national licensure requirements for school psychologists. Training is primarily oriented toward the acquisition of those skills necessary for effective functioning as a school psychologist working in a public school.

See "School Psychology (Ed.S.) Requirements" on page 29.

#### Required Credits — 79-81 hours

*\*Recommended to meet State of Colorado School Psychologist licensure requirements.*

*Psychological Foundations*

PPSY 763 Seminar in School Psychology (3)

\*PPSY 607 Theories of Counseling (3)

\*PPSY 655 Community Psychology and Social Systems (3)

\*PPSY 658 Ethics and Law in Schools for Psychologists and Counselors (3)

\*PPSY 660 Psychological Consultation: Theory and Practice (3)

PPSY 667 Crisis Intervention in the Schools (2)

PPSY 758 Advanced Psychopathology (3)

\*PPSY 781 Evaluation of Psychological Services (3)

*Select one of the following courses:*

\*EPSY 630 Child and Adolescent Psychology (3)

\*PSY 550 Cognitive Development (3)

*and select one of the following two courses:*

\*EPSY 540 Theories and Principles of Learning (3)

\*PPSY 638 Behavioral Approaches to Professional Psychology (3)

*Assessment for Intervention*

PPSY 618 Practicum in Child, Adolescent, and Family Interventions (5)

\*PPSY 674 Assessment for Intervention: Cognitive and Academic (5)

\*PPSY 676 Assessment for Intervention: Infant and Toddler (3)

\*PPSY 678 Assessment for Intervention: Personality and Behavior (5)

\*PPSY 779 Practicum in School Psychology (3)

*Select one of the following courses:*

PPSY 681 Practicum in Consultation (3)

PPSY 738 Practicum in Evidenced-Based Interventions (3)

*Select one of the following courses:*

\*PPSY 585 Family Counseling and Education in School Settings (2)

\*PPSY 605 Group Laboratory Experience (1) and

\*PPSY 606 Theories and Practices in Group Guidance (3)

\*PPSY 665 Family Systems (3)

*Professional Education (minimum - 9 hours required)*

\*EDRD 617 Evaluation and Improvements of Literacy Teaching and Learning (4)

PPSY 580 Computer Applications to Professional Psychology (2)

\*PPSY 672 Neuropsychology of Learning Disabilities and Traumatic Brain Injuries (3)

PPSY 603 Counseling Children and Adolescents (3)

To meet the professional educational requirements, other courses, with advisor approval, from ELPS, EDSE or EDF may be substituted.

*Multicultural Understanding-Select one of the following courses:*

\*PPSY 565 Psychology of Prejudice (3)

\*PPSY 623 Counseling Diverse Populations (3)

*Supervised Field Work*

PPSY 789 Internship in School Psychology (6-20) (register for three semesters)

**Notes:** A written comprehensive examination is a program requirement, and it is satisfied by successfully completing the National Certified School Psychology Examination (NCSP).

## ENDORSEMENT PROGRAMS



### BILINGUAL BICULTURAL EDUCATION - GRADUATE ENDORSEMENT

#### Elementary and Middle School Education, and Secondary Education

#### Endorsement Requirements — 18-21 Credits

This graduate level endorsement program in Bilingual Bicultural Education emphasizes the study of the structures of English and Spanish, second language acquisition, and methodology related to teaching in a dual language classroom. This program leads to recommendation to Colorado's Linguistically Diverse: Bilingual Education endorsement. The Elementary and Middle School Education program must be completed in conjunction with, or after the completion of the Elementary or Middle School Licensure Program. The Secondary Education Program must be completed in conjunction with, or after the completion of a Secondary Teacher Preparation program.

#### Elementary and Middle School Education Endorsement — 18 hours

##### Required Credits — 18 hours

EDEL 619 Pluralism in Education (3)  
EDLD 600 Literacy and Content Instruction in Spanish Bilingual Classrooms (3)  
EDLD 602 Teaching Linguistically Diverse Learners (3)  
EDLD 603 Methods and Assessment for ESL and Bilingual Education (3)  
EDLD 604 Field Experience in TESOL and Bilingual Education (3)  
SPAN 555 Spanish Readings (3)

#### Secondary Education Endorsement — 21 hours

##### Required Credits — 21 hours

EDEL 619 Pluralism in Education (3)  
EDLD 600 Literacy and Content Instruction in Spanish Bilingual Classrooms (3)  
EDLD 602 Teaching Linguistically Diverse Learners (3)  
EDLD 603 Methods and Assessment for ESL and Bilingual Education (3)  
EDLD 604 Field Experience in TESOL and Bilingual Education (3)  
EDRD 620 Reading in the Middle and Secondary Schools (3)  
SPAN 555 Spanish Readings (3)

**Note:** Students are required to take Spanish Oral Proficiency Exam (OPI). Additional language courses may be required if they do not pass the OPI.



### SCHOOL LIBRARY MEDIA ENDORSEMENT

K-6, K-12 and 7-12 Endorsement Levels

#### Endorsement Requirements — 30-33 Credits K-12 — 33 credits; K-6 and 7-12 — 30 credits.

The graduate non-degree programs in educational media presently includes the School Library Media Endorsement. This endorsement is required of those who intend to obtain professional level employment in Colorado K-12 school libraries, learning resource centers or media centers.

To be endorsed in School Library Media by the State of Colorado Department of Education, an applicant must meet the following requirements:

- hold a Type A teaching license (or equivalent) teaching license;
- have completed one year of successful teaching experience and/or school media experience while holding a valid Type A or teaching license or equivalent certificate;
- have completed an approved graduate degree or (non-degree) program in Educational Media in an accepted institution of higher education including field experience appropriate for the level of endorsement.

The UNC School Library Media program has been designed to meet or exceed competency requirements set by the Colorado Department of Education. Students who do not already hold an M.A. degree who are interested in obtaining a School Library Media Endorsement should investigate the M.A. program in Educational Media. The major difference between the M.A. and this program is 6 additional hours.

Endorsements are granted by the Colorado Department of Education upon the recommendation of the UNC Licensure Officer. Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the Department of Elementary Education or the Department of Educational Foundations and Curriculum Studies in McKee for information. Courses taken at other accredited institutions within the preceding 10 years may be accepted in lieu of courses taken at UNC. However, these courses will be assessed by the UNC Graduate Evaluator before acceptance. Students should be prepared to present evidence of course appropriateness (e.g., a copy of the course description).

#### School Library Media Requirements — 30 hours

ET 502 Instructional Design (3)  
ET 503 Computers in Education (3)  
ET 504 Instructional Materials Design (3)  
ET 530 Media Cataloging and Classification (3)  
ET 533 Reference and Information Management (3)  
ET 535 Administration of Instructional Resources (3)  
ET 536 Media Selection, Utilization and Evaluation (3)  
SRM 600 Introduction to Graduate Research (3)  
EDRD 614 Literature for Children, Adolescents and Young Adults (3)  
ET 692 Internship (3)  
(required for K-6, K-12 endorsement and required for 7-12, K-12 endorsement)

**Note:** K-12 requires 3 additional hours of electives.



## TEACHING ENGLISH AS A SECOND LANGUAGE - GRADUATE ENDORSEMENT

Elementary and Middle School Education  
and Secondary Education

### Endorsement Requirements — 18-21 Credits

This graduate level endorsement program in the teaching of English as a Second Language (ESL) emphasizes the study of the structures of English, second language acquisition, and methodology related to the teaching of English to speakers of other languages. This program leads to recommendation to Colorado's Linguistically Diverse: ESL endorsement. The Elementary and Middle School Education Program must be completed in conjunction with, or after the completion of the Elementary or Middle School Licensure Program. The Secondary Education Program must be completed in conjunction with, or after the completion of a Secondary Teacher Preparation Program.

### Elementary and Middle School Education Endorsement — 18 hours

#### Required Credits — 18 hours

EDEL 619 Pluralism in Education (3)  
EDLD 602 Teaching Linguistically Diverse Learners (3)  
EDLD 603 Methods and Assessment for ESL and Bilingual Education (3)  
EDLD 604 Field Experience in TESOL and Bilingual Education (3)  
ENG 633 Studies in Linguistics (3)  
HISP 508 Teaching the Mexican American Student (3)  
*or*  
EDLD 606 Linguistically Diverse Students and the U.S. Educational System (3)

### Secondary Education Endorsement — 21 hours

#### Required Credits — 21 hours

EDEL 619 Pluralism in Education (3)  
EDLD 602 Teaching Linguistically Diverse Learners (3)  
EDLD 603 Methods and Assessment for ESL and Bilingual Education (3)  
EDLD 604 Field Experience in TESOL and Bilingual Education (3)  
EDRD 620 Reading in the Middle and Secondary Schools (3)  
ENG 633 Studies in Linguistics (3)  
HISP 508 Teaching the Mexican American Student (3)  
*or*  
EDLD 606 Linguistically Diverse Students and the U.S. Educational System (3)

**Note:** Students must show evidence of familiarity with a second language.

## LICENSURE PROGRAMS



### ADMINISTRATORS' LICENSURE: DISTRICT LEVEL LEADERSHIP (NON-DEGREE)

#### Licensure Requirements — 21 Credits

The Administrator Licensure Program in the Division of Educational Leadership and Policy Studies provides opportunities for candidates to acquire the knowledge and skills needed for the day-to-day demands of the administrative positions that provide leadership for family-school-community efforts to improve education. The program not only provides opportunities for students to develop an in-depth understanding of district office roles and responsibilities, but also develops a breadth of understanding of leadership, policy development, local school governance, and contemporary educational issues.

Entering students who already possess a master's degree in Educational Leadership or a Principal License (or equivalent) need a minimum of 18 semester hours of graduate coursework and an internship (3 hours). The Administrator License requires completion of the leadership core (Please See "Leadership Core — 12 hours" on page 119.) as a prerequisite for endorsement for the Administrator License. These core learning experiences may be satisfied by equivalent prior learning experiences.

This total 21 credit hour requirement is a minimum expectation for program completion. Required courses, however, may be waived by the division if a student has taken an equivalent graduate course within the previous eight (8) years or can demonstrate the knowledge and skills for a Colorado Administrator License (see Standards for School Administrators in Colorado).

See "Administrators' Licensure (Non-Degree) Requirements" on page 23.

#### Required Credits — 21 hours (minimum)

ELPS 606 Internship in Educational Leadership (3) (minimum 2 hours at central office and 1 hour with other agencies).

ELPS 654 Instructional Leadership and Supervision (3)

ELPS 660 Law and the Administrator (3)

ELPS 665 Policy Analysis and Development (3)

ELPS 747 Leadership at the School District Level (3)

*and select one of the following two courses:*

ELPS 650 School Finance and Budgeting (3)

ELPS 651 School Business Management (3)

*and select one of the following two courses:*

SRM 670 Evaluation: Models and Designs (3)

EPSY 674 Measurement I: Educational Testing (3)



### EARLY CHILDHOOD EDUCATION, POST-BACCALAUREATE LICENSURE

#### Licensure Requirements — 18-21 Credits

**Must apply through the Graduate School.**

#### Prerequisites

- A completed baccalaureate degree in liberal arts, humanities, sciences, mathematics, social sciences, health or equivalent to those listed in this catalog. (Students without a liberal arts degree will have their transcripts evaluated for liberal arts content.);
- Hold or be eligible for a Type A Colorado Teaching License, endorsed Elementary Education;
- Completion of a minimum of one course in human growth and development or its equivalent;
- Demonstrate appropriate literacy and competency in computer applications. ET 503 or the equivalent may be used to meet this requirement.

#### Required Credits — 18-21 hours

EDEC 539 Parent Education and Involvement in Early Childhood/Primary (3)

EDEC 660 Critical Issues in Early Childhood (3)

EDEC 664 Seminar in Early Childhood and Primary Education (3)

EDEC 670 Curriculum and Instruction in Early Childhood and Primary Education (3)

EDEC 675 Play and Psychosocial Development in Early Childhood (3)

EDEC 601 Practicum (1-3)

*and select one of the following courses:*

EDRD 519 Reading and Writing Development of Preschool/Primary Children (2)

EDEC 648 Psycholinguistics in Early Childhood (3)

**Notes:** This is not an initial endorsement program.

Two levels of field experience/practicum (or equivalent) are necessary to meet the endorsement requirements. Placement with preschool aged children and K-2 level children is required.

- Applicants must have an overall 3.0 GPA on last 60 semester hours for full admission to this program.

## POST-BACCALAUREATE LICENSURE PROGRAMS

Due to a major review and revision process, students making application to the following post-baccalaureate licensure programs are requested to contact the Department of Educational Foundations and Curriculum Studies in McKee to obtain detailed information concerning the structure and requirements leading to Colorado initial teacher licensure. These are licensing programs for students who already have a Bachelors degree from an accredited institution of higher education.

- Middle Grades Education
- Secondary Education



## ELEMENTARY EDUCATION POST-BACCALAUREATE LICENSURE

### Licensure Requirements — 48 Credits

Must apply through the Graduate School.

#### Prerequisites

- For students seeking first time licensure, a completed baccalaureate degree in liberal arts, humanities, sciences, mathematics, social studies, health or equivalent to those listed in this catalog. Students will have their transcripts evaluated for liberal arts content;
- For students seeking an added endorsement (already hold a Colorado teaching certificate/license in a professional area), there is a 40-semester hour requirement plus any necessary content background courses.

#### Admission for First Time Licensure

Students seeking first time licensure are admitted into the program beginning the first summer session of any year and must attend full time in order to complete all course work and student teaching in three semesters. Applications must be received by December 1st of the prior year to begin the program the first summer session of a year. All applicants wishing to count licensure hours toward a Master of Arts degree in Elementary Education must apply to the Graduate School for admission into the Master of Arts degree program at the same time he or she applies to the Post-Baccalaureate Licensure program in Elementary Education.

#### Required Credits — 48 hours

CH 303 Health Education in the Elementary School (1)  
 EDEL 520 Effective Instruction in Elementary School Mathematics (3)  
 EDEL 525 Integrated Methods: Visual Arts, Music and Physical Education (3)  
 EDEL 540 Effective Instruction in Elementary School English/Language Arts (3)  
 EDEL 544 Student Teaching and Capstone Seminar (12)  
 EDEL 550 Effective Instruction in Elementary School Social Studies (3)  
 EDEL 602 Elementary School Practicum (3)  
 EDF 500 Conceptions of Schooling (3)  
 EDRD 510 Achieving Effective Instruction in Developmental Reading (3)  
 EDRD 511 Elementary Reading Diagnosis and Individualization (3)  
 EDSE 430 Exceptional Student in the Elementary Classroom (2)  
 EPSY 347 Educational Psychology for Elementary Teachers (3)  
 ET 501 Introduction to Applications of Educational Technology (3)  
 SCED 671 Elementary and Middle School Science Curriculum (3)

**Notes:** Applicants must have an overall 3.0 GPA for admission. If the grade point average is below 3.0, the applicant is required to take the Graduate Record Examination receiving a combined score of 1000 on verbal and quantitative with a minimum of 400 on each test. The Colorado PLACE Test for elementary education must be passed prior to admission to the program.

EDEL 520, EDEL 540, EDEL 550 and EDRD 510 must be taken at UNC. Students may petition for course equivalence consideration for a maximum of two classes. A maximum of 9 semester credit hours in 500-level numbered elementary education course requirements or electives may be applied as elective credit toward a graduate degree program in elementary education. EDEL 544 (Student Teaching) must be completed in grades K-6 in an elementary school setting.

#### Admission for Added Endorsement

Students seeking an added endorsement to teach at the elementary school level may apply to the program prior to any semester. All applicants wishing to count licensure hours toward a Master of Arts Teaching degree in Elementary Education must apply to the Graduate School for admission into the M.A.T. degree program at the same time he or she applies to the Post-Baccalaureate Licensure program in Elementary Education.

### Required Credits — 40 hours

CH 303 Health Education in the Elementary School (1)  
 EDEL 525 Integrated Methods: Visual Arts, Music and Physical Education (1-3)  
 EDEL 544 Student Teaching and Capstone Seminar (12)  
 EDEL 602 Elementary School Practicum (3)  
 EDEL 620 Researched Applications for Instruction in Mathematics, K-9 (3)  
 EDEL 640 Instruction in Language Arts and Literacy in the Elementary School (3)  
 EDEL 650 Researched Application for Instruction in Social Studies, K-9 (3)  
 EDRD 612 Reading in the Elementary Schools (3)  
 EDRD 511 Elementary Reading Diagnosis and Individualization (3)  
 EDRD 614 Literature for Children, Adolescents and Young Adults (3)  
 SCED 671 Elementary and Middle School Science Curriculum (3)

**Notes:** EDEL 544 (Student Teaching) must be completed in grades K-6 in an elementary school setting.

For more information about the Post-Baccalaureate Licensure program in Elementary Education, stop by the Department of Elementary Education in McKee, or call for an appointment with the Coordinator of this program.



## PRINCIPALS' LICENSURE (NON-DEGREE)

### Licensure Requirements — 27 Credits

The principals' licensure program provides opportunities to acquire knowledge about leadership in P-12 educational settings. The program is designed according to the Standards for Principals through the Colorado Department of Education and State Board of Education. Program requirements include 27 semester hours of coursework including a field experience.

See "Principals' Licensure (Non-Degree) Requirements" on page 23.

#### Leadership Core — 12 hours

ELPS 601 Leadership Development Through Inquiry (3)  
 ELPS 603 Shaping Organizations: Management and Leadership in Education (3)  
 ELPS 604 Understanding People: Professional Development and Educational Leadership (3)  
 ELPS 605 External Environments: Social, Political, and Economic Influences in Educational Leadership (3)

#### Additional Requirements — minimum of 15 hours

ELPS 606 Internship in Educational Leadership (6)  
 ELPS 654 Instructional Leadership and Supervision (3)  
 ELPS 660 Law and the Administrator (3)  
 ELPS 670 The Principalship: Leadership at the School Site Level (3)



## READING LICENSURE

Select One Endorsement: Reading Specialist or Reading Teacher

### Licensure Requirements — 29-59 Credits

See “Reading Licensure Endorsement Requirements” on page 30.

## Reading Specialist Endorsement

### Program Requirements — 59 hours

The K-12 Reading Specialist endorsement is designed to prepare students to: 1) provide professional guidance and expertise to school and/or district literacy curriculum, instruction, and assessment programs; 2) develop and conduct inservice programs related to literacy teaching and learning; 3) team teach with classroom teachers; 4) serve as an in-class consultant, collaborator, and/or coach with classroom teachers; and 5) to provide professional guidance and expertise regarding the instructional needs of children with reading/literacy difficulties. As required by the State of Colorado, the K-12 Reading Specialist endorsement program is designed to be a sixth year graduate program of studies. Equivalent graduate courses may be waived by the student's assigned advisor. Most students entering the program will have a Master of Arts degree in Reading and/or a Reading Endorsement at the Elementary or Secondary level. Students in the K-12 Reading Specialist program are required to obtain the alternate endorsement in Reading.

### K-12 Specialist:

To successfully complete the K-12 Reading Specialist academic program an applicant must:

- Have successfully completed graduate studies in the teaching of reading to qualify for Reading Teacher endorsement at both the elementary and secondary levels. An elementary or secondary Reading Teacher shall have completed preparation in reading at the level alternate to the initial Reading Teacher endorsement.
- Have completed all course requirements with a letter grade of “B” or better.
- Pass the Colorado PLACE Test for Reading Teacher endorsement.

### Required Literacy Courses — 35 hours

EDRD 612 Reading in the Elementary Schools (3)  
 EDRD 614 Literature for Children, Adolescents and Young Adults (3)  
 EDRD 617 Evaluation and Improvements of Literacy Teaching and Learning (4)  
 EDRD 620 Reading in the Middle and Secondary Schools (3)  
 EDRD 621 Critical Reading and Thinking in Content Subjects (3)  
 EDRD 642 Teaching the Writing Process in Schools (3)  
 EDRD 645 Reading Research (3)  
 EDRD 670 Directing a School-Wide Reading/Literacy Program (3)  
 EDRD 692 Clinical Practicum in Literacy Coaching (4)

*and select one of the following courses*

EDRD 694 Reading Center Internship: Adult Reading, Literacy and/or Supervision (3)  
 EDRD 701 Advanced Practicum in Literacy (3)

*and select one of the following courses:*

EDRD 622 Directed Study (3) (Content to be determined with Advisor)

### Required Support Courses — 24 hours

EDEL 619 Pluralism in Education (3)  
 SRM 600 Introduction to Graduate Research (3)  
 SRM 670 Evaluation: Models and Designs (3)  
 EDLD 602 Teaching Linguistically Diverse Learners (3)  
 EDLD 603 Methods and Assessment for ESL and Bilingual Education (3)  
 ELPS 662 Design and Delivery of Professional Development (3)  
 ELPS 655 Seminar in Learning in Adulthood (3)

*and select one of the following courses:*

EED 541 Methods and Materials for Teaching Language and Composition in the Secondary School (3)  
 EDEC 670 Curriculum and Instruction in Early Childhood and Primary Education (3)  
 EDEL 612 Elementary School Curriculum (3)  
 EDMS 667 Assessment, Design and Evaluation of Middle School Curriculum (3)  
 EDRD 618 Literacy Instruction for Emerging Readers and Writers at Risk (3)  
 EDSE 500 Field of Special Education (3)  
 EDSE 501 The Exceptional Learner (3)

## Reading Teacher K-12 Endorsement

### Program Requirements — 29 hours

The Reading Teacher endorsement is designed to prepare students to: 1) provide professional guidance and expertise to school literacy curriculum, instruction and assessment programs; 2) serve as a literacy coach to classroom teachers; 3) to work with students experiencing literacy difficulties; and 4) to provide professional guidance and expertise regarding the instructional needs of children with reading and literacy difficulties. As required by the State of Colorado, the Reading Teacher endorsement program is designed to be a fifth year graduate program of studies. Equivalent graduate courses may be waived by the student's assigned advisor.

### Reading Licensure:

To successfully complete the Reading Teacher endorsement program, an applicant must complete all courses with a letter grade of “B” or better. To receive the Reading Teacher endorsement from the State of Colorado, the applicant must also:

- Have successfully completed two or more years of teaching experience in an accredited and/or established elementary or secondary school (at the level of application) while holding a Type A or equivalent certificate.
- Pass the Colorado PLACE Test for Reading Teacher endorsement.

## Elementary and Secondary Reading Endorsement Requirements — 29 hours

### Required Reading Credits – 29 hours

EDRD 611 Language, Literacy and Cognitive Development (3)  
 EDRD 612 Reading in the Elementary Schools (3)  
 EDRD 614 Literature for Children, Adolescents and Young Adults (3)  
 EDRD 617 Evaluation and Improvements of Literacy Teaching and Learning (4)  
 EDRD 620 Reading in the Middle and Secondary Schools (3)  
 EDRD 642 Teaching the Writing Process in Schools (3)  
 EDRD 645 Reading Research (3)  
 EDRD 670 Directing a School-Wide Reading/Literacy Program (3)  
 EDRD 692 Clinical Practicum in Literacy Coaching (4)



## SPECIAL EDUCATION ADMINISTRATION, POST- MASTER'S LICENSURE PROGRAM

### Licensure Requirements — 38-48 Credits

The Special Education Administration endorsement program is designed to prepare students to become special education administrators. The endorsement is a post-master's licensure and all students must have completed a master's degree at an accredited institution. Students are admitted to the program if they meet the admission requirements of the Graduate School, are teacher licensed and have completed three years of successful teaching experience or its equivalent. In addition to the admission requirements, a student must hold or be eligible for Colorado licensure as Special Education Teacher I: Moderate Needs or the equivalent.

The course of study is a highly individualized program based on the background of the student and is designed to provide broad knowledge base for all areas of special education.

Depending upon the licensure of the student, a program is designed to provide an in-depth knowledge of the field of special education, emphasizing the wide variety of needs of special children with regard to delivery systems, evaluation, programming, identification, finance, law and due process.

### Required Credits — 38-48 hours

#### *Special Education Core*

- EDSE 500 Field of Special Education (3)
- EDSE 501 The Exceptional Learner (3)
- EDSE 502 Communication, Collaboration and Consultation for Special Educators (3)
- EDSE 503 Effective School Environments for Learners with Exceptional Needs (3)
- EDSE 505 Assessment of Exceptional Individuals (3)

#### *Special Education Administration*

- EDSE 520 Survey of Learners with Profound Needs (3)
- EDSE 601 Supporting Special Students in the Mainstream (3)
- EDSE 680 Administration and Supervision of Special Education (3)
- EDSE 681 Administrative Planning and Program Evaluation in Special Education (3)
- EDSE 718 Advanced Seminar in Education of Students with Hearing and/or Visual Handicaps (3)
- EDSE 730 Externship in Special Education (1-12)
- ELPS 650 School Finance and Budgeting (3)
- ELPS 660 Law and the Administrator (3)

Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the Department of Elementary Education or the Department of Educational Foundations and Curriculum Studies in McKee for information.

## MASTER'S DEGREES



### APPLIED STATISTICS AND RESEARCH METHODS, M.S.

#### Degree Requirements — 30 Credits

This program provides students with a broad understanding of appropriate applications of statistical and research methodology and with experience in using computers effectively for statistical analysis. Emphasis is placed on the concerns that an applied statistician or educational researcher must address in dealing with practical issues.

Completion of this degree will enable the graduate to seek employment in a career field requiring the application of statistical or research methodology, for example: data analysis or experimental design; to teach in a community or junior college; to work as an evaluation/assessment specialist in a public school setting; or to enter a Ph.D. program in statistics, educational research, or a related area.

See "Applied Statistics and Research Methods (M.S.) Requirements" on page 22.

#### Required Credits — 10 hours

SRM 502 Applied Statistics (4)  
SRM 520 Introduction to Statistical Computing (1)  
SRM 600 Introduction to Graduate Research (3)  
SRM 650 Research and Statistics Colloquium (2) (1 credit/  
term)

**And, complete one of the following Concentration Area requirements:**

#### Applied Statistics Concentration — 20 hours

SRM 551 Mathematical Statistics with Applications I (4)  
SRM 552 Mathematical Statistics with Applications II (4)  
SRM 608 Experimental Design (3)  
SRM 614 Linear Models (3)  
Elective Credits (minimum) (6)

#### Research Methods Concentration — 20 hours

SRM 670 Evaluation: Models and Designs (3)  
SRM 680 Introduction to Qualitative Research (3)  
EPSY 674 Measurement I: Educational Testing (3)  
Elective Credits (minimum) (11)

**Note:** Students enrolled in summers-only or evenings-only programs may substitute SRM 602 and SRM 603 for SRM 502 and SRM 520. They may also substitute two (2) credit hours of SRM 694 for SRM 650.

Electives must be approved by advisor prior to enrollment.





## BIOLOGICAL SCIENCES, M.S.

Select One Emphasis Area: Non-Thesis or Thesis

### Degree Requirements — 30 Credits

See “Biological Sciences (M.S.) Requirements” on page 3.

### Program Requirements — 27 hours

*Biology Core — 3 hours*

BIO 691 Seminar in Biological Sciences (1)

BIO 694 Foundations of Biological Research (2)

### Required Elective Credits — 24-27 hours minimum

*Basic Elective Credits — 7 hours Thesis — 10 hours Non-Thesis*

BIO 525 Molecular Genetics (3)

BIO 530 Plant Taxonomy (4)

BIO 533 General Parasitology (4)

BIO 534 Mammalogy (4)

BIO 535 Survey of Fishes, Amphibians and Reptiles (4)

BIO 537 Morphogenesis of Algae and Fungi (4)

BIO 540 Anatomy and Morphogenesis of Plants (4)

BIO 550 Cell Physiology (4)

BIO 554 General Plant Physiology (4)

**Note:** All of the above courses are double numbered.

*Advanced Study Electives — 8 hours*

BIO 512 TA Development Seminar (1)

BIO 545 Cytology (3)

BIO 552 Mammalian Physiology I (3)

BIO 553 Mammalian Physiology II (3)

BIO 555 Reproductive and Developmental Biology (3)

BIO 557 Mammalian Physiology I Laboratory (1)

BIO 558 Mammalian Physiology II Laboratory (1)

BIO 560 Animal Ecology (4)

BIO 561 Plant Ecology (4)

BIO 569 Conceptual Issues in Evolution (2)

BIO 571 Teaching Strategies for Biology Teachers (1)

BIO 521 Advanced Genetics (3)

BIO 636 Advanced Invertebrate Zoology (4)

BIO 645 Comparative Vertebrate Adaptations (4)

BIO 654 Plant Reproductive Growth and Development (3)

BIO 682 Problems in Teaching College Biology (3)

*\*Enrichment and Non-Scheduled Electives — 3 hours*

BIO 501 Current Issues in Biology (1)

BIO 508 Workshop (1-6)

BIO 513 Professional Renewal (1-10)

BIO 556 Current Topics in Biomedical Research (2)

BIO 585 Topics in Field Biology (1-10)

BIO 592 Internship in Biological Sciences (1-6)

BIO 595 Special Topics in Biology (3)

BIO 622 Directed Studies (1-6)

SCED 508 Workshop (1-6)

SCED 513 Professional Renewal (1-12)

\*Hours can be selected with the approval of the student's advisor from the above list of enrichment and non-scheduled classes or other appropriate classes in the sciences or College of Education.

*Required Electives — 3 hours*

Select with approval of advisor (3 hours)

### Non-Thesis Emphasis

For students, especially secondary biology and science teachers, needing to expand their background in the biological sciences and to enhance their research skills.

Students will broaden their basic knowledge of the biological sciences and gain some experience in research methodology. They may also improve their understanding of the support sciences and science pedagogy.

### Program Requirements — 27 hours

*Biology Core — 3 hours*

*Basic Electives — 10 hours minimum*

*Advanced Study Electives — 8 hours minimum*

*\*Enrichment and Non-Scheduled Electives — 3 hour minimum*

### Required Emphasis Credits — 3 hours

BIO 697 Graduate Research (3)

### Thesis Emphasis

For students wanting to broaden their background in the biological sciences and to develop their research skills in preparation for a doctoral program or a research career. Students will gain the background in biological science and in research to allow them to enter professional fields of biology requiring advanced training or to enter advanced studies.

### Program Requirements — 27 hours

*Biology Core — 3 hours*

*Basic Electives — 7 hours minimum*

*Advanced Study Electives — 8 hours minimum*

*\*Enrichment and Non-Scheduled Electives — 3 hour minimum*

*Research Elective (6 hours)*

BIO 699 Thesis (6)



## CHEMISTRY, M.S.

Select One Emphasis Area: Education or Research

### Degree Requirements — 30 Credits

See "Chemistry (M.S.) Requirements" on page 4.

#### Education Emphasis

This Chemistry, M.S. extends and builds upon the knowledge and skills learned at the undergraduate level and, through the science education component, develops skills necessary to become increasingly effective in the chemistry classroom.

Successful completion of this degree will enhance advancement opportunities in the education field and provide a teacher advanced training in content and pedagogy. The degree can also qualify persons to teach at the junior or community college level.

#### Research Credits — 5-12 hours

CHEM 600 Seminar in Chemistry (2)

and either

CHEM 695 Thesis Proposal (1)

CHEM 699 Thesis (6)

or

CHEM 693 Chemical Research (3-10)

or

CHED 693 Chemical Education Research (3-10)

**Note:** Students must meet a physical chemistry requirement if not previously taken. CHEM 551, CHEM 552, CHEM 453 and CHEM 454 may be taken to meet this requirement.

#### Chemistry Elective Credits — 6-19 hours

CHEM 520 Theory and Use of Analytical Instruments (1)

CHEM 522 Advanced Analytical Chemistry (3)

CHEM 523 Chemical Spectroscopy (3)

CHEM 533 Organic Synthesis and Stereochemistry (3)

CHEM 534 Theory and Mechanisms of Organic Reactions (3)

CHEM 543 Organometallic Chemistry (3)

CHEM 556 Physical Chemistry of Atomic and Microscopic Systems (3)

CHEM 557 Physical Chemistry of Macroscopic Systems (3)

CHEM 560 Environmental Chemistry (2)

CHEM 581 General Biochemistry I (4)

CHEM 582 General Biochemistry II (4)

CHEM 587 Toxicology (3)

CHEM 590 Advanced Topics in Chemistry (3)

#### Pedagogy Credits — 6-19 hours

CHED 682 Problems in Teaching Chemistry (3)

EPSY 540 Theories and Principles of Learning (3)

*Electives*

EDEL 619 Pluralism in Education (3)

EDSE 501 The Exceptional Learner (3)

EPSY 674 Measurement I: Educational Testing (3)

ET 503 Computers in Education (3)

SRM 600 Introduction to Graduate Research (3)

**Notes:** Courses may be taken with the approval of the candidate's graduate advisor in the natural sciences, mathematics, computer science, education, etc., as necessary to broaden the candidate's background. For students with limited experience in using computers, SCI 591, Computer Applications in Science and SCI 593, The Computer in the Science Classroom, are recommended.

Students completing a thesis must successfully defend the thesis, and must successfully complete comprehensive examinations in both chemistry and chemical education.

#### Research Emphasis

The Chemistry, M.S. extends and builds upon the knowledge and skills learned at the undergraduate level and, through the research component, develops independence in the chemical laboratory and in dealing with the chemical literature.

Candidates have the opportunity to work closely with faculty trained in biochemistry and in analytical, inorganic, physical and organic chemistry.

Successful completion of this degree will enhance chances for professional advancement and expand employment opportunities. Further education in a Ph.D. program in chemistry is also a possibility.

#### Research Credits — 12 hours

CHEM 600 Seminar in Chemistry (2)

CHEM 695 Thesis Proposal (1)

CHEM 699 Thesis (9)

#### Chemistry Elective Credits — minimum 12 hours

CHEM 520 Theory and Use of Analytical Instruments (1)

CHEM 522 Advanced Analytical Chemistry (3)

CHEM 523 Chemical Spectroscopy (3)

CHEM 533 Organic Synthesis and Stereochemistry (3)

CHEM 534 Theory and Mechanisms of Organic Reactions (3)

CHEM 543 Organometallic Chemistry (3)

CHEM 556 Physical Chemistry of Atomic and Microscopic Systems (3)

CHEM 557 Physical Chemistry of Macroscopic Systems (3)

CHEM 560 Environmental Chemistry (2)

CHEM 581 General Biochemistry I (4)

CHEM 582 General Biochemistry II (4)

CHEM 587 Toxicology (3)

CHEM 590 Advanced Topics in Chemistry (3)

CHEM 622 Directed Studies (1-3)

#### General Electives — 0-6 hours

Electives to complete 30 credit hours with the approval of the major advisor are required for this program.

**Note:** In addition to course requirements, all students must successfully complete a defense of the thesis and must successfully complete comprehensive examinations in a major area of study (analytical, biological, inorganic, organic or physical chemistry).



## COMMUNICATION, M.A.

Select One Emphasis Area: Human Communication: Non-Thesis Option or Human Communication: Thesis Option

### Degree Requirements — 30-33 Credits

This program focuses on the study of spoken symbolic interaction. Students will emphasize coursework relevant to rhetorical and communication theory, interpersonal and group communication, and communication research methods.

Graduates of this program will advance their current professional careers, prepare themselves for careers in business and industry requiring expertise in human communication or prepare themselves to apply for a Ph.D. program in speech communication. The thesis option is recommended for students considering additional graduate study.

### Program Major Requirements — 18 hours

SPCO 600 Graduate Study in Communication (3)

SPCO 601 Qualitative Methods in Communication Research (3)

SPCO 602 Quantitative Methods in Communication Research (3)

SPCO 605 Rhetorical Criticism (3)

and select one of the following two courses:

SPCO 504 Rhetorical Theory (3)

SPCO 603 Communication Theory (3)

and select one of the following two courses:

SPCO 514 Interpersonal Communication (3)

SPCO 515 Group Communication (3)

**Notes:** Select any electives with SPCO prefixes. One elective course may be from a related discipline with the approval of your advisor. Students must adhere to the Graduate School policy on double-numbered courses.

Graduates are required to have a minimum number of graduate and undergraduate credit hours in the discipline for graduation (45 Non-Thesis and 48 Thesis Option). Possible deficiencies will be determined after review of the undergraduate transcripts.

All graduate students must pass written and oral comprehensive examinations before graduation. Students may apply for comprehensive examinations after completion of 24 semester hours, all undergraduate requirements and all required courses.

A maximum of 9 semester hours, individually or in combination, of courses numbered 508, 513, 561 or 622 may be counted toward the master's degree.

### Human Communication: Non-Thesis Option Emphasis

**Degree Requirements — 33 hours**

**Program Requirements — 18 hours**

**Required Elective Credits — 15 hours**

500- and/or 600-level coursework

### Human Communication: Thesis Option Emphasis

**Degree Requirements — 30 hours**

**Program Requirements — 18 hours**

**Required Emphasis Credits — 6 hours**

SPCO 699 Thesis (6)

**Required Elective Credits — 6 hours**

500- and/or 600-level coursework

Students must pass an oral examination over his/her thesis.



## COMMUNICATION DISORDERS: AUDIOLOGY, M.A.

Non-Certifying Degree Emphasis

### Degree Requirements — Credits 31

This program is designed to provide students academic coursework relating to normal and disordered hearing in children and adults. Students who complete the non-certifying master's program will not participate in any of the clinical practica required in the certifying master's degree program. Therefore, they will not be eligible to complete the Clinical Fellowship Year (CFY) required by the American Speech-Language-Hearing Association (ASHA) for the Certificate of Clinical Competence (CCC) and they will not be qualified for Colorado Department of Education certification.

International students will be admitted to the non-certifying master's degree program until such time as they successfully pass the required speech-language-hearing screening conducted by departmental faculty. A student who passes this screening may then elect to follow the master's degree program that leads to certification.

See "Communication Disorders: Audiology, Non-Certifying (M.A.) Requirements" on page 34.

### Required Credits — 31 hours

CMDS 515 Foundations of Research and Writing (1)

CMDS 555 Neuroanatomy and Neurophysiology of Communication (3)

CMDS 570 Rehabilitative Audiology (3)

CMDS 571 Speech and Hearing Science (4)

CMDS 572 Industrial Audiology (2)

CMDS 573 Auditory Physiology and Pathology (3)

CMDS 582 Educational Audiology (3)

CMDS 671 Psychoacoustics (2)

CMDS 675 Differential Diagnosis of Auditory Problems (3)

CMDS 678 Hearing Aids and Uses of Amplification (3)

HRS 610 Interpretation and Evaluation of Behavioral Research (3)

Required Elective Credits (2)\*

\*Elective Credits selected with consent of advisor.

**Notes:** If the student decides to complete a thesis, six hours of CMDS 699, Thesis: Communication Disorders and three hours of SRM 602, Statistical Methods I, must be taken in addition to the requirements described above.

Successful completion of a written comprehensive exam or a master's thesis is required to complete the Master of Arts program.



## COMMUNICATION DISORDERS: SPEECH-LANGUAGE PATHOLOGY, M.A.

Select One Emphasis Area: Certifying or  
Non-Certifying

### Degree Requirements — 69 Credits

#### Program Requirements — 37 hours

CMDS 516 Professional Issues in SLP (1)  
CMDS 555 Neuroanatomy and Neurophysiology of  
Communication (3)  
CMDS 563 Voice and Resonance Disorders (2)  
CMDS 571 Speech and Hearing Science (4)  
CMDS 655 Acquired Disorders of Language and Cognition (3)  
CMDS 656 Feeding and Swallowing Disorders: Lifespan (2)  
CMDS 657 Motor Speech Disorders: Lifespan (2)  
CMDS 661 Speech Production Disorders: Lifespan (3)  
CMDS 664 Fluency Disorders (2)

and select one of the following courses:

CMDS 658 Assistive Technology for Communication  
Disorder (3)  
EDSE 254 American Sign Language 1 (3)

and select one of the following courses:

CMDS 682 Language Disorders in Early Childhood and  
Preschool (3)  
CMDS 684 Disorders of Language & Literacy: School-Age  
and Adolescent (3)

Research Courses — 9 hours

CMDS 515 Foundations of Research and Writing (1)  
CMDS 615 Research in Communication Sciences and  
Disorders (1) (Take 3 times)  
CMDS 686 Capstone in Speech-Language Pathology (2)

and select one of the following courses:

HRS 610 Interpretation and Evaluation of Behavioral  
Research (3)  
SRM 600 Introduction to Graduate Research (3)

Successful completion of a written comprehensive exam, its  
equivalent, or a master's thesis is required to complete the  
M.A. program.

See "Communication Disorders: Speech-Language Pathology  
(M.A.) Requirements" on page 35.

### Certifying Degree Emphasis

#### Degree Requirements — 69 hours

This program is designed to prepare students for entry level  
activity as speech-language pathologists. Speech-language  
pathologists are professional practitioners responsible for the  
prevention, diagnosis and treatment of speech and language  
disorders in children and adults.

Areas emphasized in the graduate program include the  
diagnosis and treatment of articulation, voice, fluency and  
language disorders in persons ranging in age from young  
children through older adults. Supervised practica are  
provided in both on- and off-campus facilities.

Upon completion of the program, graduates are eligible to  
take the National Examination in Speech-Language  
Pathology and Audiology (NESPA) and to complete the  
Clinical Fellowship Year (CFY) required by the American  
Speech-Language-Hearing Association (ASHA) for the  
Certificate of Clinical Competence (CCC). Certified speech-  
language pathologists find employment in the public  
schools, private practice, hospitals, rehabilitation facilities  
and free-standing clinics.

Students who are deficient in clinical observation hours  
should see advisor for enrollment options.

#### Program Requirements — 37 hours

##### Clinical Practicum — 14 hours

CMDS 569 Advanced Diagnostic Procedures (6)  
CMDS 583 Clinical Practicum: Introduction (2)  
CMDS 585 Clinical Practicum in Speech-Language Pathology:  
Intermediate (2)

CMDS 586 Clinical Practicum in Speech-Language Pathology:  
Intermediate/Advanced (2)

CMDS 588 Clinical Practicum in Speech-Language Pathology:  
Advanced (2)

##### Internships — 18 hours

(Student chooses Primary internship for 12 hours and  
Secondary internship for 6 hours)

CMDS 592 Internship in Public Schools (6 or 12)

CMDS 692 Internship in Medical Settings (6 or 12)

Notes: Students who do not pursue a thesis must complete  
both internships: CMDS 592, Internship in Public Schools  
and CMDS 692, Internship in Medical Settings, for 6-12  
semester hours each. Students who elect to complete a thesis  
may be exempted from one of these externships, with the  
consent of their academic advisor and they must complete  
CMDS 699, Thesis: Communication Disorders, for six  
semester hours and SRM 602, Statistical Methods I, for three  
semester hours, in addition to the requirements shown  
above.

Students who complete this program are eligible for the  
Certificate of Clinical Competence in Speech-Language  
Pathology from the American Speech-Language-Hearing  
Association and for licensure from the Colorado Department  
of Education. This program is accredited by the Council on  
Academic Accreditation (CAA) of the ASHA and by the  
Colorado Department of Education.

### Non-Certifying Degree Emphasis

#### Degree Requirements — 37 hours

This program is designed to provide students academic  
coursework relating to normal and disordered speech and  
language in children and adults, without preparing them for  
direct clinical service. Students who complete the non-  
certifying master's program will not participate in any of the  
clinical practica required in the certifying master's degree  
program. Therefore, they will not be eligible to complete the  
Clinical Fellowship Year (CFY) required by the American  
Speech-Language-Hearing Association (ASHA) for the  
Certificate of Clinical Competence (CCC) and they will not  
be qualified for Colorado Department of Education  
certification.

International students will be admitted to this program until  
such time as they successfully pass the required speech-  
language-hearing screening conducted by the department  
faculty. A student who passes this screening may then elect  
to follow the certifying master's degree program.

#### Program Requirements — 37 hours

Notes: If the student decides to complete a thesis, six hours of  
CMDS 699, Thesis: Communication Disorders and three  
hours of SRM 602, Statistical Methods I, must be taken in  
addition to the requirements described above.

**COMMUNITY COUNSELING, M.A.****Degree Requirements — 60 Credits**

*This program is accredited by the Council for Accreditation of Counseling and Related Educational Programs.*

**Program Objectives**

The Counseling faculty is committed to the development of broadly based competent professional counselors skilled in helping people with personal, career and leisure concerns in educational institutions and community agencies. The requirements of the program are conceptualized within the framework and standards set forth by the counseling profession, Colorado state law, Graduate School and job requirements.

The Community Counseling program at the master's level prepares a professional counselor to work in various agency settings such as mental health centers, probation and parole departments, substance abuse centers and residential treatment centers.

See "Community/School Counseling (M.A.) Requirements" on page 28.

**Required Credits — 60 hours**

EPSY 530 Life Span Developmental Psychology (3)

PPSY 558 Abnormal Psychology (3)

PPSY 565 Psychology of Prejudice (3)

or

PPSY 623 Counseling Diverse Populations (3)

PPSY 603 Counseling Children and Adolescents (3)

PPSY 605 Group Laboratory Experience (1)

PPSY 607 Theories of Counseling (3)

PPSY 612 Practicum in Individual Counseling (5)

PPSY 616 Career Theory, Counseling and Assessment (3)

PPSY 624 Assessment and Treatment of Substance Abuse (3)

PPSY 650 Orientation to Community Counseling (3)

PPSY 654 Child Abuse and Neglect (3)

PPSY 655 Community Psychology and Social Systems (3)

PPSY 657 Legal and Ethical Aspects of Counseling and Psychology (3)

PPSY 662 Group Dynamics and Facilitation (3)

PPSY 665 Family Systems (3)

PPSY 673 Appraisal and Assessment: Community Counseling (3)

PPSY 692 Internship in Community Counseling (9)

SRM 600 Introduction to Graduate Research (3)

**Marriage and Family Therapy Emphasis**

*If admitted and enrolled in the Community Counseling, M.A., this emphasis may be an elected addition to the degree program.*

**Program Requirements — 66 Credits**

The requirements of the emphasis are directed toward the development of competent professionals in the practice of marital and family therapy. The emphasis area deals primarily with relationships, interpersonal interaction and systems theory.

**Required Credits — 51 hours**

Complete the required credits for the M.A. in Community Counseling degree, without PPSY 692.

**Required Emphasis Courses — minimum 15 hours**

PPSY 668 Sexuality Counseling (3)

PPSY 669 Advanced Methods: Couples and Family Therapy (3)

PPSY 691 Internship in Community Counseling: Marriage and Family Therapy (2)

PPSY 694 Practicum in Family Therapy (4)

PPSY 695 Seminar: Contemporary Issues in Couples and Family Therapy (3)

**Suggested Elective**

PPSY 585 Family Counseling and Education in School Settings (2)

**EARTH SCIENCES, M.A.****Degree Requirements — 30 Credits**

This program is for students who wish to broaden or deepen their backgrounds in the earth science disciplines (astronomy, geology, meteorology and oceanography) and develop their research skills. It serves individuals who are or intend to become secondary school or community college earth science teachers. It is also appropriate for elementary and middle school teachers, for students pursuing careers in allied fields that require a multidisciplinary background in the earth sciences and for individuals wishing to explore the earth sciences as a second career.

The multidisciplinary structure of the department affords each student the opportunity to develop a sequence of courses that complements and builds upon his or her previous education and experience, whether in the earth sciences or in other disciplines. The program provides both a thesis and a non-thesis option. Typically, students seeking a focused program emphasizing research skills elect the thesis option, and students seeking a broad, multidisciplinary curriculum emphasizing content will elect the non-thesis option. In consultation with the student's graduate committee, each student will select the appropriate option and design a curriculum for his or her particular educational and career objectives.

See "Earth Sciences (M.A.) Requirements" on page 5.

**Thesis Option Required Credits — 12-16 hours**

ESCI 599 Seminar in Earth Sciences — minimum of (2)

ESCI 600 Introduction to Earth Science Research (2)

ESCI 695 Special Topics in Earth Sciences (2)

ESCI 699 Thesis (6-10)

**Thesis Option Elective Credits — 14-18 hours**

*\*Select courses from the Elective Credits listed below.*

**Non-Thesis Option Required Credits — 8-12 hours**

ESCI 599 Seminar in Earth Sciences — minimum of (2)

ESCI 600 Introduction to Earth Science Research (2)

ESCI 695 Special Topics in Earth Sciences (2)

ESCI 697 Graduate Research (2-6)

**Non-Thesis Option Elective Credits — 18-22 hours**

*\*Select courses from the Elective Credits listed below.*

**\*Thesis or Non-Thesis Elective Credits**

AST 622 Directed Studies (1-4)

ESCI 550 Strategies in Teaching in Earth Sciences (1)

ESCI 575 Earth Systems Science Education (1-6)

ESCI 584 Earth Sciences Field Experiences (1-15)

GEOL 510 Groundwater Geology (2)

GEOL 521 Optical Mineralogy and Petrography (4)

GEOL 540 Paleontology (4)

GEOL 550 Sedimentology and Stratigraphy (4)

GEOL 560 Geomorphology (3)

GEOL 564 Glacial and Quaternary Geology (3)

GEOL 567 Volcanic Geology (3)

GEOL 581 Geologic Field Techniques (2)

GEOL 590 Rocky Mountain Geology Seminar (2)

GEOL 622 Directed Studies (1-4)

MET 521 Climatology (3)

MET 536 Biometeorology (3)

MET 541 Synoptic Meteorology (3)

MET 542 Synoptic Meteorology Laboratory (2)

MET 595 Special Topics in Meteorology (1-4)

MET 622 Directed Studies (1-3)

OCN 622 Directed Studies (1-4)

SCED 671 Elementary and Middle School Science Curriculum (3)

SCED 678 Science Education Seminar (1-2)

SCED 680 Science Curricula in Secondary/College Settings (3)

**Note:** ESCI 599, a one semester hour course, must be taken every semester the student is in residence at UNC.

Both written and oral comprehensive examinations are required.

\*Substitutions must be approved by the graduate committee.

**EDUCATIONAL LEADERSHIP,  
M.A.****Degree Requirements — 36 Credits**

The Master of Arts degree in Educational Leadership provides opportunities for candidates to acquire knowledge about leadership in P-12, community college, higher education, or other educational settings. The program provides opportunities for students to develop in-depth understanding about leadership roles and responsibilities, working with external environments, professional development, organizational behavior, and contemporary educational issues.

See "Educational Leadership (M.A.) Requirements" on page 23.

**Leadership Core — 12 hours**

ELPS 601 Leadership Development Through Inquiry (3)  
 ELPS 603 Shaping Organizations: Management and Leadership in Education (3)  
 ELPS 604 Understanding People: Professional Development and Educational Leadership (3)  
 ELPS 605 External Environments: Social, Political, and Economic Influences in Educational Leadership (3)

**Choose One Concentration Area Below — 9 hours***P-12 Education — 9 hours*

ELPS 654 Instructional Leadership and Supervision (3)  
 ELPS 660 Law and the Administrator (3)  
 ELPS 670 The Principalship: Leadership at the School Site Level (3)

*Higher Education and Student Affairs Leadership — 9 hours*

*Select from the following courses:*

HESA 650 College Student Development: Theory and Research (3)  
 HESA 651 Philosophical, Historical and Cultural Foundations of Student Affairs in Higher Education (3)  
 HESA 655 Multiculturalism in Higher Education (3)  
 HESA 668 Higher Education in the United States (3)  
 HESA 669 College and University Curriculum (3)  
 HESA 680 Law and Higher Education (3)  
 HESA 683 Finance and Resource Management in Higher Education (3)

*Adult and Continuing Education — 9 hours*

ELPS 655 Seminar in Learning in Adulthood (3)  
 ELPS 662 Design and Delivery of Professional Development (3)  
 ELPS 666 Planning and Change in Education (3)

*Individually Designed Concentration — 9 hours*

ELPS Prefix Courses (6)

**Additional Requirements**

SRM 600 Introduction to Graduate Research (3)

**Electives**

Additional electives appropriate for concentration area to total a minimum of 36 semester hours for program completion.

**Note:** Satisfactory performance on a concluding activity approved by division faculty, in accordance with Graduate School policy, must be demonstrated.

**EDUCATIONAL MEDIA, M.A.****Degree Requirements — 36-39 Credits**

Students interested in obtaining a School Library Media endorsement who do not already hold a master's degree may enroll in the master's degree in educational media. This program has been designed to meet the requirements for an M.A. degree as well as to meet the graduate program requirements and competency requirements dictated by the State of Colorado for School Library Media endorsement.

See "Educational Media (M.A.) Requirements" on page 26.

**Required Credits — 36-39 hours**

EPSY 540 Theories and Principles of Learning (3)  
 SRM 600 Introduction to Graduate Research (3)  
 ET 500 Introduction to Educational Technology (3)  
 ET 502 Instructional Design (3)  
 ET 503 Computers in Education (3)  
 ET 504 Instructional Materials Design (3)  
 ET 530 Media Cataloging and Classification (3)  
 ET 533 Reference and Information Management (3)  
 ET 535 Administration of Instructional Resources (3)  
 ET 536 Media Selection, Utilization and Evaluation (3)  
 ET 692 Internship (3)  
 (required for K-6, K-12 endorsement and required for 7-12, K-12 endorsement)  
 EDRD 614 Literature for Children, Adolescents and Young Adults (3)

**Notes:** Students may transfer up to 6 semester hours or 9 quarter hours of approved graduate level credit to the program from other accredited institutions.

All coursework to be transferred or applied to meet graduate course requirements that was completed before a student's acceptance into a graduate degree program must be approved by the UNC Graduate School.

Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the Department of Elementary Education and the Department of Educational Foundations and Curriculum Studies in McKee for information.

Students wishing to obtain an M.A. who do not intend to apply for State of Colorado School Library Media endorsement should apply to the M.A. program in Educational Technology.



## EDUCATIONAL PSYCHOLOGY, M.A.

### Degree Requirements — 30 Credits

Students take the common core of courses listed below and select a concentration in consultation with their advisor. Appropriate area of concentration might include: learning and cognitive processes; research, measurement and evaluation; or human development.

See "Educational Psychology (M.A.) Requirements" on page 24.

#### Required Credits — 20 hours

EPSY 530 Life Span Developmental Psychology (3)  
EPSY 540 Theories and Principles of Learning (3)  
SRM 602 Statistical Methods I (3)  
SRM 600 Introduction to Graduate Research (3)  
EPSY 661 Trends and Issues in Educational Psychology (3)  
EPSY 663 Apprenticeship (1-3)  
SRM 670 Evaluation: Models and Designs (3)

or

EPSY 674 Measurement I: Educational Testing (3)

#### Elective Credits — 10 hours

Students define a concentration area in consultation with their advisor.

**Note:** SRM 603 and EPSY 699 are highly recommended electives for students intending subsequently to enter a doctoral program. Student competencies are examined by comprehensive examination during fall or spring semesters.



## EDUCATIONAL TECHNOLOGY, M.A.

### Degree Requirements — 30 Credits

The Master of Arts degree in Educational Technology is designed to develop knowledge and skills in instructional system analysis, computer applications and media design. Application of knowledge and skills is focused on improving human performance in applied learning contexts.

See "Educational Technology (M.A.) Requirements" on page 26.

#### Required Credits — 21 hours

EPSY 540 Theories and Principles of Learning (3)  
SRM 600 Introduction to Graduate Research (3)  
SRM 602 Statistical Methods I (3)  
ET 500 Introduction to Educational Technology (3)  
ET 502 Instructional Design (3)  
ET 503 Computers in Education (3)  
ET 504 Instructional Materials Design (3)

#### Elective Credits — 9 hours

Elective courses to be selected to develop or support a student's teaching or research interests. Elective courses must be numbered at the 500 level or above.



## ELEMENTARY EDUCATION, M.A.T.

Select One Area: Elementary Education, M.A.T. or Middle School Emphasis

### Degree Requirements — 30-33 Credits

#### Elementary Education

##### Program Requirements — 30 hours

The Master of Arts in Teaching degree provides inservice elementary teachers with the knowledge, abilities, and dispositions needed to scaffold their own professional development toward a vision of accomplished practice. Three abilities are emphasized throughout the program: critical reflection, systematic inquiry, and collaboration. Teacher participants use these abilities to plan and implement a series of learning and assessment projects for the purpose of improving elementary students' learning and achievement. The M.A.T. program provides opportunities to develop in-depth understanding of content-specific pedagogy, the curriculum development process, teacher research, and portfolio approaches to teaching and learning. Teachers are encouraged to become school leaders as they gain confidence working with increasingly diverse groups of children, parents, and colleagues.

##### Required Credits — 21 hours

EDEL 601 Practicum and Capstone Seminar in Elementary Education (3)\*  
EDEL 610 Teacher Research in the Elementary School (3)  
EDEL 612 Elementary School Curriculum (3)  
EDEL 619 Pluralism in Education (3)  
EDEL 640 Instruction in Language Arts and Literacy in the Elementary School (3)  
EDEL 645 Assessment of Language Arts and Literacy in the Elementary School (3)  
SRM 600 Introduction to Graduate Research (3)

##### Elective Credits — 9 hours

**Note:**\* The practicum and capstone seminar is designed as a culminating experience for the degree program. It must be approved by the student's advisor and adhere to the guidelines established by the program area.

#### Middle School Emphasis

##### Program Requirements — 33 Credits

The Master of Arts in Teaching degree in Elementary Education with an Emphasis in Middle School is designed for elementary, middle school, junior high and secondary licensed teachers who wish to pursue graduate work that focuses on the middle level education. Because current licensure standards allow elementary, middle school and secondary licensed teachers to teach at this level, the program is open to all licensed teachers interested in middle school teaching. Students completing this program will not automatically receive middle school licensure. Students must have a teaching license before completing the master's program.

See "Middle School Emphasis (M.A.T.) Requirements" on page 22.

##### Middle School Required Credits — 24 hours

EDMS 601 Practicum (1-3)  
EDMS 665 Middle School Theory, Philosophy and Curriculum (3)  
EDMS 667 Assessment, Design and Evaluation of Middle School Curriculum (3)  
EDMS 669 Integrated Curriculum for Middle Grades (3)  
EDMS 670 Instructional Practices in Middle Grades Education (3)  
SRM 600 Introduction to Graduate Research (3)  
EDEL 619 Pluralism in Education (3)

Reading (3 hours)

Select one of the following two courses:

EDRD 620 Reading in the Middle and Secondary Schools (3)

EDRD 621 Critical Reading and Thinking in Content Subjects (3)

**Middle School Elective Credits — 9 hours**

Electives are determined by the candidate's need to develop or strengthen understanding and competency in areas related to his or her professional growth and development with approval of student's advisor. Special consideration will be given to the professional growth activities approved and required by the student's school district or institution in planning the M.A.T. program. The following courses may be relevant to a student's professional development.

- EDRD 614 Literature for Children, Adolescents and Young Adults (3)
- EDRD 620 Reading in the Middle and Secondary Schools (3)
- EDEL 640 Instruction in Language Arts and Literacy in the Elementary School (3)
- EDEL 650 Researched Application for Instruction in Social Studies, K-9 (3)
- EPSY 530 Life Span Developmental Psychology (3)
- SCED 671 Elementary and Middle School Science Curriculum (3)

**Note:**Teacher participants in the program take the common core of required courses listed above and determine an emphasis area in consultation with their advisor (9 hours). Students may transfer up to 6 semester hours of approved graduate level credit to the program from other accredited institutions. Course equivalence will be considered for elective credits only.



**ELEMENTARY EDUCATION:  
EARLY CHILDHOOD EDUCATION,  
M.A.**

Primary Education Emphasis

**Degree Requirements — 33-35 Credits**

The master's degree program in Early Childhood/Primary Education is designed to meet the specific needs and interests of professional teachers in the primary grades.

See "Elementary Education: Early Childhood (M.A.) Requirements" on page 25.

**Required Credits — 26 hours**

Students are limited to a maximum of 9 semester credits of 500-level and/or double-numbered courses for inclusion in the master's program.

- \*EDRD 519 Reading and Writing Development of Preschool/Primary Children (2)
- \*EDEC 539 Parent Education and Involvement in Early Childhood/Primary (3)
- \*EDEC 648 Psycholinguistics in Early Childhood (3)
- \*EDEC 660 Critical Issues in Early Childhood (3)
- \*EDEC 664 Seminar in Early Childhood and Primary Education (3)
- \*EDEC 670 Curriculum and Instruction in Early Childhood and Primary Education (3)
- \*EDEC 675 Play and Psychosocial Development in Early Childhood (3)
- EDRD 612 Reading in the Elementary Schools (3)
- SRM 600 Introduction to Graduate Research (3)

**Elective Credits — 7-9 hours.**

*Choose additional coursework in consultation with major advisor to total 7-9 semester hours.*

- EDEC 508 Early Childhood Workshop (3)
  - \*EDEC 601 Practicum in Early Childhood (1-3)
  - EDEC 662 Research in Early Childhood and Primary Education (3)
  - EDEC 663 Educational Assessment, Evaluation and Prescription for the Young Child (3)
  - EDEC 677 Problem Solving Strategies in Early Childhood and Elementary Mathematics (2)
  - EDEC 680 Play and Development of High Risk Children (2)
  - EDEL 619 Pluralism in Education (3)
  - EDEL 620 Researched Applications for Instruction in Mathematics, K-9 (3)
  - EDEL 640 Instruction in Language Arts and Literacy in the Elementary School (3)
  - EDEL 650 Researched Application for Instruction in Social Studies, K-9 (3)
  - EDRD 614 Literature for Children, Adolescents and Young Adults (3)
  - EDRD 617 Evaluation and Improvements of Literacy Teaching and Learning (4)
  - EPSY 630 Child and Adolescent Psychology (3)
  - SCED 671 Elementary and Middle School Science Curriculum (3)
- (Other courses accepted with the approval of the academic advisor.)

**Note:**Students must also complete a four hour written comprehensive examination.

**Endorsement In Early Childhood Education**

Students who meet the following prerequisites and who complete courses specified with an asterisk (\*) are eligible to seek institutional recommendation for Endorsement in Early Childhood Education from the Colorado Department of Education.

Prerequisites: 1) Hold or be eligible for a Colorado Teaching License, Endorsed Elementary; 2) completion of a minimum of one course in human growth and development (or its equivalent) before enrolling in the endorsement program; and 3) evaluation of supervised field experiences and teaching experiences to assess practicum placement needs associated with this endorsement.

Required courses for endorsement: EDRD 519 or EDEC 648 and EDEC 539, EDEC 601, EDEC 660, EDEC 664, EDEC 670 and EDEC 675.





## ENGLISH, M.A.

### Degree Requirements — 30 Credits

The master's degree program provides focused, in-depth study of literature, practical experiences in literary criticism and research and opportunities for advanced levels of writing. Judicious selection of courses under the guidance of the student's advisor may provide additional focus to the program through special course clusters in areas such as pedagogy, literary theory, rhetoric/composition, or specific periods of interests.

Graduates of the program will be prepared to enter a wide range of fields and/or to pursue additional advanced levels of study such as the Ph.D. in English. The program enables teachers currently in the field to develop special areas of interest, to pursue these in depth, and to enhance their skills in teaching, research, and writing. In addition, graduates can pursue professional study in law, theology, medicine (with appropriate science and mathematics preparation), library science, communications, media, and business. The M.A. in English is excellent preparation for any profession or occupation that stresses language usage, such as writing.

#### Required Credits — 15 hours

ENG 600 Introduction to Graduate Study (3)

One course in Theory (3)

Two courses in British Literature, one before and one after 1800 (6)

One course in American Literature (3)

#### Required Elective Credits — 12 hours

A minimum of two courses must be selected from ENG 600-level offering (6)

Additionally, all students must choose one of the following options:

a Master's Project

or

a Creative Project

or

an additional three credit hours (from a 600-level course)

The Master's or Creative Project may be written under ENG 697 for 3 semester hours. The Master's Project consists of a research paper of 30-50 pp., appropriate for journal submission. The Creative Project is a creative work of similar length and can consist of a collection of poems, short stories, or chapters of a novel. Students must make a public presentation of the Project before an audience of students and faculty.

**Notes:** To increase the flexibility of this program for teachers and to provide further work to help them improve their instructional skills, a block of pedagogical coursework (6 semester hours) may be taken as part of the required elective hours. The student and graduate advisor will plan according to individual needs.

Completion of a Master of Arts degree in English does not meet all the College of Education PTEP requirements for licensure in English. Students must consult their departmental advisors and/or the College of Education PTEP office if they are interested in elementary or secondary licensure.

All master's candidates must take a written, comprehensive examination.



## FOREIGN LANGUAGES, M.A.

Spanish Teaching Emphasis

### Degree Requirements — 30 Credits

The program is designed for the secondary school teacher of Spanish and concentrates on the development of a high level of functional proficiency in the four language skills and in culture. The most recent developments in foreign language teaching methodologies are studied and researched.

The program prepares graduate level Spanish language teachers for the secondary schools.

See "Spanish Teaching Emphasis Requirements" on page 7.

#### Required Credits — 10 hours

FL 531 Teaching of Foreign Languages (2)

SRM 600 Introduction to Graduate Research (3)

*Civilization (select one of the following):*

SPAN 521 Spanish Civilization and Culture (3)

SPAN 531 Latin American Civilization and Culture (3)

SPAN 560 Spanish Civilization and Culture (2)

SPAN 561 Latin American Civilization and Culture (2)

SPAN 562 Mexico and United States Hispanic Civilization and Culture (2)

*Literature (select one of the following):*

SPAN 550 Masterpieces of Spanish Literature (3)

SPAN 551 Masterpieces of Latin American Literature (3)

SPAN 570 Readings in United States Hispanic Literature (1-3)

SPAN 571 Readings in Spanish Literature (1-3)

SPAN 572 Readings in Latin American Literature (1-3)

*Language (select one of the following):*

SPAN 501 Spanish Grammar (3)

SPAN 502 Spanish Composition (3)

SPAN 505 Spanish Phonetics and Dialects (3)

SPAN 507 Spanish for Oral Proficiency (3)

SPAN 580 Grammar Topics (1-3)\*

SPAN 582 Spanish for Oral Proficiency (2)

\* If offered

#### Required Elective Credits — Select 10 hours

From department graduate level courses offered during the regular academic year or from the courses listed below, which are offered on a rotating basis during summers only.

*Civilization*

SPAN 560 Spanish Civilization and Culture (2)

SPAN 561 Latin American Civilization and Culture (2)

SPAN 562 Mexico and United States Hispanic Civilization and Culture (2)

SPAN 563 Hispanic Cultural Topics (3)

*Literature*

SPAN 570 Readings in United States Hispanic Literature (3)

SPAN 571 Readings in Spanish Literature (3)

SPAN 572 Readings in Latin American Literature (3)

SPAN 575 Masterpieces of 20th Century Latin America (2)

SPAN 576 Mexican Literature (2)

*Skill Development*

SPAN 580 Grammar Topics (3)

SPAN 581 Advanced Spanish Grammar (2)

SPAN 582 Spanish for Oral Proficiency (2)

SPAN 583 Oral and Written Discourse (2)

*Workshops*

HISP 508 Workshop (6)

HISP 513 Professional Renewal (6)

SPAN 508 Workshop (6)

SPAN 513 Professional Renewal (6)

#### Required Elective Credits outside the Department — 10 hours

Students are required to complete 10 semester hours of courses outside of the department in the areas of pedagogy and civilization and culture. Courses selected must relate logically to the teaching of Spanish. A minimum of two courses in each area will be chosen with the consent of the major advisor.

**Note:** Students must successfully complete written and oral comprehensive examinations. No thesis is required.

**GERONTOLOGY, M.A.**

Select One Emphasis Area: Direct Service, General Studies or Management/Administration

**Degree Requirements — 49 Credits**

The Master of Arts in Gerontology prepares students for professional responsibility in counseling-related, administrative positions or similar professional endeavors within the aging network.

Graduates find employment in health related or long term care facilities, senior centers, recreation programs, community college teaching, pre-retirement educational programs, mental health related activities, industrial settings or private practice/consultation.

See "Gerontology (M.A.) Requirements" on page 36.

**Program Requirements — 34 hours****Required Credits — 34 hours**

GERO 560 Community Resources for the Elderly (4)  
 GERO 565 Management Concepts for Aging Services (3)  
 GERO 625 Psychosocial Aspects of Aging (3)  
 GERO 630 Intervention Strategies with the Elderly (3)  
 GERO 635 Social Policies of Aging (3)  
 GERO 640 Health Aspects of Gerontology (3)  
 GERO 692 Graduate Internship in Gerontology (12)  
 HRS 610 Interpretation and Evaluation of Behavioral Research (3)

**Note:** Successful completion of a written comprehensive exam is required to complete the M.A. program

**Direct Service Emphasis****Program Requirements — 34 hours****Required Emphasis Credits — 15 hours**

HRS 630 Human Services Counseling Theories and Techniques (3)  
 HRS 694 Supervised Counseling in Human Services (6)  
 Two advisor-approved electives whose content focuses on direct practice skills or service issues (6)

**General Studies Emphasis****Program Requirements — 34 hours****Required Emphasis Credits — 13 hours**

and select one of the following two courses:

GERO 655 Program Planning and Evaluation in Gerontology (3)  
 NURS 505 Nursing Research (3)  
 HHS 515 Bio-Physical Changes in Aging (3)  
 Advisor approved courses (7)

**Note:** The opportunity to complete a thesis is available within this emphasis. Students should contact the Program Coordinator or his/her academic advisor for admission criteria.

**Management/Administration Emphasis****Program Requirements — 34 hours****Required Emphasis Credits — 15 hours**

GERO 650 Personnel Practices of Aging (3)  
 GERO 655 Program Planning and Evaluation in Gerontology (3)  
 GERO 660 Financial Management and Budgeting for Aging Programs (3)  
 GERO 665 Grant Development and Administration (3)  
 Advisor approved course (3)

**GRADUATE INTERDISCIPLINARY DEGREE PROGRAM, M.A.**

Teacher Education Emphasis

**Degree Requirements — 30-36 Credits**

The Teacher Education Emphasis is a comprehensive degree program coordinated by the Department of Elementary Education or the Department of Educational Foundations and Curriculum Studies in McKee. It provides advanced study focused on the following themes: teacher leadership; alternate teaching and assessment strategies; and teacher as researcher. In addition, students enrolling in this degree program will select an area of concentration from the following: Diversity in Education; Mathematics and Science; Bilingual Education; Teaching English as a Second or Other Language; or Middle Level Education.

See "Graduate Interdisciplinary: Teacher Education Emphasis (M.A.) Requirements" on page 22.

**Required Courses — 15 hours**

TED 600 Professional Seminar I (1)  
 TED 601 Conceptions of Schooling (3)  
 TED 602 Teacher Leadership (3)  
 TED 603 Alternative Teaching and Assessment Strategies (3)  
 TED 605 Professional Seminar II (2)  
 SRM 600 Introduction to Graduate Research (3)

**Elective Course — 3 hours**

Three additional approved hours

*Course Concentration (12-17 hours - select from one of the following):*

*A) Diversity in Teaching (12 hours)*

EDSE 506 Teaching Students with Special Needs in Inclusive Settings (3)  
 PPSY 508 Workshop: Family Systems (3)  
 EDFE 601 Practicum (3)

Three additional approved hours (3)

*B) Mathematics and Science (12 hours)*

ENST 515 Environment and Environmental Problems (2)  
 EDEL 508 Problem Solving in Mathematics (3)  
 ESCI 550 Strategies in Teaching in Earth Sciences (1)  
 Six additional approved hours (6)

*C) Linguistically Different: English as a Second Language (18 hours)*

EDLD 602 Teaching Linguistically Diverse Learners (3)  
 EDLD 603 Methods and Assessment for ESL and Bilingual Education (3)  
 EDLD 604 Field Experience in TESOL and Bilingual Education (3)  
 EDLD 605 Advanced Seminar in Bilingual Education and TESOL (3)

ENG 633 Studies in Linguistics (3)

HISP 513 Teaching the Mexican American Child (3)

*D) Linguistically Different: Bilingual Education (18 hours)*

EDLD 602 Teaching Linguistically Diverse Learners (3)  
 EDLD 603 Methods and Assessment for ESL and Bilingual Education (3)  
 EDLD 604 Field Experience in TESOL and Bilingual Education (3)  
 EDLD 605 Advanced Seminar in Bilingual Education and TESOL (3)

\*SPAN 513 Contrastive Features (3)

\*SPAN 555 Spanish Readings (3)

\*These courses are taught in Spanish.

*E) Middle Level Education (15 hours)*

EDMS 665 Middle School Theory, Philosophy and Curriculum (3)  
 EDMS 667 Assessment, Design and Evaluation of Middle School Curriculum (3)  
 EDMS 669 Integrated Curriculum for Middle Grades (3)  
 EDMS 601 Practicum (3)  
 EDRD 620 Reading in the Middle and Secondary Schools (3)

**Notes:** All students are required to pass a written comprehensive examination or defend a program portfolio covering all aspects of the completed coursework.



## HISTORY, M.A.

### Degree Requirements — 30 Credits

The master's degree in history has been designed with several options in mind. It may be taken as a foundation for further advanced graduate work; as part of an individualized program that prepares students for a secondary teaching career; or as a terminal degree. Whichever option a student selects, faculty will stress the development of research techniques, analysis of historical data and expository writing skills.

Students receiving a master's degree in history will be competent in research methodology, writing skills and content in selected areas of history. Opportunities include advanced work in history, teaching at the secondary level (with licensure) or in junior and community colleges. Additionally, graduates may apply for professional schools, e.g., in law, library science, theology, museum curatorship and archival work.

See “Center of Excellence (Department and Teaching)” on page 7.

#### Required Courses — 3 hours

HIST 600 Introduction to Graduate Historical Study (3)

#### Elective Courses — 27 hours

Elective courses may be taken from any course numbered 500 or 600 with a HIST prefix. Additionally, students are permitted to take up to nine hours of history courses that are double-numbered, i.e. 300/500 or 400/500.

**Notes:** Candidates for the M.A. in history should consult with the chair of the history department and the departmental graduate coordinator as soon as possible during the first semester of graduate work so that a major field advisor may be assigned. A plan of study will be approved by the advisor and the graduate coordinator. Candidates, in consultation with the major field advisor, will select two other department members who together will constitute the candidate's examining committee. Candidates are urged to consult frequently with the faculty who compose their committee.

#### Thesis Option

A minimum/maximum of six hours may be earned in HIST 699 by writing a thesis on a subject that falls within the student's concentration. At least 15 hours of coursework, in addition to the six thesis hours, must be concentrated in one of the following areas: United States; European; Africa/Asia/ and Latin American history. The remaining six hours in history that round out the candidate's program should be taken from outside the concentration area. Research and writing of a thesis precludes comprehensive examinations. An oral examination will be held after the student's major professor has accepted the thesis for presentation to the candidate's committee. Students will be responsible on the oral for a mastery of their field, including the reading list they have received during their first week in the program.

#### Non-Thesis Option

Candidates must concentrate fifteen hours of coursework in one of the following areas: American History, European History, African/Asian/Latin American History. The area chosen will become the student's major field. Twelve additional hours of history courses at the 500/600 level, or up to nine hours at the 300/500 or 400/500 levels plus three hours at the 500/600 level, must be completed outside the student's concentration area.

Students who elect this option are required to pass written and oral examinations in their concentration area. The written examination will be three hours in length and may be taken no earlier than the second semester of graduate study. Within two weeks of the written examination, candidates receiving a passing grade from each member of their examining committee on the comprehensive will be examined orally, usually for two hours, over the concentration. Students will be responsible on the oral for a mastery of their field of study, including the reading list they have received during their first week in the program.

### Comprehensive and Thesis Fields In History:

European	United States	Africa/Asia/Latin American
Ancient Medieval Early Modern Modern	Colonial Period to the Present	Comprehensive or thesis to be developed with candidate's graduate advisor and committee.

**Notes:** Candidates must obtain a permit from the Department of History allowing them to take their comprehensive or thesis/oral examination. The student must return the permit to the department office no later than the end of the sixth week of the semester in which the examination will be taken. At this time a specific date will be set by the department chair with the advice of the candidate's major professor and committee.

The maximum credit that may be earned in HIST 622, Directed Studies, is six hours. Candidates must obtain prior approval and the signatures of their advisor and the department chair before enrolling.

The minimum/maximum credit that may be earned in HIST 699, “Thesis,” is six hours.

Only nine hours of designated double numbered courses (300/500) may be applied to the master's degree program.

All students will be examined orally by a department committee during their second semester in residence. A “pass” or “conditional pass” recommendation by the committee will permit a student's continuance in the program. A “fail” recommendation will eliminate the student from the History M.A. program. All students without exception must satisfy the thirty hours master's degree requirement.

**Scholarships:** Master's degree candidates are encouraged to apply for the Oliver M. Dickerson stipend presently established at \$1,000-\$4,000 per academic year. Application should be made to the Coordinator of Graduate Studies, Department of History, UNC, Greeley, CO 80639. Other graduate scholarships may be applied for by writing to the Office of Student Financial Resources, UNC, Greeley, CO 80639.



## MATHEMATICS, M.A.

Select One Emphasis Area: Liberal Arts or Teaching

### Degree Requirements — 30 Credits

#### Liberal Arts Emphasis

The foci of this program are the core areas of algebra and analysis with specialization or breadth available through electives.

A graduate of this program may continue graduate work in mathematics or some other discipline such as statistics. A graduate may also enter a career making use of the knowledge and skills developed in the selected courses; career potential exists in industrial settings, business and governmental service.

See "Mathematics (M.S.) Requirements" on page 8.

#### Required Credits — 17 hours

MATH 510 Seminar in Mathematics (1)\*  
 MATH 523 Modern Algebra (3)  
 MATH 525 Linear Algebra I (3)  
 MATH 540 Introduction to Topology (3)  
 MATH 545 Introductory Analysis (3)  
 MATH 560 Introductory Complex Variables (3)

#### Required Elective Credits — 13 hours

Electives must have the approval of the advisor. Electives must be selected from 500-600 level MATH or STAT courses not including those designed for the Master of Arts: Teaching Emphasis (Exception: One of MATH 528 or MATH 529 may be selected as an elective).

**Notes:** \*Two semester hours of MATH 510 satisfy the Graduate School requirement, Introduction to Graduate Studies.

The departmental comprehensive examination will consist of two-two hour written examinations over the required sequences MATH 523 - MATH 525 and MATH 540 - MATH 545. An oral examination over the program up to two hours in length will be given upon successful completion of the written comprehensive.

#### Teaching Emphasis

This program is designed to prepare teachers to be experts in their own classroom. Upon finishing this program they should be able to teach the content of mathematics, assume leadership roles in mathematics curriculum within their schools, and read and understand the professional literature relating to the teaching and learning of their discipline. The emphasis is on preparing teachers for the 21st century with a dynamic and individualized program of study.

See "Teaching Emphasis Requirements" on page 8.

#### Required Credits — 15 hours

MATH 528 Discrete Mathematics (3)  
 MATH 534 Continuous Mathematics (3)  
 MATH 543 Modern Geometry (3)  
 MED 600 Introduction to Research in Mathematics Education (3)  
 MATH 550 Applied Probability and Statistics (3)

**Note:** MED 600 satisfies the Graduate School requirements, Introduction to Graduate Studies.

#### Elective Credits — 15 hours

At least five semester hours must be selected from group A and at least six semester hours must be selected from group B.

##### Group A

MATH 520 Functions and Equations (3)  
 MATH 529 Mathematical Problem Solving (3)  
 MATH 537 Mathematical Modeling (3)  
 MATH 591 Abstract Algebra and Number Theory (3)

##### Group B

MED 528 Teaching of Discrete Mathematics (2)  
 MED 534 Teaching Algebra and Trigonometry (2)  
 MED 543 Teaching Geometry (2)  
 MED 550 Teaching Applied Probability and Statistics (2)

MED 595 Teaching Advanced Topics in Secondary School Mathematics (2)  
 MED 673 Teaching and Learning Mathematics on the Elementary Level (3)  
 MED 674 Teaching and Learning Mathematics on the Secondary Level (3)

Additional electives may be chosen from courses offered by the department or other departments with the approval of the student's advisor.

#### Comprehensive Examinations

A student may select either one of the following options to satisfy the departmental comprehensive examination requirement. Normally, at least three faculty members will be involved in judging whether or not the selected option has been completed satisfactorily.

- *Option 1.* A written examination over two of the four required content courses (student's choice) and another over MED 600 and over one other course from Group B above. Up to two hours of oral examination will be given upon successful completion of the written examination.
- *Option 2.* Development of a curriculum module incorporating mathematical and pedagogical content of the program. This module must be carefully developed and written in acceptable format and a copy filed with the department. In addition, the student must make a two hour oral presentation over the module.



## MUSIC, M.M.

Degree requirements for all Emphasis Areas: Choral Conducting, Instrumental Performance, Music Education, Music History and Literature, Music Theory and Composition, Vocal Performance or Wind/Orchestra Conducting

### Degree Requirements — 30-36 Credits

The degree program seeks to assist the graduate candidate in developing advanced professional competencies in performance, scholarly abilities, research, and pedagogical techniques for use in the profession or for instruction in higher education.

See "Music (M.M.) Requirements" on page 43.

All graduate students enrolling in the School of Music as majors are expected to attend major recitals, concerts, productions and convocations on a regular basis as part of their course program.

"Residency," when stated in the music section of this Catalog, is interpreted to mean 10 credit hours or more per semester.

Master of Music candidates will take a written comprehensive examination at a time approved by the major advisor.

### Choral Conducting Emphasis

#### Program Requirements — 36 hours

This emphasis is designed to assist the graduate candidate in developing advanced professional competencies in choral conducting. In addition to the Music, M.M. requirements above, an entrance audition is required.

#### Required Credits — 32 hours

MUS 550 *Score Reading and Analysis* (1)  
 MUS 600 *Introduction to Musical Scholarship* (2)  
 MUS 653 *Vocal Literature and Styles* (3)  
 MUS 685 *Performance in Opera Theatre* (2)  
 MUS 693 *Practicum in Music* (4)  
 Individual Performance in Voice (4)  
 Individual Performance in Conducting (2)  
 Major Performing Organization (2)

*Studies in Music History and Theory*  
 Music History (6)  
 Music Theory (6)

Studies in Music History and Theory will be selected by advisement based upon candidate's needs identified through advisory examination.

#### Recommended Electives — 4 hours

MUS 559 *Opera and Oratorio Literature* (2)  
 MUS 650 *Seminar: Choral Music* (2)

Elective courses are recommended and should be selected by advisement and based on specific needs and interests.

**Notes:** A recorded public recital and correlative paper are required. The performance will be conducted by the candidate and evaluated by the major advisor and vocal faculty. It is the student's responsibility to file a printed program and tape recording of the performance with the School of Music Office and the Music Library.

The prospective choral conducting applicant should have had at least two years of experience in high school teaching or equivalent experience before applying for graduate studies. A personal audition is required.

Conducting applicants should write to the appropriate director for specific information concerning audition and interview procedures.

### Instrumental Performance Emphasis

In addition to the Music, M.M. requirements above, brass, woodwind, string, and percussion majors will take a written examination on instrumental techniques in their instrument area.

### Required Credits — 22-23 hours

*Studies in the Major Area*

MUS 600 *Introduction to Musical Scholarship* (2)  
 MUS 693 *Practicum in Music* (2) (Recital and Correlative Paper)  
 Individual Performance (8)  
 Major Performing Organization (2)

String performers will participate in a major ensemble each semester in residence.

*Other Studies in Music*

Music History, Music Theory (6)  
 Pedagogy (2-3)

*Other Studies in Music* will be selected by advisement based upon candidate's needs identified through advisory examination.

### Elective Credits — 7-8 hours

Electives will be selected by advisement based upon candidate's needs identified through examination.

**Notes:** Master of Music candidates in performance must present a public recital. This recital should be recorded and a printed program and tape recording should be filed with the School of Music Office and the Music Library.

A correlative paper may be required in conjunction with the recital at the discretion of the individual department.

Performance emphases are available in bassoon, clarinet, flute, harp, horn, oboe, percussion, keyboard, saxophone, string bass, bass trombone, tenor trombone, trumpet, tuba, tenor tuba, viola, violin, violoncello and voice.

### Music Education Emphasis

#### Program Requirements — 30 hours

The Master of Music (Music Education Emphasis) degree program is designed to develop and enrich professional understandings, skills, musical and pedagogical competencies in the field of music education.

#### Admission

The incoming student must meet admission requirements of the Graduate School. The candidate must have completed an undergraduate degree in music or music education. Other candidates may be accepted upon petition to the Music Education Department.

#### Core Components — 12 hours

*Studies in the Major Area*

MUS 519 *Foundations of Music Education* (3)  
 MUS 533 *Curriculum Trends in Music Education* (3)  
 MUS 610 *Research in Music Education* (3)

Studies in Professional Education to be selected from the following content areas such as: Multicultural Education, Educational Psychology, Educational Foundations or Special Education (3).

#### Credits in Music Studies — 10 hours

To be selected in consultation with program advisor (10).

#### Elective Credits in Music and other areas — 8 hours

Courses should be based upon the candidate's specialized teaching area and professional goals.

**Notes:** Incoming Master of Music (Music Education Emphasis) candidates will be asked to write an advisory examination on topics related to music education.

The Music Education department will consider examinations, scholarly papers and musical performance in all areas of study to assess student progress throughout the program.

Master of Music (Music Education Emphasis) candidates will write a comprehensive examination at a time approved by the major advisor.

### Music History and Literature Emphasis

#### Program Requirements — 31-34 hours

In addition to the Music, M.M. requirements above, students entering this area of emphasis must have the equivalent of an undergraduate music major as outlined in this Catalog.

Students will be expected to demonstrate translational competency in German, French, or Latin as a prerequisite to candidacy.

**Required Credits — 30 hours**

MUS 600 Introduction to Musical Scholarship (2)  
 MUS 699 Thesis (6)  
 Music History (12)  
 Music Theory Courses (6)  
 Major Performing Organization and/or Individual Performance (4)

**Elective Credits — 1-4 hours**

Electives will be selected by advisement, based upon candidate's needs identified through examination.

**Notes:** Music Theory and Music History courses are selected by advisement based on the candidate's area of focus and upon the candidate's needs identified through the advisory examination.

Students who are able to demonstrate competency in any required course may substitute an elective chosen in consultation with the advisor.

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## Music Theory and Composition Emphasis

**Program Requirements — 33 Credits**

In addition to the Music, M.M. requirements above, Theory and Composition candidates must submit examples of works composed, supported if possible by recordings.

This emphasis requires that the student has completed a Bachelor of Music, Bachelor of Music Education, or a Bachelor of Arts in Music degree.

**Required Credits — 33 hours**

MUS 509 Electronic Music (3)  
 MUS 600 Introduction to Musical Scholarship (2)  
 MUS 603 Analytical Studies in Music (3)  
 MUS 648 Seminar: Music in the Twentieth Century (3)  
 MUS 677 Individual Instruction in Composition (8)  
 MUS 699 Thesis (6) (or original composition)  
 Music Performing Organization and/or Individual Performance (2)

*Studies in Music History*

Music History (6)

Studies in Music History will be selected by advisement based upon candidate's needs identified through advisory examination.

**Notes:** MUS 502 and MUS 503 may be required if advisors indicate that these courses will significantly increase the strength of the Master of Music program in Theory and Composition.

Students who are able to prove their competency in any of the required courses listed above may substitute electives chosen in consultation with the advisor.

Master of Music candidates will present a recital of their compositions written as part of their degree program.

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## Vocal Performance Emphasis

**Program Requirements — 32-36 hours**

In addition to the Music, M.M. requirements above, Voice students must pass a diction proficiency examination in German, French and Italian. An entrance audition is required; voice students will be expected to perform one or more art songs in French, German, Italian and English, including one opera aria or oratorio aria and a contemporary art song. The entrance audition may be performed during the first semester of degree work.

**Required Credits — 29-33 hours**

MUS 559 Opera History and Literature (2)  
 MUS 600 Introduction to Musical Scholarship (2)  
 MUS 693 Practicum in Music (1-4) (Recital and Correlative Paper)  
 Individual Performance (8)  
 Major Performing Organization (2)

*Studies in the Major Area*

and select one of the following two courses:

MUS 510 Vocal Pedagogy (2)  
 MUS 564 Problems in Teaching Voice (2)  
 and select two of the following courses (4-5 semester hours)  
 MUS 536 German Art Song (3)  
 MUS 538 French/Italian Art Song (2)  
 MUS 539 British/American Art Song (2)

and select one of the following two courses:

MUS 685 Performance in Opera Theatre (2)

and/or

MUS 686 Scene Studies in Opera (2)

*Other Studies in Music*

Music History or Music Theory (6)

Other Studies in Music will be selected by advisement based upon candidate's needs identified through advisory examination.

**Elective Credits — 3 hours**

**Note:** Students in the area of Vocal Performance should have skills in translation of vocal literature in one foreign language (French, German, or Italian) as well as diction mastery of all three. A candidate may challenge any portion of the language requirement.

Master of Music candidates in voice must present a public recital. This recital should be recorded and a printed program and tape recording should be filed with the School of Music Office and the Music Library.

A correlative paper may be required in conjunction with the recital at the discretion of the individual department.

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## Wind/Orchestra Conducting Emphasis

**Program Requirements — 30-31 hours**

In addition to the Music, M.M. requirements above, the prospective instrumental conducting applicant should have had at least two years of experience in high school teaching or equivalent experience before applying. A personal audition is required.

**Required Credits — 30-31 hours**

MUS 550 Score Reading and Analysis (1)  
 MUS 600 Introduction to Musical Scholarship (2)  
 MUS 693 Practicum in Music (3)  
 Individual Performance in Conducting (4)  
 Individual Performance (major instrument) (2)  
 Major Performing Organization (2)

and select one of the following two courses:

MUS 511 History and Literature of the Wind Band (2) (winds)

MUS 512 Symphonic Repertoire (2) (orchestral)

and select one of the following courses:

MUS 580 String Techniques for the Conductor (2)

MUS 658 Brass Pedagogy (3)

MUS 661 Percussion Pedagogy (2)

MUS 662 Woodwind Pedagogy (2)

Orchestra conductors must take MUS 580/String Techniques for the Conductor (2 hours). MUS 658/Brass Pedagogy, MUS 661/Percussion Pedagogy, MUS 662/Woodwind Pedagogy are taken with advisement.

*Studies in Music History and Theory*

Music History (6)

Music Theory (6)

**Note:** Studies in Music History and Theory will be selected by advisement based upon candidate's needs identified through advisory examination.

A recorded public recital and correlative paper are required. The performance will be conducted by the candidate and evaluated by the major advisor and instrumental faculty. It is the student's responsibility to file a printed program and tape recording of the performance with the School of Music Office and the Music Library.

Conducting applicants should write to the appropriate director for specific information concerning audition and interview procedures.



## NURSING, M.S.

Select One Emphasis Area: Education or Family Nurse Practitioner (FNP)

### Degree Requirements — 43-45 Credits

#### Program Requirements — 9 hours

NURS 505 Nursing Research (3)  
NURS 507 Leadership and Nursing Issues (3)  
NURS 600 Nursing Theory (3)

Successful completion of a comprehensive exam is required to complete the Master of Science program

### Education Emphasis

#### Degree Requirements — 43 Credits

The Master of Science degree in Nursing prepares post-baccalaureate nursing students as nurse educators for either academic or inservice settings with clinical emphasis in case management of the chronically ill child or adult. The program is consistent with the characteristics of graduate education accepted by the National League for Nursing and the American Association of Colleges of Nursing. Full-time and part-time options are available. Health policies, OSHA requirements and CPR certification are required.

This program provides expertise valuable for positions in education, community college settings, institutions of higher education, community health settings and institutions that provide inpatient care for the chronically ill child or adult. Students who want to be on the Colorado Advanced Practice Registry as Clinical Nurse Specialists (CNS) will be required to take NURS 610 in lieu of the education elective and complete NURS 680 (9 hrs) and NURS 690 (2 hrs) instead of NURS 695.

#### Program Requirements — 9 hours

##### Prerequisites: Undergraduate Research.

#### Required Major Credits — 34 hours

##### *Clinical (15 hours)*

NURS 602 Concepts in Chronic Illness (4)  
NURS 604 Care of Chronically Ill Adult and Child (4)  
NURS 612 Advanced Pharmacology (4)  
NURS 614 Advanced Pathophysiology (3)

##### *Education (13 hours)*

EPSY 540 Theories and Principles of Learning (3)  
NURS 630 Teaching Strategies in Nursing (3)  
NURS 660 Nursing Education Seminar (4)  
NURS 695 Advanced Academic Nursing Roles (3)

##### *Required Research (6 hours)*

NURS 699 Thesis (6)

or

NURS 691 Applied Nursing Research (3)

and

Education Elective (3 hours).

### Family Nurse Practitioner (FNP) Emphasis

#### Degree Requirements — 45 Credits

The Master of Science degree in Nursing with an emphasis in FNP prepares the post-baccalaureate nursing student for advanced clinical practice in primary care of families. The graduate is eligible to apply for ANA certification upon program completion. Full-time and part-time options are available. Health policies, OSHA requirements, CPR and ACLS certification are required.

The program provides expertise valuable for generalist primary care practice in a variety of settings. Such practice is both autonomous and interdependent in nature and direct in its care services provision.

**Prerequisites: Undergraduate Research, Undergraduate Physical Assessment Course.**

#### Program Requirements — 9 hours

#### Required Major Credits — 36 hours

##### *FNP Emphasis (33 hours)*

NURS 610 Health Assessment (3)  
NURS 612 Advanced Pharmacology (4)  
NURS 614 Advanced Pathophysiology (3)  
NURS 640 Health Care of Families I (4)  
NURS 645 Health Care of Families II (4)  
NURS 650 Health Care of Families III (4)  
NURS 680 Advanced Practice Role Practicum (1-9)  
NURS 690 Advanced Clinical Role (2)

##### *Research Requirement (3-6 hours)*

NURS 699 Thesis (6)

or

NURS 691 Applied Nursing Research (3)



## PSYCHOLOGY, M.A.

Select One Emphasis Area: General Psychology or Human Neuropsychology

### Degree Requirements — 38 Credits

#### Program Requirements — 32 hours

SRM 603 Statistical Methods II (3)  
 SRM 610 Statistical Methods III (3)  
 PSY 550 Cognitive Development (3)  
 PSY 600 Graduate Research Methodology (3)  
 PSY 620 Assessment and Interviewing (2)  
 PSY 625 Principles of Neuropsychology (3)  
 PSY 627 Psychometrics (3)  
 PSY 643 Theories of Motivation (3)  
 PSY 664 Advanced Social Psychology (3)  
 PSY 699 Thesis (6)

See "Psychology (M.A.) Requirements" on page 10.

### General Psychology Emphasis

The master's program in psychology emphasizes the development of advanced research skills as well as expanding the breadth of knowledge in the various sub-specializations of psychology. The program culminates in a research project in which the student demonstrates scholarship while preparing an empirical study, a literature review, or a comprehensive course outline.

Students in the psychology master's program develop the requisite knowledge and skills for careers in research in a wide range of psychology career specializations and in community and junior college teaching. In recent years, the majority of the graduates from this program have entered doctoral programs in psychology.

#### Program Requirements — 32 hours

##### Required Credits — 3 hours

PSY 590 Seminar in History and Systems (3)

##### Elective Credits — 3 hours

(to complete minimum of 38 semester hours in the program)

EPSY 530 Life Span Developmental Psychology (3)  
 EPSY 630 Child and Adolescent Psychology (3)  
 EPSY 631 Psychology of Youth, Adulthood and Aging (3)  
 EPSY 684 Advanced Seminar in Human Development (3)  
 EPSY 685 Advanced Seminar in Learning and Cognition (3)  
 PPSY 558 Abnormal Psychology (3)  
 PPSY 607 Theories of Counseling (3)  
 PPSY 657 Legal and Ethical Aspects of Counseling and Psychology (3)  
 PPSY 660 Psychological Consultation: Theory and Practice (3)

### Human Neuropsychology Emphasis

#### Degree Requirements — 38 Credits

In addition to the core curriculum, which provides a systematic foundation in psychology, the emphasis includes coursework in behavioral and electrophysiological measurements of brain function.

The training provides skills necessary to carry out neuropsychological evaluations under appropriate supervision and to conduct advanced research in brain-behavior relationships. In recent years, the majority of the graduates from this program have entered doctoral programs in psychology.

#### Program Requirements — 32 hours

##### Required Credits — 6 hours

PSY 626 Introduction to Neuropsychological Assessment (3)  
 PSY 680 Neuroscience Seminar (3)



## PUBLIC HEALTH, M.P.H.

Community Health Education Emphasis

### Degree Requirements — 45 Credits

Students earning the Master of Public Health with an emphasis in Community Health Education are prepared to assume administrative and coordinating positions in health agencies, hospitals, as well as industrial and educational settings.

The graduate program is designed to accommodate students who wish to earn the M.P.H. degree with an emphasis in Community Health Education on either a part-time or full-time basis. Graduate tuition scholarships and graduate assistantships are available to students on a competitive basis. Careers in the field are multifaceted, requiring knowledge in the scientific and theoretical basis of health promotion/disease prevention as well as skills in communication, organization and administration.

Students must complete six hours of internship (300 contact hours) and successfully pass a written comprehensive examination in order to complete the M.P.H. program.

See "Public Health (M.P.H.) Requirements" on page 35.

#### Required Credits — 36 hours

CH 509 Seminar in Health Behavior (3)  
 CH 530 Seminar in Health Promotion Strategies (3)  
 CH 540 Principles of Health Program Management (3)  
 CH 550 Environmental Health (3)  
 CH 560 Scientific Foundations of Health Promotion/Disease Prevention (3)  
 CH 610 Program Planning and Evaluation (3)  
 CH 620 Epidemiology (3)  
 CH 625 Public Health Administration and Policy (3)  
 CH 692 Graduate Internship (6)  
 SRM 617 Biostatistics and Health Data Analysis (3)

and select one of the following two courses:

HRS 610 Interpretation and Evaluation of Behavioral Research (3)  
 SRM 600 Introduction to Graduate Research (3)

#### Required Elective Credits — 9 hours

**Notes:** Elective units are selected with consent of advisor.

Successful completion of a written comprehensive exam is required to complete the Master of Public Health program. Students wishing to pursue a thesis option in lieu of comprehensive exams must do so in consultation with their advisor.





## READING, M.A.

### Degree Requirements — 33 Credits

The Reading/Literacy Graduate programs prepare students to be inquiring practitioners who seek knowledge and experiences about reading/literacy processes and practices.

These evolving scholars are guided and encouraged to pursue knowledge, commit to inquiry, engage in problem solving related to reading/literacy processes and practices, and participate as leaders in reading/literacy related activities. The inquiring practitioners learn to use reading/literacy knowledge, practices, and processes to serve the changing technological, diversity, and reading/literacy education needs of dynamic local and global environments.

See "Reading (M.A.) Requirements" on page 30.

#### Program Objectives

The Master of Arts Degree program in Reading prepares a student to function more effectively as a classroom teacher; to direct reading programs, staff development and curriculum development at a school level and for many literacy related tasks.

#### Endorsement

By completing the Master of Arts degree in Reading students fulfill the requirements for institutional recommendation for endorsement as a K-12 Reading Teacher. Students seeking endorsement must provide evidence of two or more years of teaching experience in an accredited and/or established elementary, middle, or secondary school while holding a Type A or teaching license equivalent certificate before such recommendation is made. Students wishing to obtain Colorado licensure in reading are required to pass a State of Colorado administered proficiency examination PLACE-Reading. Students should contact the Licensure Officer in McKee for information.

#### Required Reading Credits – 30 hours

- EDRD 611 Language, Literacy and Cognitive Development (3)
- EDRD 612 Reading in the Elementary Schools (3)
- EDRD 614 Literature for Children, Adolescents and Young Adults (3)
- EDRD 617 Evaluation and Improvements of Literacy Teaching and Learning (4)
- EDRD 620 Reading in the Middle and Secondary Schools (3)
- EDRD 642 Teaching the Writing Process in Schools (3)
- EDRD 645 Reading Research (3)
- EDRD 670 Directing a School-Wide Reading/Literacy Program (3)
- EDRD 692 Clinical Practicum in Literacy Coaching (4)
- EDRD 693 Capstone Reading Seminar (1)

#### Required Professional Credits – 3 hours

- SRM 600 Introduction to Graduate Research (3)



## REHABILITATION COUNSELING, M.A.

Select Rehabilitation Counseling, M.A. or Vocational Evaluation Emphasis

### Degree Requirements — 60 Credits

The mission of the Rehabilitation Counseling program at the University of Northern Colorado is to develop well-educated professional rehabilitation counselors and to improve the quality of life for persons with disabilities in the state, region and the nation through counseling, teaching, learning, the advancement of knowledge, and community service. Graduate education includes the Master of Arts degree in Rehabilitation Counseling and/or with an emphasis in Vocational Evaluation. The University provides services that support equal learning opportunities for all students. Learning occurs in an environment characterized by small classes taught by full-time faculty who are all certified rehabilitation counselors, and some of whom are also certified vocational evaluators.

See "Rehabilitation Counseling (M.A.) Requirements" on page 36.

#### Required Credits — 45 hours

- HRS 580 Rehabilitation Principles and Case Management (3)
- HRS 581 Vocational Evaluation and Assessment of People with Disabilities (3)
- HRS 585 Occupational Information and Job Placement (3)
- HRS 604 Family, Cultural and Psychological Aspects of Disability (3)
- HRS 605 Medical Aspects of Disability (3)
- HRS 610 Interpretation and Evaluation of Behavioral Research (3)
- HRS 630 Human Services Counseling Theories and Techniques (3)
- HRS 631 Group Processes in Rehabilitation (3)
- HRS 692 Clinical Internship in Rehabilitation (15) Must be completed in an approved rehabilitation evaluation setting.
- HRS 694 Supervised Counseling in Human Services (6)

## Rehabilitation Counseling

#### Elective Credits — 15 hours

- GERO 665 Grant Development and Administration (3)
- HRS 597 Counseling and Treatment of the Substance Abuser (3)
- HRS 611 Vocational Evaluation Planning and Reporting (3)
- HRS 612 Seminar in Vocational Evaluation Systems (3)
- HRS 650 Human Resources System (3)
- HRS 660 Advanced Seminar in Client Assessment (3)
- HRS 693 Practicum in Vocational Evaluation (6)

**Notes:** To complete requirements for rehabilitation counseling, 15 semester hours must be taken from required electives. Substitutions to electives may be made only with department faculty approval on the written petition of the student.

Required courses may be waived only by the department chair on written recommendation of the student's advisor.

Passing the Certified Rehabilitation Counselor (CRC) examination, administered by the Commission on Rehabilitation Counselor Certification, to complete the Master of Arts program.

The master's program is fully accredited by the Council on Rehabilitation Education (CORE) and qualifies students for application for national certification as a Rehabilitation Counselor and/or Vocational Evaluator.

## Vocational Evaluation Emphasis

### Program Requirements — 45 hours

#### Required Major Credits — 15 hours

- HRS 611 Vocational Evaluation Planning and Reporting (3)
- HRS 612 Seminar in Vocational Evaluation Systems (3)
- HRS 660 Advanced Seminar in Client Assessment (3)
- HRS 693 Practicum in Vocational Evaluation (6)



## SCHOOL COUNSELING, M.A.

### Degree Requirements — 57 Credits

*This program is accredited by the Council for Accreditation of Counseling and Related Educational Programs.*

The Counseling faculty is committed to the development of broadly based competent professional counselors skilled in helping people with personal, career and leisure concerns in educational institutions. The requirements of the program are conceptualized within the framework and standards set forth by the counseling profession, Colorado state law, Graduate School and job requirements.

The School Counseling program is designed at the master's level to develop a professional who counsels with children and adults in various settings, especially in elementary, middle and secondary schools.

See "Community/School Counseling (M.A.) Requirements" on page 28.

#### Required Credits — 57 hours

EPSY 530 Life Span Developmental Psychology (3)

PPSY 558 Abnormal Psychology (3)

PPSY 565 Psychology of Prejudice (3)

or

PPSY 623 Counseling Diverse Populations (3)

PPSY 602 Foundations of School Guidance (3)

PPSY 603 Counseling Children and Adolescents (3)

PPSY 604 Career Development and Occupational Systems (3)

PPSY 605 Group Laboratory Experience (1)

PPSY 606 Theories and Practices in Group Guidance (3)

PPSY 607 Theories of Counseling (3)

PPSY 608 Organization, Administration and Consultation in Guidance Services (3)

PPSY 612 Practicum in Individual Counseling (5)

PPSY 614 Internship in School Counseling and Guidance (6)

PPSY 624 Assessment and Treatment of Substance Abuse (3)

PPSY 654 Child Abuse and Neglect (3)

PPSY 657 Legal and Ethical Aspects of Counseling and Psychology (3)

or

PPSY 658 Ethics and Law in Schools for Psychologists and Counselors (3)

PPSY 660 Psychological Consultation: Theory and Practice (3)

PPSY 671 Appraisal and Assessment: School Counseling (3)

SRM 600 Introduction to Graduate Research (3)

**Note:** Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the Teaching/Special Services Licensing Office in McKee 216 for information.



## SOCIAL SCIENCE, M.A.

Clinical Sociology Emphasis

### Degree Requirements — 33 Credits

The master's program in clinical sociology emphasizes the application of social science knowledge to various problems experienced by communities, agencies, governmental bodies and businesses. The emphasis of the program is on providing students with social science knowledge and skills which are applicable to solving problems in the above organizations. The program culminates in an internship and a research project resulting in a professional research report.

See "Social Science (M.A.) Requirements" on page 11.

#### Required Sociology Credits — 27 hours

SOC 530 Organizational Analysis (3)

SOC 532 Social Psychology and Group Dynamics (3)

SOC 539 Seminar in Clinical Sociology (3)

SOC 552 Applied Social Theory (3)

SOC 580 Social Policy Analysis (3)

SOC 660 Applied Social Research (3)

SOC 691 Research Internship (6)

GERO 665 Grant Development and Administration (3)

#### Elective Credits — 6 hours

Elective credits may be any advisor approved 500 or 600 numbered courses and may not have a SOC prefix.

#### Professional Research Report Options:

Courses required for this option are listed above. The professional research report is completed in conjunction with SOC 691 Research Internship (1-9). Candidates should consult with the departmental graduate coordinator as soon as possible during the first semester of work so that they can be assigned an advisor. In consultation with their advisor the committee chair, they should choose another department member to be on their committee. These faculty members plus the internship site supervisor serve as the student's committee which directs the research project, the professional research report and the oral examination over the research. Candidates are urged to consult frequently with the members of their committee.

#### Thesis Option:

The thesis option requires 6 thesis credits, SOSC 699. Thesis credit may be substituted for elective credits and/or for three research internship credits. The thesis option also includes an oral defense of the thesis. The option is primarily for students who wish to continue their graduate work, in another program, toward the Ph.D. Students who are interested in this option should consult with the graduate coordinator as soon as possible.



## SPECIAL EDUCATION, M.A.

Select One Emphasis Area: Early Childhood, Moderate Needs, Profound Needs, Severe Needs: Affective, Severe Needs: Cognitive, Severe Needs: Hearing, Severe Needs: Vision, or Teaching the Gifted and Talented

### Degree Requirements — 36-74 Credits

If a student enters the master of arts program in special education without a current teacher licensure, she or he is required to complete additional (separate) admission requirements and course requirements listed under Professional Teacher Education.

#### Program Requirements — 21 hours

EDSE 500 Field of Special Education (3)  
 EDSE 501 The Exceptional Learner (3)  
 EDSE 502 Communication, Collaboration and Consultation for Special Educators (3)  
 EDSE 503 Effective School Environments for Learners with Exceptional Needs (3)  
 EDSE 504 Transition Planning and Service Delivery for Students with Special Needs (3)  
 EDSE 505 Assessment of Exceptional Individuals (3)  
 SRM 600 Introduction to Graduate Research (3)

See "Special Education (M.A.) Requirements" on page 27.

### Early Childhood Special Education Emphasis

#### Emphasis Requirements — 42-51 Credits

This master's program is designed to prepare teachers who will work with infants and young children (birth to 5) with special needs. The program consists of the required courses and practicum requirements agreed upon by the student and advisor.

#### Program Requirements — 18 hours

EDSE 504 is not required for this emphasis.

#### Required Major Credits — 24-33 hours

EDSE 530 Parent/Professional Partnerships (3)  
 EDSE 531 Assessing Young Children with Special Needs (3)  
 EDSE 533 Methods in Early Childhood Special Education (3)  
 EDSE 534 Research and Policy in Early Childhood Special Education (3)  
 EDSE 536 Early Intervention for Infants and Toddlers with Special Needs (3)  
 EDEC 660 Critical Issues in Early Childhood (3)  
 EDEC 675 Play and Psychosocial Development in Early Childhood (3)  
 EDSE 535 Practicum in Early Childhood Special Education (3-12)

### Moderate Needs Emphasis

#### Emphasis Requirements — 36-45 Credits

This master's program is designed to prepare teachers who will work with students who have moderate needs. PTEP's may require additional courses addressing competencies in the scope and sequence of regular education curriculum and methodology (EDEL 612 Elementary School Curriculum (3)). The program consists of the required courses and practicum requirements agreed upon by the student and advisor.

#### Program Requirements — 21 hours

#### Required Major Credits — 15-24 hours

EDSE 601 Supporting Special Students in the Mainstream (3)  
 EDSE 606 Instructional Methods for Students with Special Needs (3)  
 EDSE 608 Case Studies with Students with Special Needs (3)  
 EDSE 609 Language Development: Disorders of Individuals with Special Needs (3)  
 EDSE 603 Practicum with Moderate Needs Students (3-12)

### Profound Needs Emphasis

#### Emphasis Requirements — 42-51 Credits

This master's program is designed to prepare teachers who will work with profound needs students. The program consists of the required additional (separate) admission requirements and courses and practicum requirements agreed upon by the student and advisor.

#### Program Requirements — 21 hours

#### Required Major Credits — 21-30 hours

EDSE 520 Survey of Learners with Profound Needs (3)  
 EDSE 521 Assessment of Learners with Profound Needs (3)  
 EDSE 522 Methods of Teaching Learners with Profound Needs: Birth to 8 Years (3)  
 EDSE 523 Methods of Teaching Learners with Profound Needs 9 to Adult (3)  
 EDSE 524 Seminar in Education of Learners with Profound Needs (3)  
 EDSE 525 Research and Policy for Learners with Profound Needs (3)

#### Profound Needs Practicum

EDSE 526 Practicum with the Severely/Profoundly Handicapped (3-12)

### Severe Needs: Affective Emphasis

#### Emphasis Requirements — 42-51 Credits

This master's program is designed to prepare teachers who will work with students with affective needs. The program consists of the required courses and practicum requirements agreed upon by the student and advisor.

#### Program Requirements — 21 hours

#### Required Major Credits — 21-30 hours

EDSE 602 Behavioral Disorders: Characteristics, Identification and Intervention (3)  
 EDSE 606 Instructional Methods for Students with Special Needs (3)  
 EDSE 608 Case Studies with Students with Special Needs (3)  
 EDSE 610 Interventions for Students with Severe Affective Needs (3)  
 EDSE 611 Seminar in Severe Affective Needs (3)  
 EDSE 615 Special Education Law: Cases and Trends (3)

#### Severe Needs: Affective Practicum

EDSE 612 Practicum with Students with Severe Affective Needs, Ages 5-21 (3-12)

### Severe Needs: Cognitive Emphasis

#### Emphasis Requirements — 42-48 Credits

This master's program is designed to prepare teachers who will work with students with cognitive needs. The program consists of the required courses and practicum requirements agreed upon by the student and advisor.

#### Program Requirements — 21 hours

#### Required Major Credits — 21-27 hours

EDSE 606 Instructional Methods for Students with Special Needs (3)  
 EDSE 608 Case Studies with Students with Special Needs (3)  
 EDSE 609 Language Development: Disorders of Individuals with Special Needs (3)  
 EDSE 620 Psycho-Social Aspects of Students with Severe Cognitive Needs (3)  
 EDSE 621 Seminar in Severe Cognitive Needs (3)

#### Severe Needs: Cognitive Practicum (6 hours minimum)

EDSE 623 Practicum with Students with Severe Cognitive Needs, Ages 5-21 (3-12)

### Severe Needs: Hearing Emphasis

#### Emphasis Requirements — 54-60 Credits

This program is designed to prepare teachers of students who are deaf or hard of hearing. PTEPs may require additional courses addressing competencies in the scope and sequence

of regular education curriculum and methodology. Students not endorsed in Elementary Education, Secondary Education, or Early Childhood Education also are required to take EDEL 612, EDEL 620, and EDRD 612. The program consists of the required courses and practicum requirements agreed upon by the student and advisor. Students are required to pass a sign communication proficiency evaluation at the completion of their coursework prior to the practicum experience. This program meets the standards of the Colorado State Department of Education and the Council on Education of the Deaf.

#### **Prerequisites Required — 9 hours**

CMD5 266 Normal Speech and Language Development (3)  
CMD5 370 Basic Audiology (3)  
EDSE 450 Introduction to Deafness (3)

#### **Program Requirements — 21 hours**

##### **Required Major Credits — 24-30 hours**

EDSE 554 Sign Language in Educational Settings (3)  
EDSE 652 Speechreading, Auditory Training and Amplification (3)  
EDSE 653 Speech, Severe Needs: Hearing (3)  
EDSE 654 Language, Severe Needs: Hearing (3)  
EDSE 655 Reading, Severe Needs: Hearing (3)  
EDSE 656 Methods of Teaching Content: Severe Needs Hearing (3)

*Severe Needs: Hearing Practicum*

EDSE 657 Practicum, Severe Needs: Hearing (6-12)

**Notes:** Retention/Exit Requirements: Satisfactorily complete a sign language proficiency test which will be administered before each student's practicum placement; and at the end of each semester in the program the student's progress is evaluated by the Severe Needs: Hearing Faculty Committee. This committee reserves the right to place on probation or require withdrawal from the program, any student who, in their professional judgment, fails to satisfy requirements of scholarship, performance, or personal suitability.

### **Severe Needs: Vision Emphasis**

#### **Emphasis Requirements — 46-74**

This master's program is designed to prepare teachers who will work with students who are visually impaired. The program consists of the required courses and practicum requirements agreed upon by the student and advisor. Students with licensure from a state other than Colorado may be required to take additional coursework to meet Colorado Professional Teacher Education standards. Provided some prior coursework has been completed in visual impairment (VI), students may complete licensure and degree requirements in a minimum of 46 semester hours if they desire licensure in education of students who are visually impaired only. A minimum of 61 semester hours is required to complete requirements in both visually impaired and orientation and mobility if no prior coursework in VI has been completed. It is preferable for students to enroll fall semester.

#### **Program Requirements — 21 hours**

##### **Required Major Credits — 25-53 hours**

EDEL 612 Elementary School Curriculum (3)  
EDSE 540 Independent Living for Individuals with Visual Disabilities (1-2)  
EDSE 542 Assessment and Methods for Teaching Students with Visual/Multiple Disabilities (3)  
EDSE 543 Braille Codes and Formats (3)  
EDSE 544 Technology for Students with Visual Disabilities (2)  
EDSE 545 Advanced Braille Codes and Formats (3)  
EDSE 546 Principles of Orientation and Mobility (2)  
EDSE 641 Medical and Educational Implications of Visual Handicaps (1-3)  
EDSE 642 Advanced Seminar in Education of Students with Visual Handicaps (3)  
EDSE 643 Psychosocial Needs of Individuals with Visual Handicaps (2)

*Sever Needs: Vision Practicum*

EDSE 644 Practicum in Education of Students with Visual Handicaps, K-12 (2-12)

*\*Association for Education and Rehabilitation of Blind and Visually Impaired (AERBVI) Licensure: Orientation and Mobility*  
EDSE 547 Individual Instruction in Orientation and Mobility (4)

EDSE 647 Applied Methods in Orientation and Mobility (2)  
EDSE 648 Practicum in Orientation and Mobility (9)

\*Students earning licensure in O & M through AERBVI must complete the above coursework in addition to the VH program requirements. Before enrolling in any mobility coursework, students must obtain program faculty consent.

\*Students earning licensure in rehabilitative teaching through AERBVI must complete the above program with faculty consent. This can be combined with Orientation and Mobility.

### **Teaching the Gifted and Talented Emphasis**

#### **Emphasis Requirements — 42-57**

This master's program is designed to train teachers on the elementary and secondary levels to work with gifted and talented students in order to help them develop to their full potential. The program consists of the required courses and practicum requirements agreed upon by the student and advisor.

#### **Program Requirements — 15 hours**

EDSE 504 and EDSE 505 are not required for this emphasis.

##### **Required Major Credits — 24-30 hours**

EDSE 580 Nature and Needs of the Gifted and Talented (3)  
EDSE 581 Teaching Strategies for the Gifted and Talented (3)  
EDSE 582 Curriculum Models for the Gifted and Talented (3)  
EDSE 583 History, Organization and Administration of Programs for the Gifted and Talented (3)  
EDSE 585 Facilitating Creativity in the Gifted and Talented Student (2)  
EDSE 586 Trends, Issues and Thinking Skills in Gifted Education (2)  
PPSY 627 Counseling Interventions and Techniques for Talented and Gifted Students (2)

*Teaching the Gifted and Talented Practicum*

EDSE 584 Practicum in Teaching the Gifted and Talented (6-12)

A minimum of 6 hours is required during the Summer Enrichment Program. The maximum for the M.A. program is 12 hours.

#### **Electives Required — 3-12 hours**

Electives will be selected with the approval of the major advisor.



## SPORT AND EXERCISE SCIENCE, M.S.

Select One Emphasis Area: Exercise Science, Sport Administration, Sport Pedagogy

### Degree Requirements — 30-33 Credits

#### Exercise Science Emphasis

##### Program Requirements — 33 Hours

Exercise Science is the integrated study of human movement. Concentrations within this discipline include biomechanics, exercise physiology and social psychology of sport and physical activity.

##### Biomechanics Concentration — 33 hours

###### Required Credits (9 hours)

SES 602 Introduction to Research in Sport and Exercise Science (3)  
SES 625 Laboratory Techniques in Kinesiological Research (3)  
SRM 602 Statistical Methods I (3)

###### Concentration area requirements (15 hours)

SES 620 Advanced Anatomical Kinesiology (3)  
SES 621 Advanced Biomechanics (3)  
SES 627 Advanced Physiological Kinesiology II (3)  
SES 629 Concepts in Kinesiology (3) (Cardiopulmonary Physiology)

and select one of the following courses:

SES 623 Advanced Neuromotor Kinesiology (3)  
SES 624 Advanced Developmental Kinesiology (3)  
SES 626 Advanced Physiological Kinesiology I (3)  
SES 665 Advanced Sociological Kinesiology (3)

###### Elective Credits (9 hours)

Elective credits in a concentration area must have the approval of the program advisor and must satisfy the Thesis option or the Professional Research Project Option.

The following courses are recommended to be used as electives:

HHS 515 Bio-Physical Changes in Aging (3)  
SES 692 Graduate Internship in Sport and Exercise Science (1-6)  
BIO 552 Mammalian Physiology I (3)  
BIO 553 Mammalian Physiology II (3)

##### Exercise Physiology Concentration — 33 hours

###### Required Credits (9 hours)

SES 602 Introduction to Research in Sport and Exercise Science (3)  
or  
SRM 600 Introduction to Graduate Research (3)  
SES 625 Laboratory Techniques in Kinesiological Research (3)  
SRM 602 Statistical Methods I (3)

###### Concentration area requirements (15 hours)

SES 620 Advanced Anatomical Kinesiology (3)  
SES 626 Advanced Physiological Kinesiology I (3)  
SES 627 Advanced Physiological Kinesiology II (3)  
SES 629 Concepts in Kinesiology (3) (Cardiopulmonary Physiology)

and select one of the following courses:

SES 621 Advanced Biomechanics (3)  
SES 623 Advanced Neuromotor Kinesiology (3)  
SES 624 Advanced Developmental Kinesiology (3)  
SES 665 Advanced Sociological Kinesiology (3)

###### Elective Credits (9 hours)

Elective credits in a concentration area must have the approval of the program advisor and must satisfy the Thesis option or the Professional Research Project option. The following courses are recommended electives:

Research or Pre Med

BIO 550 Cell Physiology (4)  
CHEM 581 General Biochemistry I (4)  
CHEM 582 General Biochemistry II (4)  
BIO 552 Mammalian Physiology I (3)  
BIO 553 Mammalian Physiology II (3)

Preventative and Rehabilitative Exercise

SES 510 Cardiac Rehabilitation (3)  
SES 692 Graduate Internship in Sport and Exercise Science (6)

Nutrition in Sport and Exercise

CHEM 581 General Biochemistry I (4)  
CHEM 582 General Biochemistry II (4)  
FND 555 Nutrition for Fitness and Athletic Performance (3)

#### Social Psychology of Sport and Physical Activity Concentration — 33 hours

##### Required Credits (9 hours)

SES 602 Introduction to Research in Sport and Exercise Science (3)  
SES 625 Laboratory Techniques in Kinesiological Research (3)  
SRM 602 Statistical Methods I (3)

##### Concentration area requirements (15 hours)

SES 624 Advanced Developmental Kinesiology (3)  
SES 629 Concepts in Kinesiology (3) (Motivation)  
SES 635 Exercise and Sports Psychology (3)  
SES 665 Advanced Sociological Kinesiology (3)

Students are required to take one of the following courses:

SES 620 Advanced Anatomical Kinesiology (3)  
SES 621 Advanced Biomechanics (3)  
SES 623 Advanced Neuromotor Kinesiology (3)  
SES 626 Advanced Physiological Kinesiology I (3)

##### Elective Credits (9 hours)

Elective credits in a concentration area must have the approval of the program advisor and must satisfy the Thesis option or the Professional Research Project option.

The following courses are recommended electives:

CH 530 Seminar in Health Promotion Strategies (3)  
GERO 625 Psychosocial Aspects of Aging (3).  
SES 680 Perspectives in Sport Pedagogy (3)  
PSY 550 Cognitive Development (3)  
PSY 627 Psychometrics (3)  
PSY 643 Theories of Motivation (3)  
PSY 664 Advanced Social Psychology (3)  
SOC 563 Qualitative Methods (3)  
SOC 532 Social Psychology and Group Dynamics (3)  
SRM 680 Introduction to Qualitative Research (3)

##### Thesis Option — 6 additional hours

(This option would require a 39 hour program.) The Thesis option is in lieu of the professional research project option listed below.

Thesis hours may be included as elective hours within a student's program. The Thesis option requires the completion of an experimental research project (problem development, data collection and analysis, write-up, and defense).

##### Professional Research Project Option

The writing and presentation of a research project satisfies the completion of the comprehensive exam.

Students must see an advisor to develop a program matrix and research project topic.

#### Sport Administration Emphasis

### Degree Requirements — 30 Credits

The curriculum follows the guidelines set for the preparation of students in sport management by the National Association for Sport and Physical Education and the North American Society for Sport Management. Students are prepared to assume positions in the management of sport in collegiate athletic programs and professional, olympic and commercial sport business. The M.S. program requires a minimum of 30 hours.

See "Sport Administration Emphasis (M.S.) Admission Requirements" on page 39.

##### Required Credits — 21 hours

SES 560 Issues and Ethics in Sport Management (3)  
SES 570 Program Management (3)  
SES 576 Sport Promotion and Marketing (3)  
SES 602 Introduction to Research in Sport and Exercise Science (3)  
SES 675 Management of Sports Facilities and Equipment (3)

SES 676 Sport Public Relations and Information Systems (3)  
SES 688 Legal Aspects of Sport (3)

**Elective Credits — 9 hours**

Students are allowed 9 hours of electives in the master's program. After consulting with their advisor, students should select courses which contribute to their academic and career goals. The following courses are offered as a guide for elective course selection. Students should also review the *Catalog* for course options in their cognate areas.

ET 501 Introduction to Applications of Educational Technology (3)  
ET 504 Instructional Materials Design (3)  
SES 650 Financial Management for Sport Organizations (3)  
SES 670 Sport and Higher Education (3)  
SES 678 Event Development and Management (3)  
SES 692 Graduate Internship in Sport and Exercise Science (1-6)

**Note:** SES 692 may be used for up to 6 hours of elective credit and is designed to assist students in gaining experience in the sport industry and/or to bridge the gap between theory and practice. To be eligible to register for SES 692, a student must have 1) a GPA of 3.0, 2) completed (or currently enrolled) five required courses, and 3) completed 20 graduate credits.

**Thesis Option — 6 hours**

The research and writing of a thesis is in lieu of taking the comprehensive examinations. Thesis hours may be included as elective hours within a student's program. Contact the School of SES's Graduate Coordinator for additional information.

Additional elective credits must have the approval of a program advisor (3)

**Note:** Students must also develop a program matrix under the supervision of an assigned program advisor.

**Endorsement:** By completing the Sport Pedagogy Emphasis: Physical Education Concentration, students fulfill the requirements for institutional recommendation for endorsement as a K-12 Physical Education teacher. Before such recommendation is made, however, students seeking endorsement must provide evidence of two or more years of teaching experience in elementary, middle or secondary school while holding a Type "A" teaching license or equivalent. (Contact the Colorado Department of Education for a complete list of requirements for endorsement.)

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## **Sport Pedagogy Emphasis**

### **Degree Requirements — 33 Credits**

The Sport Pedagogy emphasis is designed for individuals who have relevant experience in their chosen concentration and who plan to provide leadership in that concentration. Sport pedagogy involves the complex and idiosyncratic activity of teaching. Students in this program examine different assumptions, conceptions, and paradigms of teaching physical activity and sport. Furthermore, they have opportunities to practice and reflect on the art and science of teaching using various models in assorted settings with diverse populations.

#### **Required Major Credits — 12 hours**

SES 602 Introduction to Research in Sport and Exercise Science (3)  
SES 603 Professional Development Seminar (3)  
SES 680 Perspectives in Sport Pedagogy (3)  
SES 688 Legal Aspects of Sport (3)

#### **Concentration Area Required Credits — 9 hours**

*Physical Education concentration requirements*

SES 612 Assessment in Sport Pedagogy (3)  
SES 614 Analysis of Teaching in Physical Education (3)  
SES 640 Curriculum in Physical Education (3)

*Outdoor Education concentration requirements*

SES 612 Assessment in Sport Pedagogy (3)  
SES 630 Challenge Course Programming (3)  
SES 631 Outdoor Education (3)

*Youth Development concentration requirements*

SES 605 Youth Development and Physical Activity (3)  
SES 606 Scholarship in Youth Development (3)

*and select one of the following courses with advisor approval:*

SES 614 Analysis of Teaching in Physical Education (3)  
SES 630 Challenge Course Programming (3)

#### **Elective Credits — 12 hours**

One course from another concentration area (3)

*and select one of the following options — 6 hours*

1) **Thesis Option:** This option requires the research and writing of a thesis. Thesis hours (SES 699) may be included as elective hours within a student's program.

2) **Professional Project Option:** This option requires the development and presentation of a professional project and is in lieu of completing a thesis. SES 692, SES 622 and other graduate coursework may be included as elective hours within a student's program and used in this option.



## VISUAL ARTS, M.A.

### Degree Requirements — 33 Credits

The graduate program in the Department of Visual Arts leads to the Master of Arts degree. It offers an in-depth and individualized course of study. Graduate students may choose an area of concentration in art education, art history, ceramics, computer graphics, drawing, painting, photographic imaging, printmaking, sculpture or an approved combination of these concentration areas.

Graduate programs in the art department provide opportunities for students who want to develop advanced expertise in art education, art history and studio arts. Any of the areas of concentration or combinations of concentration are suitable for the K-12 art educator seeking a masters degree. The M.A. degree can also be used in preparation for further, more advanced, graduate studies.

It is the goal of the Department of Visual Arts to encourage, foster and provide academic rigor and artistic excellence.

See “Visual Arts (M.A.) Requirements” on page 44.

#### Required Credits — 13 hours

ART 600 Graduate Research in Art (3)

ART 680 Seminar in Art History (4)

ART 699 Thesis (6)

#### Area of Concentration — 12 hours

#### Required Art Electives — 8 hours

Electives will be selected with the approval of the major advisor.

**Notes:** The student and the academic advisor will select a graduate committee of at least two other faculty from the art department. This committee must be chosen during the first semester in the graduate program.

The student, with the approval of the academic advisor and committee, will develop a course of study for the degree program. The approved course of study will be submitted to the graduate coordinator. Changes in the course of study must be approved by the student's academic advisor and committee.

Students having less than 12 semester hours of art history in their undergraduate program will include enough hours of art history to make up the deficiency over and above the semester hours required for a master's degree.

Students are required to have a graduate committee review each semester. The student will submit a written report of the graduate review to the academic advisor and the graduate coordinator. The student assumes responsibility for scheduling graduate reviews each semester. Two consecutive semesters of unsuccessful graduate reviews will be considered grounds for termination of the program.

In conjunction with ART 600, the student will prepare and submit a written thesis proposal. The proposal must be approved by all members of the student's graduate committee before beginning the thesis.

A written thesis is required of all Master of Arts degree candidates in the Department of Visual Arts. An exhibition of work combined with the written thesis is an option for graduate students with a studio concentration. Work for the exhibition needs to be completed while the candidate is primarily registered for courses as an on-campus student. All decisions concerning a combined art exhibition and written thesis requirement will be made by the student's graduate committee. Works for exhibition must be approved by the academic advisor and committee. Students with a concentration in art education are required to do a research thesis.

Upon completion of the program, the student will be required to demonstrate competence in the designated area of concentration in accordance with approved departmental standards. The student's committee must approve the candidate for graduation.





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# BACHELOR'S DEGREES



## AFRICANA STUDIES, B.A.

### Degree Requirements — 120 credits

Africana Studies offers an interdisciplinary curriculum that promotes the study of the history, culture, philosophy, economy and political experience of people of African descent, especially those living in the United States, on the African continent, in Latin America and in the Caribbean. Curriculum is based on the assumption that there exists a substantive, intrinsically valuable body of knowledge that expresses the black experience. Courses are organized into two foci: social and behavioral studies and cultural studies.

Graduates in Africana Studies will be prepared to enter professional and academic careers in the humanities and social sciences; possess accurate information about the histories and identities of people of African descent and be exposed to and contribute to scholarship about people of African descent.

Graduates will have a liberal arts education and skills necessary for working in multicultural environments; qualify for graduate work in Africana Studies or Pan African Studies; and will understand the struggles of people of African descent. As a job-related field, Africana Studies fosters the intellectual and professional expertise valuable for positions in teaching (elementary, secondary and post-secondary levels), business, criminal justice, counseling, education and health-related fields. Additional applications include community resource development, urban planning, public and social policy analysis, law, social services, government (local, state and federal) and international relations.

See "Africana Studies (B.A.) Requirements" on page 2

### Required Major Credits — 19-22 hours

AFS 104 Survey of Africa (3)  
 AFS 202 African American History II (3)  
 AFS 240 Dynamics of Racism (3)  
 AFS 305 Survey of African American Literature (3)  
 AFS 386 Modern African World (3)  
 AFS 399 Community Study Project (1-4)  
 AFS 490 Seminar in Africana Studies (3)

### Elective Major Credits — 12 hours

*Social and Behavioral Studies, select two of the following:*

AFS 102 The Black Woman in America (3)  
 AFS 332 Pan-Africanism (3)  
 AFS 395 Aspects of the African-American Experience (3)  
 AFS 420 Black Urban Politics (3)  
 AFS 456 Leadership and the Black Church (3)

*Cultural Studies, select two of the following:*

AFS 101 Crisis of Identity (3)  
 AFS 230 Black Women in Literature (3)  
 AFS 340 The Black Family (3)  
 AFS 360 Music and the Black Experience (3)  
 AFS 395 Aspects of the African-American Experience (3)  
 AFS 396 African and African American World Views (3)  
 AFS 486 Current Issues in Multicultural Education (3)  
 ID 308 Workshop (1-3)

### Required Specified GenEd Credits — 6 hours

*Category 4.c. Arts and Letters*

AFS 201 African American History I (3)

*Category 7.b. Interdis. and Internat. Studies, and Multicul. Studies*

AFS 100 Introduction to Africana Studies (3)

### Elective GenEd Credits — 34 hours

### University-Wide Elective Credits — 46-49 hours



## BIOLOGICAL SCIENCES, B.S.

Select One Emphasis Area: Biomedical Sciences, Cell and Molecular Biology, Organismal Biology or Biology Secondary Teaching

### Degree Requirements — 120 credits

*Program Requirements (101 hours) and Emphasis Area Required Major Credits (19 hours), Total 120 Credits.*

See “Biological Sciences (B.S.) Requirements” on page 3

### Program Requirements — 101 hours

#### Required Major Credits — 23 hours

BIO 111 Survey of Organismal Biology (4)  
 BIO 210 Cell Biology (3)  
 BIO 220 Genetics (4)  
 BIO 351 Microbiology (4)  
 BIO 360 Ecology (4)  
 BIO 391 Career Development (1)  
 BIO 465 Evolution (3)

#### Biological Science Advanced Study — 13 hours minimum

BIO or BCHM courses at 300 level or higher (Consult faculty advisor to match career goals)

#### Capstone Professional Experience — 1 hour minimum

*Select one of the following courses:*

BIO 422 Directed Studies (1-3)  
 BIO 485 Topics in Field Biology (1-10)  
 BIO 492 Internship in Biological Sciences (1-3)  
 BIO 494 Practicum in College Biological Science Instruction (1-2)  
 BIO 495 Special Topics in Biology (1-3)  
 BIO 497 Special Laboratory Topics in Biology (1-3)  
 BIO 499 Undergraduate Research (1-6)

*Consult with faculty advisor to help match career goals.*

#### Required Supporting Credits — 20 hours

CHEM 112 Principles of Chemistry II (5)  
 CHEM 331 Organic Chemistry I (5)

*and select one of the following groups:*

PHYS 220 Introductory Physics I (5)  
 PHYS 221 Introductory Physics II (5)

*or*

PHYS 240 General Physics I (5)  
 PHYS 241 General Physics II (5)

#### Required Specified GenEd Credits — 13 hours

*Category 2. Mathematics*  
 MATH 131 Calculus I (4)

*Category 6. Science and Mathematics*

BIO 110 Principles of Biology (4)  
 CHEM 111 Principles of Chemistry I (5)

#### Elective GenEd Credits — 27 hours

*Recommended for Category 1.b. SCI 291 Scientific Writing (3)*

#### University-Wide Elective Credits — 4 hours

## Biomedical Sciences Emphasis

Intended for those students having an interest in the medical and paramedical professions, this program meets the minimal requirements of most professional schools of health science. Undergraduates entering this program should have a strong science and mathematics background in high school.

Students who successfully complete the program will be able to apply for admission to medical, veterinary, dentistry, chiropractic, or paramedical professional programs. They will also be able to continue their education in graduate programs in the biological sciences (zoology, anatomy, physiology) or pursue careers in medicine, science or pharmaceutical sales.

#### Required Major Credits — 19 hours

BIO 341 Human Anatomy (3)  
 BIO 350 Human Physiology (4)  
 BIO 450 Cell Physiology (4)  
 CHEM 332 Organic Chemistry II (5)  
 STAT 250 Statistics for Health Sciences (3)

## Cell and Molecular Biology Emphasis

This program emphasizes a thorough understanding of the biological principles underlying all living systems through study of the basic unit of life, the cell. Students should have an interest in working in research or industrial laboratories, including medical, microbiological or biotechnological laboratories. They should have a strong science and mathematics background in high school.

Students successfully completing this program will be well prepared to continue their education in graduate biological sciences programs (microbiology, genetics and molecular biology) and in most professional medical schools. Students will be qualified to work in industrial and various research laboratories in medicine, microbiology and biotechnology. This program encompasses a minor in chemistry.

#### Required Major Credits — 15 hours

BIO 425 Molecular Genetics (3)  
 BIO 450 Cell Physiology (4)  
 CHEM 332 Organic Chemistry II (5)  
 CHEM 481 General Biochemistry I (3)

#### Elective Major Credits — 4 hours

*Physiology, Select one of the following courses:*

BIO 350 Human Physiology (4)  
 BIO 354 General Plant Physiology (4)

## Organismal Biology Emphasis

This program places emphasis on organismal biology and on field courses. Students completing the program will acquire a broader background in science support courses than in other bachelor's level biological science programs. Students should have an interest in working with plants and animals in a field setting. A strong science and mathematics background in high school is beneficial to students wanting to become field biologists.

Students will be prepared to work for public or private sector environmental agencies such as state or federal wildlife agencies, the Bureau of Land Management, the National Park Service, the Environmental Protection Agency, various parks and recreation programs or private consulting agencies. They can also continue their education in graduate programs in the pure or applied biological sciences (botany, zoology, ecology, forestry, wildlife biology).

#### Required Supporting Credits — 9 hours

BIO 330 Plant Taxonomy (4)  
 ENST 265 Conservation of Natural Resources (2)  
 STAT 150 Introduction to Statistical Analysis (3)

#### Elective Credits — 8 hours

*Physiology, select one of the following courses (4 hours):*

BIO 350 Human Physiology (4)  
 BIO 354 General Plant Physiology (4)

*Earth Science, select one of the following courses (4 hours):*

GEOL 201 Physical Geology (4)  
 MET 205 General Meteorology (4)

#### Biological Science Advanced Study — 2 hours

## Secondary Teaching Emphasis

This program is listed on the next column or page.



## BIOLOGICAL SCIENCES, B.S.

Biology Secondary Teaching Emphasis

### Degree Requirements — 127 credits

This program leads to State of Colorado licensure in secondary science. Students receive in-depth training in biological sciences content and pedagogy plus a wide range of additional support science content. They should have an interest in teaching and have evidence of working successfully with young people. They should have a strong science and mathematics background in high school.

Students will meet licensure requirements of the Colorado Department of Education for teaching secondary science (grades 7-12). Upon completion of this program, students will also be able to continue their education in graduate programs in the biological sciences.

#### Required Major Credits (Biology Core) — 23 hours

BIO 111 Survey of Organismal Biology (4)  
 BIO 210 Cell Biology (3)  
 BIO 220 Genetics (4)  
 BIO 351 Microbiology (4)  
 BIO 360 Ecology (4)  
 BIO 391 Career Development (1)  
 BIO 465 Evolution (3)

#### Required Major Credits (Emphasis) — 3 hours

BIO 371 Teaching Strategies for Biology Teachers (1)  
 SCI 391 Computer Applications in Science (2)  
 (Capstone Professional Experience required of all BA in Biological Sciences is met by STEP 464 as part of PTEP Credits.)

#### Elective Major Credits — 8 hours

*Physiology, select one of the following courses (4 hours):*  
 BIO 245 Introduction to Human Anatomy and Physiology (4)  
 BIO 354 General Plant Physiology (4)  
*Earth Science, select one of the following courses (4 hours):*  
 AST 100 General Astronomy (4)  
 MET 205 General Meteorology (4)

#### Required Supporting Credits — 14 hours

*Chemistry (4 hours minimum)*  
 CHEM 131 Introductory Organic Chemistry (4)  
*Physics (10 hours minimum)*  
 PHYS 220 Introductory Physics I (5)  
 PHYS 221 Introductory Physics II (5)  
 or  
 PHYS 240 General Physics I (5)  
 PHYS 241 General Physics II (5)

#### Required Specified GenEd Credits — 16 hours

*Category 2. Mathematics*  
 STAT 150 Introduction to Statistical Analysis (3)  
*Category 6. Science and Mathematics*  
 GEOL 100 General Geology (4)  
 BIO 110 Principles of Biology (4)  
 CHEM 111 Principles of Chemistry I (5)

The following courses are recommended but not required:

*For Category 1.b. Intermediate Composition*  
 SCI 291 Scientific Writing (3)  
*For Category 7. Interdis., Multi., and Int. Studies*  
 ENST 100 Introduction to Environmental Studies (3)

#### Required PTEP Credits — 38 hours

See "Secondary Professional Teacher Education Program" on page 222

#### Elective GenEd Credits — 25 hours



## BUSINESS ADMINISTRATION, B.S.

Select one Emphasis Area: Accounting, Computer Information Systems, Finance, General Business, Management or Marketing

### Degree Requirements — 120 credits

See "Business Requirements" on page 17

### Program Requirements — 96 Credits

#### Required Major Credits — 27 hours

BAAC 220 Principles of Accounting I (3)  
 BAAC 221 Principles of Accounting II (3)  
 BACS 300 Information Systems (3)  
 \*BACS 305 Intermediate Business Statistics (3)  
 BAFN 231 Legal Environment of Business (3)  
 BAFN 370 Business Finance (3)  
 BAMG 350 Management of Organizations (3)  
 \*\* BAMG 456 Strategic Management (3)  
 BAMK 360 Marketing (3)

\*BACS 305 should be taken prior to enrolling in any 400-level business course.

\*\*BAMG 456 is the capstone course for Business majors and is designed to be taken in the student's last semester. The prerequisites for this course are: BAAC 221, BACS 305 or take concurrently, BAMG 350, BAMK 360 and BAFN 370.

#### Elective Major Credits — 9 hours

Take a total of three (3) courses with a BA \_ prefix excluding: BA 100, BA 101, BA 251, BAFN 240 and BAMK 260.

#### Required Supporting Credits — 9-10 hours

SPCO 100 Basics of Public Speaking (1)  
 SPCO 103 Speaking Evaluation (2)  
*and select one of the following two courses:*  
 STAT 251 Statistics for Business and Economics (3)  
 BACS 291 Business Statistics I (3)  
*and select one of the following two courses:*  
 MATH 131 Calculus I (4)  
 MATH 176 Topics in Calculus (3)  
 (MATH 176 is recommended)

#### Required Specified GenEd Credits — 16-17 hours

*Category 1.b. Intermediate Composition*  
*Select one of the following two courses:*  
 BA 205 Business Communications (3)  
 ENG 123 College Research Paper (3)  
*Category 2. Mathematics*  
 MATH 124 College Algebra (4)  
*Category 5. Social Sciences*  
 ECON 103 Introduction to Economics: Macroeconomics (3)  
 ECON 105 Introduction to Economics: Microeconomics (3)  
*and select one of the following three courses:*  
 PSY 120 Principles of Psychology (4)  
 PSY 265 Social Psychology (3)  
 SOC 100 Principles of Sociology (3)

#### Elective GenEd Credits — 23-24 hours

#### University-Wide Elective Credits — 9-12 hours

### Accounting Emphasis

The primary mission of the program is to facilitate the development of broadly educated graduates with an emphasis in accounting. Graduates are prepared to enter a wide variety of accounting and business careers or to enter graduate school. The program emphasizes high-quality instruction and interaction among students, faculty and the professional community.

The accounting faculty also accept their responsibilities to the University, the Kenneth W. Monfort College of Business, the accounting profession, business, government and not-for-profit organizations. The faculty strive to meet these responsibilities by providing appropriate service to these groups and by participating in a broad range of scholarly activities. These professional services and scholarly activities

are an integral part of being a faculty member and complement the primary mission.

### Program Requirements — 96 Credits

#### Required Major Credits — 24 hours

BAAC 320 Intermediate Accounting I (3)  
 BAAC 321 Intermediate Accounting II (3)  
 BAAC 323 Cost and Managerial Accounting I (3)  
 BAAC 328 Accounting Systems (3)  
 BAAC 420 Accounting Theory and Research (3)  
 BAAC 421 Advanced Accounting (3)  
 BAAC 425 Auditing I (3)  
 BAAC 428 Income Tax I (3)

### Computer Information Systems Emphasis

The primary objective of the Computer Information Systems Emphasis is to provide the applicable coursework and experiences to allow graduates to secure industry positions in the fields of programming, systems analysis, systems design, database design/administration and telecommunications. The program is also designed to prepare students with a solid academic background suitable for graduate work in computer information systems. Within the curriculum, particular attention is paid to the strategic nature of technology. In the CIS program, students acquire knowledge of computer programming, micro and mainframe computers, data communications, systems analysis and design, database management systems and decision support systems.

Graduates of the CIS program usually enter the job market as programmers/analysts or networking personnel. Subsequent positions may include systems analysts, database administrators and data communications specialists. For the most part, the graduate's activities will focus on creating and implementing software and procedures used to service large and small organizations including manufacturing, retail, wholesale, financial, insurance, communications and government groups.

### Program Requirements — 96 Credits

#### Required Major Credits — 18 hours

BACS 380 Networking and Data Communications Systems (3)  
 BACS 381 Object Oriented Systems II (3)  
 BACS 485 Database Management Systems (3)  
 BACS 487 Systems Analysis and Design (3)  
*and select two of the following courses:*  
 BACS 285 Application Programming Languages (3)  
 BACS 287 Graphical Interface Programming (3)  
 BACS 288 Object Oriented Systems I (3)

#### Elective Major Credits — 6 hours

*Select two of the following courses:*  
 BACS 392 Systems Platforms and Network Development (3)  
 BACS 482 Management Support Systems (3)  
 BACS 484 Distributed Enterprise Systems (3)  
 BACS 486 Advanced Database Management (3)  
 BACS 488 Senior CIS Project (3)  
 BACS 490 Advanced E-Business Technology (3)  
 BACS 495 Special Topics in CIS (1-3)

### Finance Emphasis

The primary purpose of the Finance Emphasis is to provide students with a thorough foundation in finance, while providing them with the flexibility to prepare for a wide range of future endeavors. Graduates are prepared for careers in financial management of organizations and financial institutions.

The curriculum is consistent with national standards in finance as required for professional certifications such as the Chartered Financial Analyst (CFA), CERTIFIED FINANCIAL PLANNER™ and Certificate in Financial Management (CFM).

The emphasis allows students the opportunity to apply financial concepts to real world situations and to interact with professionals in the finance field. Throughout the

program of study, students are also taught how to integrate primary financial databases, online services and other relevant software to the field of finance.

Finance graduates must be able to recognize ethical dilemmas in finance and to make ethical business decisions. They must also be able to address the unique issues of making financial decisions in a global environment and be able to effectively communicate financial information in both oral and written forms.

### Program Requirements — 96 Credits

#### Required Major Credits — 15 hours

BAFN 371 Financial Markets and Institutions (3)  
 BAFN 379 Investments (3)  
 BAFN 470 Financial Management (3)  
 BAFN 474 Case Problems in Financial Management (3)  
 BAFN 475 Multinational Financial Management (3)

#### Elective Major Credits — 9 hours

*Select three of the following courses:*

BAAC 320 Intermediate Accounting I (3)  
 BAAC 323 Cost and Managerial Accounting I (3)  
 BAFN 340 Principles of Risk and Insurance (3)  
 BAFN 372 Introduction to Real Estate (3)  
 BAFN 441 Estate Planning and Life Insurance (3)  
 BAFN 442 Topics in Financial Planning (3)  
 BAFN 473 Commercial Bank Management (3)  
 BAFN 478 Student and Foundation Fund (3)  
 BAFN 479 Security Analysis (3)

### General Business Emphasis

The General Business Emphasis prepares students for a wide variety of careers in business, the management of small or family-owned businesses and graduate study in business administration.

Students complete coursework in each of the functional areas of business: accounting, finance, computer information systems, management and marketing. The General Business Emphasis is designed to prepare students for a broad range of entry-level positions in business organizations. The program is not intended to provide specialized study. The broad-based nature of the curriculum makes the General Business program appropriate for students intending to manage a family-owned or small business.

Courses required for the General Business Emphasis are also offered through the Evening Division Program on a three-semester cycle. Information on the Evening Division Program may be obtained from the MBC Advising Center in Kepner 1055, 970.351.1233.

### Program Requirements — 96 Credits

#### Required Major Credits — 24 hours

BAAC 327 Managerial Accounting (3)  
 BAFN 332 Business Administration and the Law (3)  
 BAFN 340 Principles of Risk and Insurance (3)  
 BAFN 470 Financial Management (3)  
 BAMG 354 Organizational Behavior (3)  
 BAMK 368 Marketing Analysis and Research (3)  
 BAMK 464 Global Marketing Strategies (3)

*and select one of the following two courses:*

BAMG 353 Human Resources Management (3)  
 BAMG 357 Managing New Business Ventures (3)

### Certificate in Entrepreneurship — General Business

#### Entrepreneurship Certificate — 16-18 Credits

General Business majors may also receive a Certificate in Entrepreneurship by including the following courses in their business program:

#### Required Credits — 9 hours

BAMG 355 Fundamentals of Entrepreneurship (3)  
 BAMG 357 Managing New Business Ventures (3)  
 BAMG/BAMK 407 Small Business Counseling (3)

*or*

BAMG 494 Not-For-Profit Management (3)

#### Required Supporting Credits — 7-9 hours

Select three of the following non-business courses:

ECON 310 Economics of Entrepreneurship (3)

HON 351 Junior Honors Seminar (2)

or

HON 451 Senior Honors Research Thesis (3)

PLP 200 The Entrepreneur in America (2)

SPCO 431 Communication and Leadership (3)

## Management Emphasis

The focus of the major is on learning how to plan, direct, and control resources such as people, time, capital, raw materials, and equipment. This focus will require the student to examine and understand issues and problems that confront society. The student will learn how to manage, motivate, and direct employees and organizations.

The primary objective of the Management Emphasis is to prepare students for entry-level management positions in business, not-for-profit organizations and government. Such positions include management trainees, supervisors, administrators, and other entry-level positions. The emphasis also prepares students for continuing education in MBA or other relevant master's degree programs.

### Program Requirements — 96 Credits

#### Required Major Credits — 12 hours

BAFN 470 Financial Management (3)

BAMG 353 Human Resources Management (3)

BAMG 354 Organizational Behavior (3)

BAMG 457 Managing Complex Organizations (3)

#### Elective Major Credits — 12 hours

Select four of the following courses:

BAAC 327 Managerial Accounting (3)

BAMG 357 Managing New Business Ventures (3)

BAMG 452 Business, Government and Society (3)

BAMG 453 Advanced Topics in Human Resources Management (3)

BAMG 455 Labor Relations (3)

BAMG 458 Managing in a Global Environment (3)

BAMG 494 Not-For-Profit Management (3)

BAMG 495 Special Topics in Management (3) (Repeatable, under different subtitles.)

BAMG 407 Small Business Counseling (3)

or

BAMK 407 Small Business Counseling (3)

## Certificate in Entrepreneurship — Management

### Entrepreneurship Certificate — 19-21 Credits

Management majors may also receive a Certificate in Entrepreneurship by including the following courses in their business program:

#### Required Credits — 12 hours

BAMG 355 Fundamentals of Entrepreneurship (3)

BAMG 357 Managing New Business Ventures (3)

BAMG/BAMK 407 Small Business Counseling (3)

or

BAMG 494 Not-For-Profit Management (3)

BAMK 368 Marketing Analysis and Research (3)

#### Required Supporting Credits — 7-9 hours

Select three of the following non-business courses:

ECON 310 Economics of Entrepreneurship (3)

HON 351 Junior Honors Seminar (2)

or

HON 451 Senior Honors Research Thesis (3)

PLP 200 The Entrepreneur in America (2)

SPCO 431 Communication and Leadership (3)

## Marketing Emphasis

In a highly competitive, global marketplace it is essential that organizations understand and rapidly respond to the needs of their customers. To develop and maintain sustainable competitive advantage, it is essential that organizations understand how to identify target markets and develop marketing strategies that will provide satisfaction to those markets. To do this, organizations employ individuals who can

analyze markets and develop comprehensive marketing programs, which include: product, promotion, pricing and distribution strategies. A Bachelor of Science degree in Business Administration with an emphasis in Marketing equips students with the knowledge and necessary skills to succeed in careers which require that they develop and implement marketing strategies. The emphasis also equips students for graduate study in marketing and business administration.

There are a wide variety of career paths in organizations open to graduates in marketing. Marketing is a significant functional area in virtually all modern organizations. A sample of marketing career areas may include the following: product management, retail management, marketing research, distribution management, logistics management, industrial buying, direct marketing, international marketing, promotion management, professional selling, sales management and advertising management. Graduates are prepared for marketing careers in public, private, governmental and non-profit organizations.

### Program Requirements — 96 Credits

#### Required Major Credits — 12 hours

BAMK 361 Consumer Behavior (3)

BAMK 368 Marketing Analysis and Research (3)

BAMK 462 Marketing Problems (3)

BAMK 464 Global Marketing Strategies (3)

#### Elective Major Credits — 12 hours

Take a total of four (4) courses from the 300/400-level courses with a minimum of two (2) from the 400-level courses.

BAMK 363 Promotional Strategy (3)

BAMK 364 Selling and Sales Management (3)

BAMK 365 Advertising (3)

BAMK 366 Retailing (3)

BAMK 461 Advertising Campaigns (3)

BAMK 468 Business-to-Business Marketing (3)

BAMK 469 Supply Chain Management (3)

BAMK 470 Direct Marketing (3)

BAMK 495 Special Topics in Marketing (3)

(BAMK 495 may be used only once to satisfy the 400-level elective requirement.)

BAMK 407 Small Business Counseling (3)

or

BAMG 407 Small Business Counseling (3)



## CHEMISTRY, B.S.

Please select one emphasis area:  
 Biochemistry (ACS Certified),  
 Chemistry (ACS Certified), Industrial  
 Chemistry, Pre-Health or Secondary  
 Teaching

### Degree Requirements — 120 Credits

#### Program Requirements — 24-26 hours

##### Chemistry Core

CHEM 321 Chemical Analysis (4)  
 CHEM 331 Organic Chemistry I (5)  
 CHEM 332 Organic Chemistry II (5)  
 CHEM 441 Inorganic Chemistry I (2)

##### and select one of the following groups:

CHEM 111 Principles of Chemistry I (5)\*  
 CHEM 112 Principles of Chemistry II (5)

##### or

CHEM 114 General Chemistry I (4)  
 CHEM 115 General Chemistry II (4)

See "Chemistry (B.S.) Requirements" on page 4

### Biochemistry Emphasis (ACS Certified)

This program is designed to give students a broad background in five areas of chemistry (including analytical chemistry, biochemistry, inorganic chemistry, organic chemistry and physical chemistry) and biology. Students will have the opportunity to work with a faculty member on an independent research project in chemistry. Students receiving this degree can be certified by the American Chemical Society. See advisor for details.

Students graduating with this emphasis will be prepared to pursue graduate study in chemistry, biochemistry, molecular biology, environmental health, professional schools (e.g., medicine, dentistry, veterinary medicine and other health-related areas) or obtain an entry position within the chemical or biotechnological industry.

#### Program Requirements — 24-26

##### Biochemistry Credits — 24 hours

CHEM 421 Instrumental Analysis (4)  
 CHEM 442 Inorganic Chemistry II (1)  
 CHEM 443 Inorganic Chemistry Laboratory (1)  
 CHEM 451 Physical Chemistry I (4)  
 CHEM 452 Physical Chemistry II (4)  
 CHEM 453 Physical Chemistry I Laboratory (1)  
 CHEM 454 Physical Chemistry II Laboratory (1)  
 CHEM 481 General Biochemistry I (3)  
 CHEM 482 General Biochemistry II (3)  
 CHEM 483 Experimental Biochemistry I (1)  
 CHEM 484 Experimental Biochemistry II (1)

##### Required Supporting Credits — 21 hours

MATH 233 Calculus III (4)  
 PHYS 241 General Physics II (5)  
 BIO 110 Principles of Biology (4)  
 BIO 220 Genetics (4)  
 BIO 450 Cell Physiology (4)

##### Required Specified GenEd Credits — 16 hours

###### Category 1.b. Intermediate Composition

SCI 291 Scientific Writing (3)

###### Category 2. Mathematics

MATH 131 Calculus I (4)

###### Category 6. Science and Mathematics

MATH 132 Calculus II (4) (c. Mathematics)  
 PHYS 240 General Physics I (5) (d. Physical Science)

##### Elective GenEd Credits — 24 hours

\*CHEM 111 (2 hours could count toward GenEd credit).

##### University-Wide Elective Credits — 9-11 hours

### Chemistry Emphasis (ACS Certified)

This program is designed to give students a broad background and an in-depth foundation in four areas of chemistry including analytical, inorganic, organic and physical chemistry. Students have the opportunity to work with a faculty member on an independent research project in chemistry. Students receiving this degree can be certified by the American Chemical Society. See advisor for details.

Students graduating with this emphasis are prepared to pursue graduate study in chemistry, professional schools (e.g., chemical engineering, medicine, dentistry, veterinary medicine and other health sciences) or an entry-level position with a chemical or petroleum company.

#### Program Requirements — 24-26

##### Required Major Core Credits — 17 hours

CHEM 421 Instrumental Analysis (4)  
 CHEM 442 Inorganic Chemistry II (2)  
 CHEM 443 Inorganic Chemistry Laboratory (1)  
 CHEM 451 Physical Chemistry I (4)  
 CHEM 452 Physical Chemistry II (4)  
 CHEM 453 Physical Chemistry I Laboratory (1)  
 CHEM 454 Physical Chemistry II Laboratory (1)

##### Elective Major Credits — 4-5 hours

###### Select one Laboratory Course from the following:

CHEM 483 Experimental Biochemistry I (1)  
 CHEM 499 Seminar and Research in Chemistry (1-3)

###### Select one Lecture Course from the following:

CHEM 481 General Biochemistry I (3)  
 CHEM (any 500 Level Courses) (3)

##### Required Supporting Credits — 9 hours

MATH 233 Calculus III (4)  
 PHYS 241 General Physics II (5)

##### Required Specified GenEd Credits — 16 hours

###### Category 1.b. Intermediate Composition

SCI 291 Scientific Writing (3)

###### Category 2. Mathematics

MATH 131 Calculus I (4)

###### Category 6. Sciences and Mathematics

MATH 132 Calculus II (4)  
 PHYS 240 General Physics I (5)

##### Elective GenEd Credits — 24 hours

\*CHEM 111 (2 hours could count toward GenEd credit).

##### University-Wide Elective Credits — 23-26 hours

### Industrial Chemistry Emphasis

This emphasis offers training in chemistry, mathematics, physics and a minor area selected by the student. The course of study provides a solid foundation in chemistry and specific background knowledge about the chemical industry.

Students completing this emphasis can pursue a career in the chemical, medical, pharmaceutical or biotechnology industries; or in related government agencies. Career options include supervision, process evaluation, quality control, pilot scale operation, management and sales. Students considering graduate study in chemistry may be required to complete additional coursework in physical chemistry and/or mathematics depending on the entrance requirements of specific graduate schools.

#### Program Requirements — 24-26

##### Required Major Core Credits — 9 hours

CHEM 421 Instrumental Analysis (4)  
 CHEM 443 Inorganic Chemistry Laboratory (1)  
 CHEM 450 Survey of Physical Chemistry (4)

##### Elective Major Credits — 2 hours

CHEM 360 Environmental Chemistry (2)

##### Required Supporting Credits — 5 hours

PHYS 221 Introductory Physics II (5)  
 Consult your advisor for additional coursework to complement this emphasis.

##### Required Specified GenEd Credits — 15 hours



*Category 1.b. Intermediate Composition*

SCI 291 Scientific Writing (3)

*Category 2. Mathematics*

MATH 131 Calculus I (4)

*Category 5. Social Science*

ECON 103 Introduction to Economics: Macroeconomics (3)

*Category 6. Science and Mathematics*

PHYS 220 Introductory Physics I (5)

**Elective GenEd Credits — 26 hours**

\*CHEM 111 (4 hours could count toward GenEd credit).

**University-Wide Elective Credits — 37-39 hours****Electives, Other**

Other recommended electives are MATH 132, MATH 221, STAT 150 and PHYS 321.

**Pre-Health Emphasis****Degree Requirements — 120-124****Option A: Pre-Medical Pre-Dental, Pre-Optometry, Pre-Veterinary, Pre-Podiatry and Pre-Pharmacy**

This program offers training in chemistry, mathematics and physics with a broad base in biological sciences and biochemistry. It provides a solid foundation in chemistry and biological sciences for those students planning to pursue professional studies in dentistry, medicine, optometry, podiatry, pharmacy or veterinary medicine.

Students completing this degree emphasis will meet the prerequisites to the professional schools listed above. Acceptance into these schools is competitive and students should register with and be advised by the pre-health committee in the Chemistry department. Students completing this degree emphasis who wish to pursue graduate study in one of the areas of chemistry will be required to complete additional coursework in physical chemistry and/or mathematics depending on the entrance requirements of the specific graduate school.

**Program Requirements — 24-26****Pre-Health: Option A Credits — 12 hours**

CHEM 450 Survey of Physical Chemistry (4)

CHEM 481 General Biochemistry I (3)

CHEM 482 General Biochemistry II (3)

CHEM 483 Experimental Biochemistry I (1)

CHEM 484 Experimental Biochemistry II (1)

**Required Supporting Credits — 19-20 hours**

BIO 111 Survey of Organismal Biology (4)

PHYS 221 Introductory Physics II (5)

*and select two of the following biology credits:*

BIO 341 Human Anatomy (3)

BIO 350 Human Physiology (4)

BIO 351 Microbiology (4)

Select one course from the CS or STAT prefixes (3)

**Required Specified GenEd Credits — 16 hours***Category 1b — Intermediate Composition*

SCI 291 Scientific Writing (3)

*Category 2 — Mathematics*

MATH 131 Calculus I (4)

*Category 6 — Sciences and Mathematics*

BIO 110 Principles of Biology (4)

PHYS 220 Introductory Physics I (5)

**Elective GenEd Credits — 24 hours**

\*CHEM 111 (2 hours would count toward GenEd credit).

**University-Wide Elective Credits — 22-25 hours****Option B: Pre-Medical Technology**

The program is designed to prepare students as practicing Medical Technologists (Clinical Laboratory Scientists) by providing them with the background courses in biology, chemistry and mathematics along with the professional medical technology courses necessary to meet or exceed the requirements of the American Society of Clinical Pathologists, ASCP.

Upon successful completion of the program, students will be prepared to take the required ASCP Board of Registry exam and the optional National Certification Agency for Medical Laboratory Personnel exam, fees required. After passing the exams, career opportunities exist in hospitals, physicians' offices, private laboratories and research organizations; as technical representatives for laboratory supply companies; or as educators of future medical technologists.

**Program Requirements — 24-26****Required Major Credits — 8 hours**

CHEM 481 General Biochemistry I (3)

CHEM 482 General Biochemistry II (3)

BCHM 381 Immunology (2)

**Required Supporting Credits — 52 hours**

BIO 111 Survey of Organismal Biology (4)

BIO 341 Human Anatomy (3)

BIO 350 Human Physiology (4)

BIO 351 Microbiology (4)

*and select one of the following courses:*

BIO 220 Genetics (4)

BIO 458 Diagnostic Microbiology (4)

BIO 333 General Parasitology (4)

BAMG 350 Management of Organizations (3)

MTEC 410 Clinical Chemistry (3)

MTEC 411 Chemistry Laboratory I (2)

MTEC 412 Chemistry Laboratory II (2)

MTEC 413 Chemistry Laboratory III (1)

MTEC 430 Immunology-Immunohematology (2)

MTEC 431 Immunohematology Laboratory I (2)

MTEC 432 Immunohematology Laboratory II (1)

MTEC 440 Medical Microbiology (3)

MTEC 441 Microbiology Laboratory I (2)

MTEC 442 Microbiology Laboratory II (3)

MTEC 460 Urinalysis and Clinical Microscopy (1)

MTEC 490 Hematology-Coagulation (3)

MTEC 491 Hematology Laboratory I (2)

MTEC 492 Hematology Laboratory II (2)

MTEC 493 Hematology-Serology-Electrophoresis Laboratory III (1)

**Required Specified GenEd Credits — 8 hours***Category 2. Mathematics*

MATH 124 College Algebra (4)

*Category 6. Science and Mathematics*

BIO 110 Principles of Biology (4)

*A course in scientific/technical writing is recommended to complete the Category 1.b. Intermediate Composition requirement.*

**Elective GenEd Credits — 32 hours**

\*CHEM 111 would fulfill Cat. 6 requirement (5 hours GenEd).

**Secondary Teaching Emphasis (ACS Certified)**

This program is listed on the next column or page.

**CHEMISTRY, B.S.**

Secondary Teaching Emphasis (ACS Certified)

**Degree Requirements — 126-128 Credits**

This program is designed to prepare students as secondary school chemistry teachers licensed in science by the Colorado Department of Education. In addition to a strong background in chemistry, students will receive training in biological sciences, physics, earth sciences and mathematics. Students receiving this degree can be certified by the American Chemical Society. See advisor for details.

Students graduating with this degree and licensure at the elementary/middle school level could become a teacher or science coordinator at an elementary or middle school. Students graduating with this degree emphasis will be well prepared to teach chemistry and other sciences in junior and senior high school. Students completing this program will be prepared to pursue graduate study in chemical education or science education.

The program will take four-five years to complete depending on high school background and the point in the educational career at which the program is entered.

**Required Major Credits — 32-34 hours**

CHEM 321 Chemical Analysis (4)  
 CHEM 331 Organic Chemistry I (5)  
 CHEM 332 Organic Chemistry II (5)  
 CHEM 441 Inorganic Chemistry I (2)

and select one of the following groups:

CHEM 111 Principles of Chemistry I (5)\*  
 CHEM 112 Principles of Chemistry II (5)

or

CHEM 114 General Chemistry I (4)  
 CHEM 115 General Chemistry II (4)

and complete the following courses:

CHED 495 Seminar in Teaching Chemistry (2)  
 CHEM 360 Environmental Chemistry (2)  
 CHEM 450 Survey of Physical Chemistry (4)

**Required Credits for Science Licensure — 16 hours**

BIO 111 Survey of Organismal Biology (4)  
 GEOL 201 Physical Geology (4)  
 PHYS 221 Introductory Physics II (5)

Secondary Licensure\*\*

SCED 441 Methods of Teaching Secondary School Science (3)

**Required Specified GenEd Credits — 13 hours**

Category 2. Mathematics

MATH 131 Calculus I (4)

Category 6. Sciences and Mathematics

BIO 110 Principles of Biology (4)  
 PHYS 220 Introductory Physics I (5)

**\*\*Required PTEP Credits — 38 hours**

See "Secondary Professional Teacher Education Program" on page 222

**Elective GenEd Credits — 27 hours**

\*CHEM 111 (2 hours could count toward GenEd credit).

**Chemistry Degree Requirements**

See "Assessment" on page 4

See "Grades" on page 4

See "Honors Program" on page 4

**Notes:** It is recommended that students have a fundamental background in computers. SCI 393 is recommended.

ACS Certification obtained by completing the following:

CHEM 421 Instrumental Analysis (4)  
 CHEM 443 Inorganic Chemistry Laboratory (1)

and replacing CHEM 450 (4) with the following courses:

CHEM 451 Physical Chemistry I (4)  
 CHEM 452 Physical Chemistry II (4)  
 CHEM 453 Physical Chemistry I Laboratory (1)  
 CHEM 454 Physical Chemistry II Laboratory (1)

**COMMUNICATION, B.A.**

Human Communication Emphasis

**Degree Requirements — 120 Credits**

A major in the discipline of speech communication allows the student to examine closely the many ways in which spoken language is the foundation of human societies and cultures. At UNC, speech communication coursework focuses on theoretical, analytic and practical aspects of human interaction. Students may elect to emphasize the study of communication in interpersonal, small group, organizational and intercultural contexts. Practical skills may be obtained in professional presentation, persuasion, leadership, and communication consulting.

Students completing this program may elect to apply for graduate study in the field of speech communication, to apply to law or other professional schools, or to begin a career with businesses who are interested in hiring people whose expertise involves human communication.

See "Speech Communication (B.A.) Requirements" on page 12

**Required Major Credits — 27 hours**

SPCO 100 Basics of Public Speaking (1)  
 SPCO 102 Introduction to Speech Communication (3)  
 SPCO 103 Speaking Evaluation (2)  
 SPCO 201 Inquiry in Speech Communication (3)  
 SPCO 321 Interpersonal Theory (3)  
 SPCO 330 Small Group Communication (3)  
 SPCO 343 Persuasion (3)  
 SPCO 491 Speech Communication Theory (3)  
 SPCO 492 Undergraduate Internship (6)\*/\*\*

**Elective Major Credits — 9 hours**

SPCO 111 Oral Interpretation (3)  
 SPCO 211 Argumentation and Debate (3)  
 SPCO 212 Professional Speaking (3)  
 SPCO 221 Non-Verbal Communication (3)  
 SPCO 232 Principles of Interviewing (3)  
 SPCO 323 Intercultural Communication (3) (Gen. Ed. 7.a)  
 SPCO 324 Family Communication (3)  
 SPCO 331 Organizational Communication (3)  
 SPCO 341 Courtroom Communication (3)  
 SPCO 350 Communication in the Classroom (3)  
 SPCO 352 Methods of Teaching Speech Communication (3)  
 SPCO 422 Directed Study (1-3)  
 SPCO 431 Communication and Leadership (3)  
 SPCO 461 Seminar in Speech Communication (1-3)

**Required Minor Minimum Credits — 18 hours****Elective GenEd Credits — 40 hours****University-Wide Elective Credits — 26 hours**



## COMMUNICATION, B.A.

### Secondary Teaching Emphasis

#### Degree Requirements — 120 Credits

A major in the discipline of speech communication with an emphasis in secondary education allows the student to examine the many ways in which spoken language is the foundation of human societies and cultures. At UNC, speech communication coursework focuses on theoretical, analytic and practical aspects of human interaction. For majors emphasizing secondary education, required courses include the study of oral interpretation, argumentation and debate, teaching methods, and speech communication theory. Students may elect to add courses in small group, organizations, and intercultural communication as well as the study of communication and conflict, leadership, or persuasion. Practical skills may be obtained in professional presentation, persuasion, leadership, and interpersonal communication.

The principle purpose of this program is to prepare persons as teachers of speech communication in secondary schools. Graduates also may elect to apply for graduate study in the field of speech communication or other professional schools.

See "Speech Communication (B.A.) Requirements" on page 12

#### Required Major Credits — 30 hours

SPCO 102 Introduction to Speech Communication (3)  
 SPCO 111 Oral Interpretation (3)  
 SPCO 201 Inquiry in Speech Communication (3)  
 SPCO 211 Argumentation and Debate (3)  
 SPCO 212 Professional Speaking (3)  
 SPCO 321 Interpersonal Theory (3)  
 SPCO 330 Small Group Communication (3)  
 SPCO 343 Persuasion (3)  
 \*SPCO 352 Methods of Teaching Speech Communication (3)  
 SPCO 491 Speech Communication Theory (3)

#### Elective Major Credits — 7 hours

SPCO 221 Non-Verbal Communication (3)  
 SPCO 232 Principles of Interviewing (3)  
 SPCO 323 Intercultural Communication (3)  
 SPCO 324 Family Communication (3)  
 SPCO 331 Organizational Communication (3)  
 SPCO 341 Courtroom Communication (3)  
 SPCO 350 Communication in the Classroom (3)  
 SPCO 422 Directed Study (1-3)  
 SPCO 431 Communication and Leadership (3)  
 SPCO 461 Seminar in Speech Communication (1-3)  
 SPCO 492 Undergraduate Internship (6)

#### Required Supporting Credits — 3 hours

JMC 100 Introduction to Journalism and Mass Communications (3)

#### Required PTEP Credits — 40 hours

See "Secondary Professional Teacher Education Program" on page 222

#### Elective GenEd Credits — 38 hours

#### University-Wide Elective Credit — 2 hours



## COMMUNICATION DISORDERS: AUDIOLOGY, B.A.

#### Degree Requirements — 120 Credits

In this comprehensive pre-professional program, students take academic courses and observe and participate in supervised clinical practica. These activities are designed to provide a strong base for entry into a professional certifying degree program at the master's degree level. This degree program does not lead to certification of any type. Students cannot find professional employment within Colorado with only the bachelor's degree in Audiology.

The degree program in audiology can be modified to serve as an excellent undergraduate foundation for entry into the master's degree program in Severe Needs: Hearing (Deaf Education). Students interested in pursuing this option should see their advisor.

#### Required Major Credits — 30 hours

CMDS 260 Introduction to Phonetics (2)  
 CMDS 265 Fundamentals of Physiological and Biological Acoustics (2)  
 CMDS 266 Normal Speech and Language Development (3)  
 CMDS 267 Anatomy and Physiology of the Speech and Hearing Mechanism (3)  
 CMDS 360 Articulation and Voice Disorders (3)  
 CMDS 365 Language Disorders in Children (3)  
 CMDS 370 Basic Audiology (3)  
 CMDS 386 Basic Clinical Strategies in Speech-Language Pathology/Audiology (2)  
 CMDS 474 Clinical Practicum in Audiology (1)  
 CMDS 478 Aural Rehabilitation and Amplification (3)  
 CMDS 483 Entry/Primary Speech-Language Pathology Practicum (2)  
 CMDS 487 Advanced Audiology (3)

#### Required Supporting Credits — 7 hours

EDSE 254 American Sign Language 1 (3)  
 BIO 245 Introduction to Human Anatomy and Physiology (4)

#### Required Specified GenEd Credits — 7 semester hour

*Category 5.e. Social Sciences (Psychology)*  
 CMDS 160 Introduction to Human Communication and Its Disorders (3)

*Category 6.b. Science and Mathematics (Life Sciences)*  
 BIO 101 Biological Perspectives (4)

#### Elective GenEd Credits — 33 hours

#### University-Wide Elective Credits — 43 hours



## COMMUNICATION DISORDERS: SPEECH-LANGUAGE PATHOLOGY, B.A.

### Degree Requirements — 120 Credits

In this comprehensive pre-professional program, students take academic courses and observe and participate in supervised clinical practica. These activities are designed to provide a strong base for entry into a professional certifying degree program at the master's degree level. This degree program does not lead to certification of any type. Students cannot be employed within Colorado and most other states with only the bachelor's degree in Speech-Language Pathology.

#### Required Major Credits — 34 hours

CMDS 260 Introduction to Phonetics (2)  
 CMDS 265 Fundamentals of Physiological and Biological Acoustics (2)  
 CMDS 266 Normal Speech and Language Development (3)  
 CMDS 267 Anatomy and Physiology of the Speech and Hearing Mechanism (3)  
 CMDS 360 Articulation and Voice Disorders (3)  
 CMDS 365 Language Disorders in Children (3)  
 CMDS 366 Language Sampling Processes (1)  
 CMDS 370 Basic Audiology (3)  
 CMDS 386 Basic Clinical Strategies in Speech-Language Pathology/Audiology (2)  
 CMDS 431 Organically-Based Communication Disorders (3)  
 CMDS 467 Diagnostic Methods and Observation (3)  
 CMDS 474 Clinical Practicum in Audiology (1)  
 CMDS 478 Aural Rehabilitation and Amplification (3)  
 CMDS 483 Entry/Primary Speech-Language Pathology Practicum (2)

#### Required Supporting Credits — 4 hours

BIO 245 Introduction to Human Anatomy and Physiology (4)

#### Required Specified GenEd Credits — 7 hours

*Category 5.e. Social Sciences (Psychology)*

CMDS 160 Introduction to Human Communication and Its Disorders (3)

*Category 6.b. Science and Mathematics (Life Sciences)*

BIO 101 Biological Perspectives (4)

#### Elective GenEd Credits — 33 hours

#### University-Wide Elective Credits — 42 hours

*Strongly Recommended Elective:*

EDSE 254 American Sign Language 1 (3)



## CRIMINAL JUSTICE, B.A.

### Degree Requirements — 120 Credits

The field of Criminal Justice is interdisciplinary in nature and draws theories and research methodology from disciplines such as sociology, psychology, political science, and public administration. With continuous interaction from faculty advisors, students choose courses from a variety of disciplines depending on interests and career plans. With the support and cooperation of law enforcement, community corrections, victim assistance, and other agencies, the department offers internship opportunities to qualified students seeking practical experiences to assist them in career decisions.

The faculty will educate students to be critical thinkers who can communicate their thoughts effectively in oral and written form. An important ingredient of the criminal justice program is teaching students to use ethical behavior in applying their knowledge as problems and situations change. Graduates will have a comprehensive knowledge of the criminal justice field,

See "Criminal Justice (B.A.) Requirements" on page 4

#### Required Major Credits — 16 hours

CRJ 220 Policing Systems (3)  
 CRJ 230 Judicial Process (3)  
 CRJ 370 Justice Professionalism and Ethics (3)  
 CRJ 380 Justice Research and Statistics (3)  
 CRJ 390 The Criminal Justice Profession (1)  
 CRJ 410 Comparative Justice Systems (3)

#### Required Supporting Credits — 24 hours

SOC 346 Criminology (3)  
 SOC 347 Sociology of Corrections (3)

*And select One Content area below — 9 hours (at least 6 hours at the 300 or 400 level). Students, in consultation with their advisor, will select courses appropriate for their content area. Courses are likely to come from departments such as those listed with each content area.*

**Law Enforcement:** Africana Studies (AFS), Anthropology (ANT), Community Health (CH), Criminal Justice (CRJ), Geography (GEOG), Hispanic Studies (HISP), Multicultural Studies, Philosophy (PHIL), Psychology (PSY) and Sociology (SOC).

**Correctional Services:** Africana Studies, Anthropology, Community Health, Criminal Justice, Geography, Hispanic Studies, Human Rehabilitation Services (HRS), Multicultural Studies, Philosophy, Psychology and Sociology.

**Justice Administration:** Accounting (BAAC), Criminal Justice, Management (BAMG), Philosophy, Political Science (PSCI) and Sociology.

*And select One Skills area below — 9 hours (at least 6 hours at the 300 or 400 level). Students, in consultation with their advisor, will select courses that develop or expand their skills in the following areas. Courses are likely to come from departments such as those listed with each skills area.*

**Computer Information Systems:** select courses from: Business Administration (BA), Computing (CG, CED), Educational Technology (ET) and Sociology

**Critical Thinking:** select courses from: Philosophy and Speech Communication (SPCO)

**Oral Communication:** select courses from: Speech Communication

**Research:** select courses from: Geography, Interdisciplinary Studies, Psychology, Sociology and Statistics (STAT)

**Written Communication:** English (ENG)

#### Required Specified GenEd Credits — 6 hours

*Category 2 - Mathematics*

STAT 150 Introduction to Statistical Analysis (3)

*Category 5f - Criminal Justice*

CRJ 110 Introduction to Criminal Justice (3)

#### Elective GenEd Credits — 34 hours

#### University-Wide Elective Credits — 40 hours



## DIETETICS, B.A.

### Degree Requirements — 120 Credits

The major focus of the bachelor of arts degree program in Dietetics is in the field of health. It is a useful and practical area of study for students interested in health maintenance and rehabilitation through the science of nutrition. Physiological, biological and behavioral sciences provide the foundation for a wide range of studies applicable to community, clinical, private practice and management aspects of nutrition in health care.

The dietetics program is accredited by the Commission on Accreditation for Dietetics Education (CADE) of The American Dietetic Association. Students in this program develop human relationship skills and expertise in addressing nutritional needs for human growth and development throughout the life cycle. Upon completion of the prescribed course of study, students are qualified for entry level careers in community, clinical, consultative dietetics and food service management positions in business and industry. At the senior level, a student may apply for a dietetic internship accredited by CADE of The American Dietetic Association. After completion of the internship the student is eligible to take the registration exam to become a Registered Dietitian.

#### Required Major Credits — 30 hours

FND 210 Medical Terminology (2)  
 FND 252 Nutrition in the Life Cycle (3)  
 FND 342 Food Science (4)  
 FND 370 Nutrition Education and Application Strategies (3)  
 FND 410 Professional Development Seminar (2)  
 FND 430 Nutrition Assessment and Intervention (3)  
 FND 431 Medical Nutrition Intervention (3)  
 FND 446 Foodservice Systems Management (4)  
 FND 451 Advanced Nutrition (3)  
 FND 452 Community Nutrition (3)

#### Required Supporting Credits — 22 hours

*Sciences (13 hours)*

BIO 351 Microbiology (4)  
 CHEM 109 Fundamentals of Chemistry II (5)  
 BIO 245 Introduction to Human Anatomy and Physiology (4)

*Business (9 hours)*

BA 101 Business Computing (3)  
 BAMK 260 Introduction to Marketing (3)  
 BAMG 350 Management of Organizations (3)

#### Required Specified GenEd Credits — 24 hours

*Category 1.b. Composition (Intermediate)*

SCI 291 Scientific Writing (3)

*Category 2. Mathematics*

STAT 250 Statistics for Health Sciences (3)

*Category 5.b. Social Sciences (Economics)*

ECON 105 Introduction to Economics: Microeconomics (3)

PSY 120 Principles of Psychology (4) (*e. Psychology*)

*Category 6.b. Science and Mathematics (Life Sciences)*

FND 250 Principles of Nutrition (3)

CHEM 108 Fundamentals of Chemistry I (5) (*d. Physical Science*)

*Category 7.a. Interdisciplinary and International Studies, and Multicultural Studies*

*Select one of the following two courses:*

ANT 110 Introduction to Cultural Anthropology (3)

SPO 323 Intercultural Communication (3)

#### Elective GenEd Credits — 16 hours

#### University-Wide Elective Credits — 28 hours



## EARTH SCIENCES, B.S.

Select One Emphasis Area:  
Environmental Earth Sciences,  
General Earth Sciences, Geology,  
Meteorology or Secondary Teaching

### Degree Requirements — 120 Credits

See "Earth Sciences (B.S.) Requirements" on page 5

### Environmental Earth Sciences Emphasis

The multidisciplinary Environmental Earth Sciences emphasis is intended for individuals who wish to pursue careers with responsibilities that include environmental monitoring, regulation or management. Students may prepare for entry-level positions in the environmental industry or governmental agencies, or for graduate education in such fields as resource management, environmental public policy and environmental law. The program also is well suited for anyone with a serious interest in the scientific aspect of environmental issues.

#### Required Major Credits — 20 hours

GEOL 201 Physical Geology (4)  
GEOL 202 Historical Geology (4)  
GEOL 410 Groundwater Geology (2)  
GEOL 460 Geomorphology (3)  
MET 421 Climatology (3)  
OCN 301 Physical and Chemical Oceanography (4)

#### Elective Major Credits — 14 hours

Required Elective Credits including at least two earth sciences courses selected in consultation with an academic advisor to explore an area of interest in greater depth. Courses are to be selected based on the following list, but other courses may satisfy requirements with the approval of the advisor.

##### Earth Science Credits:

ESCI 492 Earth Science Internship (1-15)  
GEOL 320 Mineralogy (4)  
GEOL 330 Earth Materials (3)  
GEOL 450 Sedimentology and Stratigraphy (4)  
GEOL 464 Glacial and Quaternary Geology (3)  
MET 360 Physical Meteorology (3)  
MET 536 Biometeorology (3)  
OCN 302 Geological and Biological Oceanography (4)

##### Supporting Discipline Credits

CHEM 131 Introductory Organic Chemistry (4)  
CHEM 360 Environmental Chemistry (2)  
ECON 356 Water Resource Economics (3)  
ENST 335 Environmental and Resource Economics (3)  
ENST 355 Introduction to Environmental Health (3)  
GEOG 315 Resource Management (3)  
GEOG 407 Geographic Information Science (3)

#### Required Supporting Credits — 16 hours

BIO 110 Principles of Biology (4)  
BIO 360 Ecology (4)  
CHEM 112 Principles of Chemistry II (5)  
STAT 150 Introduction to Statistical Analysis (3)

#### Required Specified GenEd Credits — 20 hours

##### Category 2. Mathematics

MATH 124 College Algebra (4)

##### Category 5.b. Social Sciences

ECON 105 Introduction to Economics: Microeconomics (3)

##### Category 6. Science and Mathematics

MET 205 General Meteorology (4) (a. Earth Sciences)  
BIO 111 Survey of Organismal Biology (4) (b. Life Sciences)  
CHEM 111 Principles of Chemistry I (5) (d. Physical Science)

#### Elective GenEd Credits — 22 hours

#### University-Wide Elective Credits — 28 hours

### General Earth Sciences Emphasis

Earth Sciences includes astronomy, geology, meteorology and oceanography.

The General Earth Sciences Program provides a multi-disciplinary background in the earth sciences, with

opportunity to develop a sequence of courses, including both earth science and supporting science and mathematics, which best serve individual interests and career goals. It is intended for students who have an interest in environmental issues, wish to pursue interests in oceanography or astronomy, desire a comprehensive understanding of their physical environment, or who plan to pursue careers in fields where a multidisciplinary background in the earth sciences is desirable, such as environmental or resource law, environmental monitoring, pre-secondary teaching, and regional planning. A departmental advisor will work closely with each student to ensure that the program meets individual needs.

The following program is recommended for students, including those who plan to be middle school teachers, who wish to obtain a broad background in the earth sciences and the supporting sciences and mathematics.

#### Required Major Credits — 25 hours

Must be selected from courses with AST, ESCI, GEOL, MET or OCN prefixes that may be counted for earth sciences majors. At least two courses must be taken from each of two of the earth science disciplines (AST, GEOL, MET, OCN).

##### Core Credits (26 hours)

AST 301 Classical Astronomy (3)  
AST 302 Modern Astronomy (3)  
GEOL 201 Physical Geology (4)  
GEOL 202 Historical Geology (4)  
MET 421 Climatology (3)  
OCN 301 Physical and Chemical Oceanography (4)  
OCN 302 Geological and Biological Oceanography (4)

#### Elective Major Credits — 1-11 hours

(selected from the following list in consultation with advisor)

ESCI 265 Earth Science Concepts for Elementary Teachers (3)  
ESCI 497 Undergraduate Research (1-4)  
GEOL 330 Earth Materials (3)  
GEOL 340 Paleontology (4)  
GEOL 390 Colorado Geology (3)  
GEOL 460 Geomorphology (3)  
GEOL 464 Glacial and Quaternary Geology (3)  
MET 306 Dynamic Meteorology I (3)  
MET 360 Physical Meteorology (3)

#### Required Supporting Credits — 20-30 hours

Supporting science, mathematics and computer science course offerings selected from courses that have been approved for the major by the department. Electives must include at least 3 credit hours of mathematics coursework.

Select courses from the following list in consultation with advisor:

BIO 110 Principles of Biology (4)  
BIO 111 Survey of Organismal Biology (4)  
BIO 265 Life Science Concepts (3)  
BIO 380 Aquatic Biology (4)  
BIO 360 Ecology (4)  
CG 105 Personal Computer Applications (3)  
CHEM 103 Introductory Chemistry (3)  
CHEM 108 Fundamentals of Chemistry I (5)\*  
\*CHEM 111 Principles of Chemistry I (5)  
\*CHEM 112 Principles of Chemistry II (5)  
ENST 225 Energy and the Environment (3)  
ENST 235 Chemistry and the Environment (2)  
ENST 255 Atmospheric Environment of Humans (2)  
ENST 265 Conservation of Natural Resources (2)  
MATH 124 College Algebra (4)  
MATH 125 Plane Trigonometry (3)  
MATH 131 Calculus I (4)  
MATH 132 Calculus II (4)  
MATH 181 Fundamentals of Mathematics I (3)  
MATH 182 Fundamentals of Mathematics II (2)  
\*PHYS 220 Introductory Physics I (5)  
\*PHYS 221 Introductory Physics II (5)  
PHYS 321 Elementary Modern Physics (3)  
SCI 265 Physical Science Concepts (4)  
SCI 391 Computer Applications in Science (2)

#### Required Specified GenEd Credits — 4 hours

##### Category 6. Science and Mathematics

MET 205 General Meteorology (4) (a. Earth Sciences)

**Elective GenEd Credits — 36 hours** (The following courses are listed above)

*Category 2. Mathematics - 3 hours required*

Select one of the following: MATH 124, MATH 131, MATH 181 or MATH 182

*Category 6. Science and Mathematics - 3 semester hours remaining (4 hours specified above)*

Select one of the following: BIO 110, BIO 111, CHEM 108, CHEM 111, PHYS 220 or SCI 265

*Category 7. Interdisciplinary - 6 hours required*

ENST 225

**University-Wide Elective Credits — 24 hours**

**Note:** PHYS 240 and PHYS 241 may be taken in lieu of PHYS 220 and PHYS 221. CHEM 114 and CHEM 115 may be taken in lieu of CHEM 111 and CHEM 112.

## Geology Emphasis

The science of geology explores the physical makeup of the earth, the processes that shape it and the history of its development. This program provides a broad background in geology and emphasizes the study of geology in the field and in the laboratory.

Graduates of the geology program will be prepared for entry-level positions as geologists in the petroleum mining, and environmental industries, in local, state and federal governmental agencies and in a variety of engineering and geological consulting firms. The program also provides the background necessary for admission to graduate programs in geology and related fields.

**Required Major Credits — 39 hours**

GEOL 201 Physical Geology (4)  
 GEOL 202 Historical Geology (4)  
 GEOL 320 Mineralogy (4)  
 GEOL 340 Paleontology (4)  
 GEOL 421 Optical Mineralogy and Petrography (4)  
 GEOL 450 Sedimentology and Stratigraphy (4)  
 GEOL 460 Geomorphology (3)  
 GEOL 470 Structural Geology (4)  
 GEOL 481 Geologic Field Techniques (2)

**Required Supporting Credits — 21 hours**

CHEM 112 Principles of Chemistry II (5)  
 MATH 131 Calculus I (4)  
 MATH 132 Calculus II (4)  
 PHYS 221 Introductory Physics II (5)  
 Geology elective (GEOL prefix course(s) that are open to majors) (3)

**Required Specified GenEd Credits — 18 hours**

*Category 2. Mathematics*

MATH 124 College Algebra (4)

*Category 6. Science and Mathematics*

BIO 111 Survey of Organismal Biology (4) (b. Life Sciences)  
 CHEM 111 Principles of Chemistry I (5) (d. Physical Science)  
 PHYS 220 Introductory Physics I (5) (1GE credit hr)

**Elective GenEd Credits — 25 hours**

**University-Wide Elective Credits — 17 hours**

**Note:** CHEM 114 may be taken in lieu of CHEM 111.

**Note:** Federal government requirements for employment as meteorologists and Graduate School admission in the atmospheric sciences usually require MATH 233 and MATH 335.

## Meteorology Emphasis

The science of meteorology seeks to understand the atmosphere and its phenomena by considering the forces that act on it, the processes that determine its behavior and the interaction between it and the earth beneath. This program provides a broad background in meteorology and stresses practical interpretation of weather data and the importance of meteorology to many aspects of human endeavor.

Graduates of the meteorology program will be prepared for entry-level positions as meteorologists with government agencies and private companies, as weather forecasters with

the United States Air Force and as team members with firms concerned with environmental monitoring. Meteorology is also an excellent major for individuals planning careers in either civilian or military aviation. The program provides the background necessary for admission to graduate programs in the atmospheric sciences.

**Required Major Credits — 26 hours**

MET 260 Mesoscale Meteorology (3)  
 MET 306 Dynamic Meteorology I (3)  
 MET 360 Physical Meteorology (3)  
 MET 407 Dynamic Meteorology II (4)  
 MET 421 Climatology (3)  
 MET 441 Synoptic Meteorology (3)  
 MET 442 Synoptic Meteorology Laboratory (3)  
 OCN 301 Physical and Chemical Oceanography (4)

**Elective Major Credits — 6 hours**

*select two of the following courses:*

MET 465 Radar Meteorology (3)  
 MET 470 Satellite Meteorology (3)  
 MET 536 Biometeorology (3)  
 MET 595 Special Topics in Meteorology (1-4)

Electives must be selected with the approval of the student's advisor.

**Required Supporting Credits — 18 hours**

CS 101 Introduction to Computer Science (3)  
 CS 102 Structured Programming (3)  
 MATH 132 Calculus II (4)  
 PHYS 241 General Physics II (5)  
 STAT 150 Introduction to Statistical Analysis (3)

**Required Specified GenEd Credits — 18 hours**

*Category 2. Mathematics*

MATH 131 Calculus I (4)

*Category 6. Science and Mathematics*

MET 205 General Meteorology (4) (a. Earth Science)  
 CHEM 111 Principles of Chemistry I (5) (d. Physical Science)  
 PHYS 240 General Physics I (5)

**Elective GenEd Credits — 25 hours**

**University-Wide Elective Credits — 27 hours**

**Note:** CHEM 114 may be taken in lieu of CHEM 111.

Federal government requirements for employment as meteorologists and Graduate School admission in the atmospheric sciences usually require MATH 233 and MATH 335.

## Secondary Teaching Emphasis

This program is listed on the next column or page.



## EARTH SCIENCES, B.S.

Secondary Teaching Emphasis

### Degree Requirements — 127 Credits

The coursework and experiences in this major are designed to provide the student with a broad background in the four earth science disciplines (astronomy, geology, meteorology and oceanography) and supporting sciences, including biology, chemistry, physics and mathematics.

Graduates of this program are prepared to teach earth science in grades 7-12. Graduates will have satisfied all the requirements to receive Secondary Science Licensure from the Colorado Department of Education and the Colorado Commission on Higher Education.

#### Required Major Credits — 28 hours

Course selection may vary, depending upon the educational background of the student, with approval of the advisor.

*The following courses are recommended:*

AST 301 Classical Astronomy (3)  
 AST 302 Modern Astronomy (3)  
 GEOL 201 Physical Geology (4)  
 GEOL 202 Historical Geology (4)  
 GEOL 390 Colorado Geology (3)  
 MET 421 Climatology (3)  
 OCN 301 Physical and Chemical Oceanography (4)  
 OCN 302 Geological and Biological Oceanography (4)

#### Required Supporting Credits — 19 hours

Science and math support courses, required to meet CDE Licensure in Secondary Science, are to be selected in consultation with the major advisor.

*The following courses are recommended:*

BIO 110 Principles of Biology (4)  
 CHEM 112 Principles of Chemistry II (5)  
 PHYS 220 Introductory Physics I (5)  
 PHYS 221 Introductory Physics II (5)

#### Required Specified GenEd Credits — 17 hours

*Category 2. Mathematics*

MATH 124 College Algebra (4)

*Category 6. Science and Mathematics*

MET 205 General Meteorology (4) (a. Earth Sciences)  
 BIO 111 Survey of Organismal Biology (4) (b. Life Sciences)  
 CHEM 111 Principles of Chemistry I (5) (4hrs GE credits)

#### Required PTEP Credits — 38 hours

See "Secondary Professional Teacher Education Program" on page 222

#### Elective GenEd Credits — 25 hours



## ECONOMICS, B.A.

Select Economics, B.A. or Business Economics Emphasis

### Degree Requirements — 120 Credits

The goal of the department is to graduate students who are highly qualified to pursue careers in industry and government service or who are capable of pursuing graduate study in economics or business. Economists work with government and industry information, quantitative data, theories, models, graphics and computers, especially microcomputers. For students planning to teach economics at the university level, a graduate school degree is necessary.

See "Economics (B.A.) Requirements" on page 5

#### Program Requirements — 58 hours

##### Required Major Credits — 18 hours

ECON 105 Introduction to Economics: Microeconomics (3)  
 ECON 303 Intermediate Macroeconomics (3)  
 ECON 305 Intermediate Microeconomics (3)  
 ECON 350 Application of Mathematics to Economics (3)  
 ECON 402 Contemporary Economic Problems (3)  
 ECON 452 Econometrics (3)

##### Required Specified GenEd Credits — 7 hours

*Category 2. Mathematics*

MATH 124 College Algebra (4)

*Category 5. Social Sciences (b. Economics)*

ECON 103 Introduction to Economics: Macroeconomics (3)

##### Elective GenEd Credits — 33 hours

## Economics

### Program Requirements — 58 hours

#### Required Supporting Credits — 24 hours

MATH 176 Topics in Calculus (3)  
 STAT 150 Introduction to Statistical Analysis (3)

or

STAT 251 Statistics for Business and Economics (3)

or

BACS 291 Business Statistics I (3)

and select 18 semester hours from the following:

All ECON prefix courses, ENST 335, and MIND 286.

#### University-Wide Elective Credits — 38 hours

## Business Economics Emphasis

This program offers training in economics, mathematics, statistics and information systems with a minor in Business Administration. It provides a sound foundation in the techniques and methodologies employed by economic practitioners as well as the application of economics to the business sector. Students must meet the admission requirements for the Business Administration Minor.

Students completing this degree emphasis can pursue a career in banking, industry, small business or related fields. In addition, students planning to pursue a graduate degree would be well equipped to pursue either an M.B.A. or a graduate degree in Economics.

#### Program Requirements — 58 hours

##### Business Economics Supporting Credits — 15 hours

MATH 176 Topics in Calculus (3)

STAT 251 Statistics for Business and Economics (3)

or

BACS 291 Business Statistics I (3)

and select 9 semester hours from the following:

All ECON prefix courses, ENST 335, and MIND 286.

##### Required Business Minor Credits — 28 hours

Majors must meet the admission requirements for both the business economics major and the business administration minor.

#### University-Wide Elective Credits — 19 hours





## ENGLISH, B.A.

Liberal Arts Emphasis

### Degree Requirements — 120 Credits

The English major is excellent preparation for any profession or occupation that stresses language usage, such as writing and teaching-related fields. Graduates of this program will be prepared to enter a variety of professional and graduate level programs, including law, theology, medicine (with appropriate science and mathematics preparation), library science, communications, media and business.

See "English (B.A.) Requirements" on page 6

#### Required Major Credits — 18 hours

ENG 131 Introduction to Literature (3)  
 ENG 211 Survey of American Literature (3)  
 ENG 213 Survey of British Literature I (3)  
 ENG 214 British Literature II (3)  
 ENG 345 Literary Theory and Criticism(3)  
 ENG 497 Senior Seminar (3)

#### Elective Major Credits — 21 hours

*Select one of the following courses:*

ENG 303 The Essay (3)  
 ENG 319 Advanced Expository Techniques (3)  
 ENG 340 Creative Writing - Advanced (3)  
 ENG 408 Advanced Topics in Rhetoric and Composition (3)

*and select one of the following courses:*

ENG 318 Traditional and Modern Grammars (3)  
 ENG 418 Advanced Topics in Linguistics (3)  
 ENG 419 Language and the History of English (3)

*And select two courses from different categories below (6 hours)*

##### *Women's Literature*

ENG 239 Topics in Women's Literature (3)  
 ENG 335 World Literature By and About Women (3)

##### *Postcolonial or World Literature*

ENG 235 World in Literature (3)  
 ENG 238 Introduction to Folklore (3)  
 ENG 262 Masterpieces of World Literature (3)  
 ENG 335 World Literature By and About Women (3)  
 ENG 414 Greek and Comparative Mythology (3)  
 ENG 430 Advanced Studies in World Literature (3)

##### *Ethnic American Literature*

ENG 236 Ethnic American Literature (3)  
 ENG 336 European Immigrant Literature (3)  
 ENG 337 Chicana/o Literature and Theory (3)  
 ENG 436 Major Ethnic Writers (3)

*And select three courses, two at the 300-400 level (9 hours)*

#### Required Minor Credits — 18 hours

#### Required Specified GenEd Credit — 3 hours

*Recommended for Cat. 1.b.:*

ENG 225 Communications on a Theme (3)

#### Elective GenEd Credits — 37 hours

#### University-Wide Elective Credits — 23 hours



## ENGLISH, B.A.

Middle Grades and Secondary  
Teaching Emphasis

### Degree Requirements — 120-125 Credits

Graduates of the program will be prepared to enter the teaching profession in grades 5-9 (with middle grades licensure) and grades 7-12 (with secondary licensure) and to accept teaching assignments in a wide range of courses in writing and literature.

#### Required Major Credits — 27 hours

ENG 131 Introduction to Literature (3)  
 ENG 211 Survey of American Literature (3)  
 ENG 213 Survey of British Literature I (3)  
 ENG 214 British Literature II (3)  
 ENG 345 Literary Theory and Criticism(3)  
 ENG 318 Traditional and Modern Grammars (3)  
 ENG 419 Language and the History of English (3)  
 ENG 497 Senior Seminar (3)

*and select one of the following courses:*

ENG 312 Shakespeare in Context: Histories and Comedy (3)  
 ENG 313 Shakespeare in Context: Tragedies and Romances (3)  
 ENG 314 Shakespeare in Context: Poetry (3)

#### Elective Major Credits — 15 hours

*Select one of the following two courses:*

ENG 303 The Essay (3)  
 ENG 319 Advanced Expository Techniques (3)

*And select two courses from different categories below (6 hours)*

##### *Women's Literature*

ENG 239 Topics in Women's Literature (3)  
 ENG 335 World Literature By and About Women (3)

##### *Postcolonial or World Literature*

ENG 235 World in Literature (3)  
 ENG 238 Introduction to Folklore (3)  
 ENG 262 Masterpieces of World Literature (3)  
 ENG 335 World Literature By and About Women (3)  
 ENG 414 Greek and Comparative Mythology (3)  
 ENG 430 Advanced Studies in World Literature (3)

##### *Ethnic American Literature*

ENG 236 Ethnic American Literature (3)  
 ENG 336 European Immigrant Literature (3)  
 ENG 337 Chicana/o Literature and Theory (3)  
 ENG 436 Major Ethnic Writers (3)

*And select two courses, one at the 300-400 level (6 hours)*

#### Required Specified GenEd Credits — 3 hours

*Recommended for Cat. 1.b.:*

ENG 225 Communications on a Theme (3)

#### Required PTEP Credits — 38-41 hours

See "Middle Grades Professional Teacher Education Program" on page 221 (41 hours)

See "Secondary Professional Teacher Education Program" on page 222 (38-41 hours)

#### Elective GenEd Credits — 37 hours



## FOREIGN LANGUAGE, B.A.

Select One Emphasis Area: French Liberal Arts, German Liberal Arts, French Secondary Teaching or German Secondary Teaching

### Degree Requirements 120 — Credits

Students develop skills in critical thinking as they acquire familiarity with contemporary issues in the French or German-speaking world, a basic knowledge of their civilization, and a facility for reading and interpreting French or German literature.

Foreign language majors may choose to pursue graduate study in their discipline or, having combined their language study with other fields such as business, political science, international trade and relations, history, fine arts and others, can become involved in careers in international business, government, social work, publishing, or the arts.

See "Foreign Language (B.A.) Requirements" on page 6

### French Liberal Arts Emphasis

#### Degree Requirements — 120 Credits

The French Liberal Arts Major stresses acquisition of the four language skills (listening, speaking, reading, writing) through performance-oriented classes at all levels, conducted in French. The faculty encourages and assists students in arranging study opportunities with our exchange program at the Université de Tours, elsewhere in France, or in another French-speaking country.

Participation in such a program creates opportunities for improved language proficiency and first-hand experience with French culture. The department's extracurricular activities likewise encourage cultural awareness and communication skills.

See "Foreign Language (B.A.) Requirements" on page 6

#### Required Major Credits — 23 hours

FR 201 Listed under Specified General Education

FR 202 Listed under Specified General Education

FR 251 Intermediate French Lab I (1)

FR 252 Intermediate French Lab II (1)

FR 301 France: Its People and Culture (3)

FR 302 Current Events in France (3)

FR 311 French Civilization and Literature Survey I (3)

FR 312 French Civilization and Literature Survey II (3)

FR 407 French for Oral Proficiency (3)

*and select two offerings from the two repeatable, variable-topic courses (6 semester hours)*

FR 450 Readings in French Literature (3)

FR 475 Research Seminar: French Texts and Contexts (3)

#### Elective Major Credits — 6 hours

*and select three of the following courses:*

FR 411 France Then and Now (2)

FR 412 French Politics and Society (2)

FR 413 The Francophone World (2)

FR 414 Language and Society (2)

#### Required Minor Minimum Credits — 18 hours

#### Required Specified GenEd Credits — 6 semester hour

*Category 4.b. Arts and Letters*

FR 201 Intermediate French I (3)

FR 202 Intermediate French II (3)

#### Elective GenEd Credits — 34 hours

#### University-Wide Elective Credits — 33 hours

### German Liberal Arts Emphasis

#### Degree Requirements — 120 Credits

The German Liberal Arts Major stresses acquisition of the four language skills (listening, speaking, reading, writing) through performance-oriented classes at all levels, conducted in German.

The German program participates in a student exchange agreement between UNC and the Universität Oldenburg, the Pädagogische Hochschule Karlsruhe, and the Fachhochschule Furtwangen. Participation in this exchange can provide first-hand experience with German life and society and helps improve language proficiency. The Department's extracurricular activities likewise encourage cultural awareness and communication skills.

#### Required Major Credits — 23 hours

GER 201 Listed under Specified General Education

GER 202 Listed under Specified General Education

GER 251 Intermediate German Lab I (1)

GER 252 Intermediate German Lab II (1)

GER 301 Germany and the Germans I (3)

GER 302 Germany and the Germans II (3)

GER 311 German Civilization and Literature Survey I (3)

GER 312 German Civilization and Literature Survey II (3)

GER 407 German for Oral Proficiency (3)

*and select two offerings from the two repeatable, variable-topic courses (6 hours)*

GER 450 Literature, Self and Society (3)

GER 475 Research Seminar: German Texts and Contexts (3)

#### Elective Major Credit — 6 hours

*and select three of the following courses:*

GER 411 Germany Then and Now (2)

GER 412 Politics and Society (2)

GER 413 German Cultural Identity (2)

GER 414 Language, Society and the Profession (2)

#### Required Minor Credits — 18 hours

#### Required Specified GenEd Credits — 6 hours

*Category 4.b. Arts and Letters*

GER 201 Intermediate German I (3)

GER 202 Intermediate German II (3)

#### Elective GenEd Credits — 34 hours

#### University-Wide Elective Credits — 33 hours

### French Secondary Teaching Emphasis

### German Secondary Teaching Emphasis

The French and German Secondary Teaching programs are listed on the next column or page.

In preparing majors for careers in secondary school teaching of French or German, the programs stress the acquisition of the four language skills (listening, speaking, reading, writing) through performance-oriented classes at all levels, conducted in French or German.

Completion of the French or German teaching major prepares the student for State of Colorado Licensure to teach in the secondary school and for graduate study in the discipline. Students who combine their language study with other fields such as business, political science, international trade and relations, history, or fine arts can become involved in careers in international business, government, social work, publishing, or the arts.



## FOREIGN LANGUAGE, B.A.

### French Secondary Teaching Emphasis

#### Degree Requirements — 121-122 Credits

The faculty encourages and assists students in arranging study opportunities in France or another French-speaking country. Participation in such a program creates opportunities for improved language proficiency and first-hand experience with French culture. The department's extracurricular activities likewise encourage cultural awareness and communication skills while developing leadership and organizational and promotional abilities important to the foreign language teaching profession.

#### Required French Credits — 26 hours

FR 201 Listed under Specified General Education

FR 202 Listed under Specified General Education

\*FL 341 Methods of Teaching in the Secondary School (3)

FR 251 Intermediate French Lab I (1)

FR 252 Intermediate French Lab II (1)

FR 301 France: Its People and Culture (3)

FR 302 Current Events in France (3)

FR 311 French Civilization and Literature Survey I (3)

FR 312 French Civilization and Literature Survey II (3)

FR 407 French for Oral Proficiency (3)

*Select two offerings from the two repeatable, variable-topic courses (6 hours)*

FR 450 Readings in French Literature (3)

FR 475 Research Seminar: French Texts and Contexts (3)

#### Elective Major Credits — 6 hours

FR 411 France Then and Now (2)

FR 412 French Politics and Society (2)

FR 413 The Francophone World (2)

FR 414 Language and Society (2)

#### Required Specified GenEd Credits — 6 hours

*Category 4.b. Arts and Letters*

FR 201 Intermediate French I (3)

FR 202 Intermediate French II (3)

#### Required PTEP Credits — 38 hours

See "Secondary Professional Teacher Education Program" on page 222 and

See "Foreign Language, B.A. — PTEP Program" on page 223

#### Elective GenEd Credits — 34 hours

#### University-Wide Elective Credits — 11 hours



## FOREIGN LANGUAGE, B.A.

### German Secondary Teaching Emphasis

#### Degree Requirements — 121-122 Credits

The German program participates in a student exchange agreement between UNC and the Universität Oldenburg, the Pädagogische Hochschule Karlsruhe, and the Fachhochschule Furtwangen. Participation in this exchange provides first-hand experience with German life and society and helps improve language proficiency. The department's extracurricular activities likewise encourage cultural awareness and communication skills while developing leadership and organizational and promotional abilities important to the foreign language teaching profession.

#### Required Major Credits — 23 hours

GER 201 Listed under Specified General Education

GER 202 Listed under Specified General Education

GER 251 Intermediate German Lab I (1)

GER 252 Intermediate German Lab II (1)

GER 301 Germany and the Germans I (3)

GER 302 Germany and the Germans II (3)

GER 311 German Civilization and Literature Survey I (3)

GER 312 German Civilization and Literature Survey II (3)

GER 407 German for Oral Proficiency (3)

*and select two offerings from the two repeatable, variable-topic courses (6 hours)*

GER 450 Literature, Self and Society (3)

GER 475 Research Seminar: German Texts and Contexts (3)

#### Elective Major Credit — 6 hours

*and select three of the following courses:*

GER 411 Germany Then and Now (2)

GER 412 Politics and Society (2)

GER 413 German Cultural Identity (2)

GER 414 Language, Society and the Profession (2)

#### Required Supporting Credits — 3 hours

\*FL 341 Methods of Teaching in the Secondary School (3)

#### Required Specified GenEd Credits — 6 hours

*Category 4.b. Arts and Letters*

GER 201 Intermediate German I (3)

GER 202 Intermediate German II (3)

#### Required PTEP Credits — 38 hours

See "Secondary Professional Teacher Education Program" on page 222 and

See "Foreign Language, B.A. — PTEP Program" on page 223

#### Elective GenEd Credits — 34 hours

#### University-Wide Elective Credits — 11 hours



## GEOGRAPHY, B.A.

Select One Emphasis Area: Geographic Information Science, Liberal Arts, or Secondary Teaching

### Degree Requirements — 120 Credits

#### Program Requirements — 99 hours

##### Required Major Credits — 19 hours

GEOG 200 Human Geography (3)  
 GEOG 232 Physical Geography (4)  
 GEOG 274 Maps and Data Analysis (3)  
 GEOG 302 Cartography (3)  
 GEOG 375 Quantitative Techniques in Geography (3)  
 GEOG 495 Senior Seminar (3)

##### Required Minor Minimum Credits — 18 hours

##### Elective GenEd Credits — 40 hours

##### University-Wide Elective Credits — 22 hours

### Geographic Information Science Emphasis

Geography is the science of space and place. Geographers ask where things are located on the surface of the earth, why they are located where they are, how places differ from one another, and how people interact with the environment.

Through the formal study of geography, students develop a perspective that helps to explain the reasons for and the significance of local, regional and world patterns and analyzes the role of locational factors in human affairs.

One of the fastest growing areas in geography is the use of geographic information sciences (GIS) to generate maps and store map-related information. GIS is a system of computer hardware and software that stores, displays, analyzes, and maps geographic information. Geographers, planners, land developers, real estate agents, utility companies, and municipal officials all use these systems. Using GIS technologies, students can analyze population distribution, traffic movement, land availability, real estate prices, environmental hazards, soil types, and flood zones to help local government make informed land use decisions.

#### Program Requirements — 99 hours

##### Required Major Credits — 9 hours

GEOG 407 Geographic Information Science (3)  
 GEOG 412 Advanced Cartography (3)  
 GEOG 475 Advanced Geographic Techniques (3)

##### Elective Major Credits — 12 hours

GEOG 300 Advanced Human Geography: Topics (3)  
 GEOG 312 Economic Geography (3)  
 GEOG 315 Resource Management (3)  
 GEOG 320 Population Geography (3)  
 GEOG 325 Advanced Physical Geography: Topics (3)  
 GEOG 360 Political Geography (3)  
 GEOG 370 Urban Geography (3)  
 GEOG 440 Biogeography (3)  
 GEOG 492 Internship (3)

Students may take 3 of the above hours in related electives from outside the department with advisor approval. GEOG 325 may be taken for credit more than once. GEOG 422 and GEOG 492 may be taken for credit more than once, but only 3 hours will count toward the major. GEOG 407 and GEOG 440 are also offered for graduate credit under the numbers GEOG 507 and GEOG 540.

### Liberal Arts Emphasis

Geography is the study of the social, environmental and locational processes that create diversity from place to place on the earth's surface. The geographic perspective helps to explain the reasons for and the significance of local, regional and world patterns and analyzes the role of locational factors in human affairs.

Those electing a liberal arts major in geography are generally preparing for careers in middle school teaching, cartography, recreation/travel planning, military or political intelligence or resource management. Examples of specific employment opportunities include map design and construction, international business representative, tour planning/operation and area specialist. Additional positions include travel agent, real estate agent, park ranger and peace corps volunteer. Students should select either the applied geography or liberal arts emphasis in conjunction with their career goals.

#### Program Requirements — 99 hours

##### Required Major Credits — 3 hours

GEOG 110 Geography of the United States and Canada (3)

##### Elective Major Credits — 18 hours

##### Regional Credits - 8 hours (minimum)

GEOG 318 Australia (2)  
 GEOG 326 Africa (3)  
 GEOG 335 Geography of Middle America (3)  
 GEOG 340 Europe (3)  
 GEOG 344 Asia: Special Topics (3)\*  
 GEOG 350 Colorado (3)  
 GEOG 365 Russia and Eurasia (3)  
 GEOG 453 Geography of the Great Plains (3)  
 \*May be taken for credit more than once.

##### Systematic Credits - 9 hours (minimum)

GEOG 300 Advanced Human Geography: Topics (3)  
 GEOG 312 Economic Geography (3)  
 GEOG 315 Resource Management (3)  
 GEOG 320 Population Geography (3)  
 GEOG 325 Advanced Physical Geography: Topics (3)  
 GEOG 360 Political Geography (3)  
 GEOG 370 Urban Geography (3)  
 GEOG 411 Geography Concepts and Issues (2)  
 GEOG 432 Rural Development in the American West (3)  
 GEOG 440 Biogeography (3)

##### Techniques Credits - 3 hours (maximum)

GEOG 392 Field Course in Geography (3)  
 GEOG 407 Geographic Information Science (3)  
 GEOG 412 Advanced Cartography (3)  
 GEOG 422 Directed Studies (1-3)  
 GEOG 475 Advanced Geographic Techniques: Topics (1-3)  
 GEOG 492 Internship (1-6)

Majors must take a minimum of 9 semester hours in Systematic Credits. GEOG 300, GEOG 325 and GEOG 475 may be taken for credit more than once. A maximum of 3 hours of GEOG 492 may be counted toward the major. GEOG 407 and GEOG 440 are also offered for graduate credit under the numbers GEOG 507 and GEOG 540.

### Secondary Teaching Emphasis

This program is listed on the next column or page.



## GEOGRAPHY, B.A.

### Secondary Teaching Emphasis

#### Degree Requirements — 127 Credits

Geography is the study of the social, environmental and locational processes that create diversity from place to place on the earth's surface. The Department of Geography participates in the preparation of teachers by offering a bachelor's degree in geography that meets all requirements for licensure for teaching social studies at the secondary level (grades 7-12). A graduate with this degree will also be qualified to pursue graduate study in geography.

Upon successful completion of this program and the requirements of the Professional Teacher Education program, students will qualify to be licensed to teach social studies at the secondary level. Students choosing this major will be observed by experienced geography faculty when student teaching.

#### Required Major Credits — 18 hours

GEOG 100 World Geography (3)  
 GEOG 200 Human Geography (3)  
 GEOG 232 Physical Geography (4)  
 GEOG 274 Maps and Data Analysis (3)  
 GEOG 411 Geography Concepts and Issues (2)  
 GEOG 495 Senior Seminar (3)

#### Elective Major Credits — 18 hours

##### Regional Credits - 3 hours (minimum)

GEOG 110 Geography of the United States and Canada (3)  
 GEOG 318 Australia (2)  
 GEOG 326 Africa (3)  
 GEOG 335 Geography of Middle America (3)  
 GEOG 340 Europe (3)  
 GEOG 344 Asia: Special Topics (3)  
 GEOG 350 Colorado (3)  
 GEOG 365 Russia and Eurasia (3)  
 GEOG 432 Rural Development in the American West (3)  
 GEOG 453 Geography of the Great Plains (3)

##### Systematic Credits - 12 hours (minimum)

GEOG 300 Advanced Human Geography: Topics (3)  
 GEOG 312 Economic Geography (3)  
 GEOG 315 Resource Management (3)  
 GEOG 320 Population Geography (3)  
 GEOG 325 Advanced Physical Geography: Topics (3)  
 GEOG 360 Political Geography (3)  
 GEOG 370 Urban Geography (3)  
 \*GEOG 440 Biogeography (3)

##### Techniques Credits - 3 hours (maximum)

GEOG 302 Cartography (3)  
 GEOG 375 Quantitative Techniques in Geography (3)  
 \*GEOG 407 Geographic Information Science (3)

#### Required Supporting Credits — 12 hours

HIST 101 Survey of American History from 1877 to the Present (3)

PSCI 100 United States National Government (3)

and select one of the following two courses:

HIST 110 African Civilization (3)  
 HIST 113 Asian Civilization II: The Modern Transformation (3)

and select one of the following two courses:

HIST 120 Western Civilization from Ancient Greece to 1689 (3)  
 HIST 121 Western Civilization from 1689 to the Present (3)

#### Required Specified GenEd Credits — 15 hours

##### Category 2. Mathematics

STAT 150 Introduction to Statistical Analysis (3)

##### Category 4.c. Arts and Letters

HIST 100 Survey of American History from Its Beginnings to 1877 (3)

##### Category 5. Social Science

ECON 103 Introduction to Economics: Macroeconomics (3)  
 (5.b.)

and select one of the following three courses:

ANT 100 Introduction to Anthropology (3) (5.a.)  
 PSY 120 Principles of Psychology (4) (5.e.)  
 SOC 100 Principles of Sociology (3) (5.f.)

#### Category 7.b. Interdisciplinary and International Studies, and Multicultural Studies

Select one of the following courses:

AFS 101 Crisis of Identity (3)  
 HISP 102 Hispanic Cultures in the United States (3)  
 WS 101 Women in Contemporary Society (3)

#### Required PTEP Credits — 39 hours

See "Secondary Professional Teacher Education Program" on page 222 and

See "Geography, B.A. — PTEP Program" on page 223

#### Elective GenEd Credits — 25 hours



## GERONTOLOGY, B.S.

### Degree Requirements — 120 Credits

The gerontology program provides the student the opportunity to study the human aging processes and to learn skills needed in working directly with the older population.

Individuals who hold a bachelor of science degree in gerontology are prepared to work as service providers in social service agencies, senior centers, long term care facilities, adult day care and other community organizations.

#### Required Major Credits — 25 hours

GERO 455 Grant Development and Administration (3)  
 GERO 460 Community Resources for the Elderly (4)  
 GERO 465 Management Concepts and Resource Development in Health and Human Services (3)  
 GERO 490 Senior Seminar and Research in Gerontology (3)  
 GERO 492 Undergraduate Internship in Gerontology (9)  
 HHS 415 Bio-Physical Changes in Aging (3)

#### Required Supporting Credits — 14 hours

Select 14 hours from the following courses:

\*FND 252 Nutrition in the Life Cycle (3)  
 \*PSY 331 Maturity and Aging (3)  
 \*SOC 448 Issues in Social Policy (3)  
 BAMK 260 Introduction to Marketing (3)  
 CH 236 Health and Life-styles Among the Elderly (3)  
 CMDS 470 Communication Disorders of the Aging (2)  
 GERO 495 Special Topics in Gerontology (1-4)  
 HRS 394 Practicum in Human Services (2)  
 HRS 480 Human Service Helping Skills (3)  
 REC 251 Leisure, Recreation and the Older Adult (3)  
 SOC 322 Women and Aging (3)

\*Strongly Recommended.

#### Required Minor Credits — 18 hours

#### Required Specified GenEd Credits — 3 hours

Category 7. *Interdisciplinary and International Studies, and Multicultural Studies*

GERO 205 Introduction to Gerontology (3) (a. Interdisciplinary)

#### Elective GenEd Credits — 37 hours

#### University-Wide Elective Credits — 23 hours



## HEALTH, B.S.

### Community Health Emphasis

### Degree Requirements — 120 Credits

The Bachelor of Science in Health Education prepares the student with the skills and competencies to function in health education settings of all kinds. Examples of such settings include voluntary health agencies, county and state health departments, health promotion programs in business and industry, patient education in hospitals and wellness programs for the elderly.

#### Required Major Credits — 36 hours

CH 209 Foundations of Health Promotion/Health Education (3)  
 CH 293 Sophomore Practicum in Community Health (3)  
 CH 299 Community Health Systems (3)  
 CH 320 Introductory Epidemiology and Biostatistics (3)  
 CH 330 Health Promotion/Health Education Techniques (3)  
 CH 342 Modern Concepts of Health and Disease (3)  
 CH 350 Introduction to Environmental Health (3)  
 CH 405 Health Communications and the Media (3)  
 CH 410 Introduction to Program Planning and Evaluation (3)  
 CH 440 Foundations of Health Program Management (3)  
 CH 492 Internship in Health (6-12)

#### Required Specified GenEd Credits — 22 hours

Category 5. *Social Sciences*

PSY 120 Principles of Psychology (4) (e. Psychology)  
 CH 205 Issues in Health (3) (f. Sociology)  
 SOC 100 Principles of Sociology (3) (f. Sociology)

Category 6. *Science and Mathematics*

CHEM 108 Fundamentals of Chemistry I (5) (d. Physical Science)

BIO 101 Biological Perspectives (4)

Category 7. *Interdisciplinary and International Studies, and Multicultural Studies*

Select one of the following courses:

CH 236 Health and Life-styles Among the Elderly (3) (b. Multicultural)

GERO 205 Introduction to Gerontology (3) (a. Interdisciplinary)

#### Elective GenEd Credits — 19 hours

#### University-Wide Elective Credits — 43 hours



## HISTORY, B.A.

Liberal Arts Emphasis

### Degree Requirements — 120 Credits

Historical study is concerned with the record of the human past and forms the indispensable background for all other areas of knowledge in the humanities, the social sciences and the sciences. A well-rounded curriculum of American and world history courses is provided in which students are encouraged to be critical and analytical in thought as well as to be incisive and cogent in their writing. The capstone of a student's study is a seminar during the senior year, which includes an extensive research paper as the central component.

Graduates with a bachelor's degree in history generally enter teaching or affiliated academic professions. They also go into law, government service or medicine, or occupy various positions in the business world; additionally, they are qualified to do graduate study in history.

See "Center of Excellence (Department and Teaching)" on page 7

#### Required Major Credits — 12 hours

HIST 100 Listed under Specified General Education  
 HIST 101 Listed under Specified General Education  
 HIST 120 *Western Civilization from Ancient Greece to 1689* (3)  
 HIST 121 *Western Civilization from 1689 to the Present* (3)  
 HIST 480 Senior Seminar (3)

and select one of the following courses:

HIST 110 *African Civilization* (3)  
 HIST 112 *Asian Civilization I: From Prehistory to the 1600s* (3)  
 HIST 113 *Asian Civilization II: The Modern Transformation* (3)  
 HIST 118 *History of Mexico* (3)

#### Elective Major Credits — 24 hours

In addition to the required credits, each major will also take twenty-four hours of electives. Twelve of these must be in a concentration area (Europe; United States; Africa/Asia/Latin America). Of the remaining twelve hours, six must be in each of the other areas. For example: if the major's concentration area is Europe, the student must take six hours in African/Asia/Latin America and six hours in United States history. At least eighteen of the twenty-four hours must be taken from courses numbered 300 or 400.

#### Required Minor Minimum Credits — 18 hours

#### Required Specified GenEd Credits — 6 hours

Category 4.c. Arts and Letters

HIST 100 *Survey of American History from Its Beginnings to 1877* (3)  
 HIST 101 *Survey of American History from 1877 to the Present* (3)

3 additional hours from a., b., d., or e. are required to complete the Gen.Ed. requirement for Category 4. (Only 6 hours of HIST prefixes may be counted toward Gen.Ed.)

#### Elective GenEd Credits — 34 hours

#### University-Wide Elective Credits — 26 hours

#### History (B.A.) Degree Requirements

History majors must obtain a grade of "C" or better in all history courses taken at UNC. Majors receiving a grade of "D" or lower in a history course must retake the course – or an equivalent approved by the academic advisor – and receive a grade of "C" or higher to have the course counted toward the major.

All history courses numbered 300 or higher include a research and writing component.

History majors must complete a minor of at least 18 semester hours, preferably within the College of Arts and Sciences. (History Education majors seeking elementary, middle school, or secondary licensure are exempted from this minor requirement.)

The study of a foreign language is recommended for those majors who plan to pursue graduate study in history



## HISTORY, B.A.

Secondary Teaching Emphasis

### Degree Requirements — 125 Credits

The Department of History fulfills an important role in training teachers at the undergraduate and graduate levels. In addition to its emphasis in content areas of history and social science, it participates in the UNC/partner school program and the student-teaching experience/placement for its students. Experienced history faculty are regularly assigned the responsibility of observing our student teachers in the field. The end result of a student's study is a senior seminar completed under the direction of a faculty advisor during the senior year in residence.

A graduate with a bachelor's degree in history and who receives departmental endorsement in the social studies licensure area is qualified to teach in the secondary schools and to pursue graduate study in history. Additionally, with a major in history a student may seek licensure for middle school teaching.

See "Center of Excellence (Department and Teaching)" on page 7

#### Required Major Credits — 12 hours

HIST 100 Listed under Specified General Education  
 HIST 101 Listed under Specified General Education  
 HIST 120 *Western Civilization from Ancient Greece to 1689* (3)  
 HIST 121 *Western Civilization from 1689 to the Present* (3)  
 HIST 480 Senior Seminar (3)

and select one of the following courses:

HIST 110 *African Civilization* (3)  
 HIST 112 *Asian Civilization I: From Prehistory to the 1600s* (3)  
 HIST 113 *Asian Civilization II: The Modern Transformation* (3)  
 HIST 118 *History of Mexico* (3)

#### Elective Major Credits — 24 hours

Complete the following requirements (24 semester hours):

In addition to the required courses, each major will also take 24 additional hours of electives. Twelve of these must be in a concentration area (Europe; United States; Africa/Asia/Latin America). Of the remaining 12 hours, 6 must be in each of the other areas. For example, if the major's concentration is in Europe, students must take 6 hours in African/Asian/Latin American history, and 6 hours in United States history. At least 18 of the 24 hour total must be taken from courses numbered 300 or 400.

#### Required Supporting Credits — 9 hours

Social Sciences

ANT 100 *Introduction to Anthropology* (3)  
 Standards based social science electives: a minimum of two courses, numbered 200 or higher chosen from the following prefixes: ECON, GEOG, PSCI (6 hours)

#### Required Specified GenEd Credits — 18 hours

Category 4.c. Arts and Letters

HIST 100 *Survey of American History from Its Beginnings to 1877* (3)  
 HIST 101 *Survey of American History from 1877 to the Present* (3)

3 additional hours from a., b., d., or e. are required to complete the Gen.Ed. requirement for Category 4. (Only 6 hours of HIST prefixes may be counted toward Gen.Ed.)

Category 5. Social Sciences

ECON 103 *Introduction to Economics: Macroeconomics* (3) (b.)  
 GEOG 100 *World Geography* (3) (c.)  
 PSCI 100 *United States National Government* (3) (d.)  
 SOC 100 *Principles of Sociology* (3)

#### Required PTEP Credits — 39 hours

See "Secondary Professional Teacher Education Program" on page 222 and

See "History, B.A. — PTEP Program" on page 223

#### Elective GenEd Credits — 23 hours



## HUMAN REHABILITATIVE SERVICES, B.S.

### Degree Requirements — 120 Credits

The Human Rehabilitative Services program educates students in rehabilitative theory and procedures relevant to helping people.

Individuals who hold a bachelor of science degree in Human Rehabilitative Services are prepared to work in a variety of human service settings or to enter into graduate education related to the helping professions.

#### Required Major Credits — 33 hours

HRS 380 Rehabilitation Principles and Case Management (3)

HRS 385 Working with Families in Rehabilitation (3)

HRS 394 Practicum in Human Services (3)

HRS 470 Client Assessment (3)

HRS 480 Human Service Helping Skills (3)

HRS 485 Medical/Psychological Aspects of Disability for Human Service Workers (3)

HRS 490 Career Planning and Placement (3)

HRS 492 Clinical Internship (12)

#### Required Minor Credits — 18 hours

Students must complete a minor or an area of concentration totaling 18 credits. Students should consider their career goal as they select a minor or an area of concentration. For example, students looking at careers in the corrections field should consider the corrections courses from sociology; if interested in mental health facilities, consider psychology as their minor or area of concentration. The student is encouraged to confer with his or her advisor in establishing an area that will meet his or her needs.

#### Required Specified GenEd Credits — 9 hours

*Category 2. Mathematics*

*Select one of the following two courses:*

STAT 150 Introduction to Statistical Analysis (3)

STAT 250 Statistics for Health Sciences (3)

*Category 7. Interdisciplinary and International Studies, and Multicultural Studies*

GERO 205 Introduction to Gerontology (3) (a.

*Interdisciplinary)*

HRS 290 Introduction to Human Rehabilitative Services (3)

(b. Multicultural)

#### Elective GenEd Credits — 31 hours

#### University-Wide Elective Credits — 29 hours

Students must make application for practicum and clinical internship five (5) weeks before the semester in which the field experience is planned.



## INTERDISCIPLINARY STUDIES, B.A.

Administered by the College of Arts and Sciences

### Degree Requirements — 120 Credits

The Bachelor of Arts degree in Interdisciplinary Studies enables any undergraduate student to pursue an interdisciplinary theme of study he or she has devised in substitution for the traditional major. Each student works with two faculty advisors who assist in constructing a program of coursework that will meet the student's objectives. This program affords students the opportunity to pursue topics of study tailored to meet their individual interests and needs.

Graduates will benefit by pursuing a major that develops awareness of the interrelatedness and wholeness of knowledge. This program enables students to integrate knowledge focusing on both contemporary and lasting human issues and problems. Students will develop both theoretical and practical approaches to topics. This major will provide the groundwork for students who aspire to useful careers in such important fields as urban affairs, business relations, environmental protection, human development and international relations.

#### Required Major Credits — 3 hours

XXXX 422 Directed Studies (3) (Must be a Thesis or Final Project)

(Must have regular prefix of appropriate area of study — with the departmental prefix of the primary advisor as supervising faculty).

#### Elective Major Credits — 57 hours

Complete an approved, coherent multi- or interdisciplinary program of electives.

#### Elective General Education Credits — 40 hours

#### University-Wide Elective Credits — 20 hours

**Notes:** Students desiring to enter the program must have their interdisciplinary studies proposal approved by the Interdisciplinary Studies Committee no later than the first semester of their junior year.

At least 50 percent of the courses taken to complete the major must be upper division courses, 300-400 level.

Interdisciplinary studies proposals must include at least three courses from a minimum of two disciplines to be considered acceptable proposals.

Students in this program must maintain a grade point average of 2.6 or above.





## INTERDISCIPLINARY STUDIES, B.A.

### Anthropology Emphasis

#### Degree Requirements — 120 Credits

This interdisciplinary emphasis focuses on the power of the integrated, interdisciplinary nature of anthropology to understand human cultural and biological variation in an historic, prehistoric and global context. Anthropology is devoted to understanding what it means to be human. This knowledge is valuable, not only for itself, but also for how it can be applied to a variety of professional settings. The interdisciplinary complement of the emphasis allows students to draw on a variety of disciplines to extend their knowledge and skills beyond anthropology into related fields.

The core of the program provides a blend of content and inquiry based instruction. Courses in anthropology emphasize both theory and methods through which students learn a variety of qualitative and quantitative techniques for analyzing anthropological problems. The individually designed interdisciplinary complement allows students to integrate anthropology with a wide range of fields that offer opportunity for applying anthropology in numerous career choices.

Interdisciplinary students with an anthropology emphasis often pursue graduate study and academic careers. They also follow careers in both the public and private sectors, finding work in almost every area of society, including public planning, public health, education, journalism, social services, rural development, urban planning, immigration, public archaeology, public policy evaluation, business, international development, public and private research and a variety of advocacy and public interest occupations. The interdisciplinary structure of this program greatly enhances career options for students preparing for life in the modern world.

#### Required Major Credits — 9 hours

*Foundation courses*

- \*ANT 110 Introduction to Cultural Anthropology (3) (GE 7.a)
- ANT 310 World Cultures (3)
- ANT 470 Seminar in Anthropology (3)

#### Elective Major Credits — 24 hours

*(Minimum of 12 credits in courses numbered 300 or above)*

*Core and Methods*

Select one of the following courses in consultation with an advisor:

- \*ANT 120 World Archaeology (3) (GE 5.a.)
- \*ANT 130 Introduction to Physical Anthropology (3) (GE 6.b.)

and select two of the following courses in consultation with an advisor:

- ANT 210 Field Methods in Cultural Anthropology (3)
- ANT 220 Archaeological Research Methods (3)
- ANT 230 Anthropometrics (3)

*Cultural Anthropology*

Select two of the following courses in consultation with an advisor:

- ANT 311 Latin American Cultures (3)
- ANT 312 North American Indians (3)
- ANT 313 Modernization and Development (3)
- \*ANT 314 Sex Roles in a Cross-Cultural Perspective (3) (GE 7.a.)
- \*ANT 315 Life History and Culture (3) (GE 1.b.)
- \*ANT 317 Contemporary Native American Issues (3) (GE 7.b.)
- ANT 318 Native American Women (3)

*Archaeology*

Select two of the following courses in consultation with an advisor:

- ANT 121 Archaeology of Colorado (3)
- ANT 321 Prehistory of the Americas (3)
- ANT 323 Ancient Civilizations (3)
- ANT 325 Fieldwork in Archaeology (4)

*Physical Anthropology*

Select one of the following courses in consultation with an advisor:

- ANT 330 Forensic Anthropology (3)

- ANT 430 Human Evolutionary Anatomy (3)
- ENST 331 Global Population and Human Needs (3)

#### \*\*Required Supporting Credits — 27 hours (Interdisciplinary Complement)

*(A minimum of 12 credits in courses 300 or above)*

#### Elective GenEd Credits — 40 hours

#### University-Wide Elective Credits — 20 hours

**Note:** \*No more than six semester hours of anthropology courses listed in the University Catalog for general education credit may be "double-counted" for both the major and general education. The student may choose any two anthropology courses marked with an asterisk(\*) above for "double-counting" purposes.

\*\*Courses for the interdisciplinary complement of this major are selected and approved in consultation with an anthropology faculty advisor. Courses are to be selected from at least two disciplines outside of anthropology, including directed studies courses (XXXX 422) and/or internship courses (XXXX 492) offered by anthropology and other programs. Course selection is to be guided by the student's career goals and academic interests. Course selections should have a clear thematic focus. No fewer than 50% of interdisciplinary complement courses must be 300 level or above. Students emphasizing cultural anthropology should look to the social sciences and humanities (africana studies, economics, English, geography, history, hispanic studies, political science, psychology, sociology, women's studies or the performing and visual arts) for their course selections.

Students emphasizing archaeology should consider courses in biology, earth sciences, geography, history, physics and/or chemistry. Students emphasizing physical anthropology should consider courses in biology, community health, nutrition and/or kinesiology. Other disciplines may also be relevant for particular career objectives and may be included in the interdisciplinary complement.



## INTERDISCIPLINARY STUDIES, B.A.

### International Studies Emphasis

#### Degree Requirements — 120 Credits

The emphasis area will develop a broad understanding of international issues through the study of foreign language, economics, geography, history, political science, communication and anthropology.

The program will prepare individuals to work in analytical or research positions with private and public agencies with an international focus. The major also prepares the student for graduate school in international studies.

#### Required Major Credits — 18 hours

ECON 303 Intermediate Macroeconomics (3)  
ECON 305 Intermediate Microeconomics (3)  
ECON 344 International Economics (3)  
HIST 240 Modern America, 1914-Present (3)  
PSCI 318 The Politics of the Developing States (3)  
Thesis (3)

#### Elective Major Credit — 21 hours

and *select one of the following groups:*

MATH 175 Topics in Finite Mathematics (3)  
ECON 350 Application of Mathematics to Economics (3)  
ECON 452 Econometrics (3)

or

SOC 351 Classical Social Theory (3)  
SOC 361 Social Research (3)  
SOC 362 Social Statistics (3)

and *complete:*

Twelve credit hours at the 200-level or above in a foreign language in student's concentration area.

#### Required Concentration Area Credits — 18 hours

In addition to the core requirements, the student is to take 18 additional hours in one of the following concentration areas that complements the student's language training. At least one course each in anthropology, geography, history and political science is recommended. No more than three hours of internship may be used to complete the concentration.

##### Concentration Area: African and Middle Eastern

ANT 110 Introduction to Cultural Anthropology (3)  
ANT 310 World Cultures (3)  
AFS 104 Survey of Africa (3)  
AFS 332 Pan-Africanism (3)  
AFS 396 African and African American World Views (3)  
ECON 320 Comparative Economic Systems (3)  
ECON 360 Economics of Growth and Development (3)  
GEOG 326 Africa (3)  
HIST 110 African Civilization (3)  
HIST 318 Modern Africa (3)  
PSCI 325 Conflict in the Middle East (3)  
PSCI 328 International Law and Organizations (3)

##### Concentration Area: Asian

ANT 110 Introduction to Cultural Anthropology (3)  
ANT 313 Modernization and Development (3)  
ECON 320 Comparative Economic Systems (3)  
ECON 360 Economics of Growth and Development (3)  
GEOG 344 Asia: Special Topics (3)  
HIST 112 Asian Civilization I: From Prehistory to the 1600s (3)  
HIST 113 Asian Civilization II: The Modern Transformation (3)  
HIST 309 Modern Southeast Asia (3)  
HIST 310 Modern China (3)  
HIST 311 Modern Japan (3)  
HIST 313 India (3)  
MIND 181 Great Traditions of Asia: India, China and Japan (3)  
PSCI 328 International Law and Organizations (3)

##### Concentration Area: European

ANT 110 Introduction to Cultural Anthropology (3)  
ECON 320 Comparative Economic Systems (3)  
ECON 360 Economics of Growth and Development (3)  
FR 116 Contemporary France (3)  
GEOG 340 Europe (3)  
GEOG 365 Russia and Eurasia (3)

GEOG 392 Field Course in Geography (Europe) (3)  
GER 116 Contemporary Germany (3)  
HIST 120 Western Civilization from Ancient Greece to 1689 (3)  
HIST 121 Western Civilization from 1689 to the Present (3)  
HIST 263 European Intellectual History (3)  
HIST 369 Britain in the Modern Age, 1689 to the Present (3)  
HIST 376 France from 1848 (3)  
HIST 385 History of the Holocaust, 1933 to the Present (3)  
HIST 386 Twentieth Century Russia (3)  
HIST 389 Modern Europe (3)  
PSCI 210 Politics in the European Community (3)  
PSCI 310 Politics of Central and East European States (3)  
PSCI 328 International Law and Organizations (3)

##### Concentration Area: Latin American

ANT 110 Introduction to Cultural Anthropology (3)  
ANT 311 Latin American Cultures (3)  
ECON 320 Comparative Economic Systems (3)  
ECON 360 Economics of Growth and Development (3)  
GEOG 335 Geography of Middle America (3)  
GEOG 392 Field Course in Geography (Latin America) (3)  
HISP 131 Latin American Civilization and Culture (3)  
MAS 141 Mexican Civilization and Culture (3)  
HIST 118 History of Mexico (3)  
HIST 314 History of Latin America to 1855 (3)  
HIST 315 History of Latin America: 1855 to the Present (3)  
PSCI 328 International Law and Organizations (3)

#### Required Specified GenEd Credits — 9 hours

##### Category 5. Social Science

GEOG 200 Human Geography (3) (*c.Geography*)  
PSCI 220 Introduction to International Relations (3) (*d.Political Science*)

##### Category 7.a. Interdisciplinary and International Studies, and Multicultural Studies

SPCO 323 Intercultural Communication (3)

#### Elective GenEd Credits — 31 hours

#### University-Wide Elective Credits — 23 hours

**Notes:** At least one half of all courses (including both core and elective courses) taken must be at the 300-400 level. ECON 103 and ECON 105 are prerequisites for ECON 303 and ECON 305 to be taken under general education. Students who plan to attend graduate school may substitute MATH 131 and prerequisites for MATH 175 and MATH 176.

Language proficiency is estimated to require at least 12 hours of study at the intermediate level or above. Demonstrated proficiency at the intermediate/ high level on the ACTFL/ETS Oral Proficiency Interview fulfills the language requirement regardless of the actual number of language credits taken.

UNC offers a full complement of courses in French, Spanish and German. Students who wish to pursue other languages are responsible for supplementing UNC course offerings with outside language study (e.g., regular courses at other universities, long distance education, and/or tutoring) in order to achieve proficiency.

A thesis is required to graduate from the program. The thesis topic and faculty thesis advisor must be approved by the ITR Director. It is recommended that the student begin the thesis two semesters before graduation. Thesis credit will be taken as a directed study in the department of the thesis advisor.

No more than three hours of internship may be used to complete any concentration area. Internships for more than three hours are available above the 18 hour requirement.

Students must formally apply to the ITR Committee 970.351.2739 before being admitted to the program. A 2.6 cumulative GPA is required for entrance to and graduation from the International Trade and Relations program.



# INTERDISCIPLINARY STUDIES, B.A.

Liberal Arts Emphasis

## Degree Requirements — 120-124 Credits

The coursework in this major is designed to provide students with an interdisciplinary liberal arts education. The general education courses provide the broad foundation, with courses from seven general categories required. The required core courses narrow the focus to four disciplines or clusters of disciplines - math, science, history and the social sciences and language and literature. These courses examine ways of thinking within and across broadly related disciplines. Concentration areas provide students with more in-depth study of academic disciplines.

Elementary licensure candidates also must complete the PTEP courses and the required supporting courses in Speech Communications. Those not completing the PTEP and Speech Communications courses must, in consultation with their advisors, choose a minor or a second Concentration area which is complementary to the first and may also, with advisor's permission, substitute appropriate courses for those marked here with this symbol: ++

### Required Major (Core) Credits — 22 hours

#### Social Studies

- HIST 224 History of Colorado (3)
- or
- SOSC 200 Exploring Colorado (3)

#### Science

SCI 465 Principles of Scientific Inquiry: Finding Order in Chaos (3)

- and select one of the following courses:
- BIO 265 Life Science Concepts (3)
- or [BIO 101]

#### Social Studies

SOSC 300 Social Studies Methods of Inquiry (3)

#### Language Arts

ENG 404 Modern Literature About Childhood and Adolescence (3)

- or
- EDRD 414 Literature for Children, Adolescents and Young Adults (3)

and select one of the following courses:  
ENG 419 Language and the History of English (3)

- or
- EDRD 419 Language and Literacy Development of Preschool and Elementary School Children (3)

#### Math

MATH 387 Mathematics in Our Technological World (4)

### Required Supporting Credits — 3 hours

- SPCO 100 Basics of Public Speaking (1)
- SPCO 103 Speaking Evaluation (2)

Students in the PTEP program must satisfy an oral proficiency requirement. This can be done by taking the two courses listed above or by passing a proficiency exam administered by the Department of Speech Communication. Students, not in the PTEP, are exempt from this requirement.

**SELECT EITHER PTEP (124 hour program) or Additional Concentration or minor(120 hour program) — 40-41 hours**

### Required PTEP Credits — 41 hours

Please See "Elementary Professional Teacher Education Program" on page 219.

OR

### Additional Concentration or Minor — 40 hour

Additional Concentration or Minor - 18  
Elective Credits - 22

### Required Specified GenEd Credits — 40 hours

**Note:** Students are strongly recommended to take the courses listed with the full course titles. Courses listed in brackets are acceptable alternatives.

Category 1.a. — ENG 122 College Composition (3)

\*1.b. - one course from Intermediate Composition (3)

\*\*Category 2. — MATH 181 Fundamentals of Mathematics I (3)

and

MATH 182 Fundamentals of Mathematics II (2)

Category 3. — one course from Physical Activity (1)

Category 4.c. — HIST 100 Survey of American History from Its Beginnings to 1877 (3)

or [HIST 101 or HIST 121]

4.d. - ENG 131 Introduction to Literature (3)

or [ENG 211, ENG 214 or ENG 262]

4.a./b./e. - one course from ART/MUS/FL/PHIL/MIND

or

Category 5.a./e./f. — one course from ANT/PSY/SOC

5.b./d. — ECON 103 Introduction to Economics: Macroeconomics (3)

or [ECON 105 or ECON 101]

or PSCI 100 United States National Government (3)

or [PSCI 105]

Category 5.c. — GEOG 100 World Geography (3)

or GEOG 110 Geography of the United States and Canada (3)

or [GEOG 200]

Category 6. Science — select one course from each of the two sets of courses below.

ESCI 265 Earth Science Concepts for Elementary Teachers (3)

or [AST 100, GEOL 100, MET 205 or OCN 200]

SCI 265 Physical Science Concepts (4)

or [CHEM 108, CHEM 111, PHYS 220 or PHYS 240]

\*\*\*Category 7.a. — one course from Interdisciplinary and International Studies (3)

\*\*\*\*7.b. - one course from Multicultural Studies

**Note:** \*select any course except BA 205, AFS 305 and MUS 152

\*\* students selecting the Mathematics concentration take MATH 131 instead of MATH 181

\*\*\* select any course except GERO 205, NURS 200 and BA 251

\*\*\*\*select any course except CH 236 and HRS 290

### Required Concentration Area Credits — 18 hours

Select Area of Concentration from the list below:

Math & Science	Social Studies	Language Arts
Biology	Civics	Bilingual/Bicultural
Chemistry	Economics	English
Earth Science	Geography	ESL
Mathematics	History	French
Physics		German
		Spanish
<b>Integrated Studies</b>		
Environmental Studies		
Ethnic and Gender Studies		
Fine Arts		

## Bilingual/Bicultural Concentration

### Required Major Credits — 18 hours

HISP 395 History and Philosophy of Bilingual Education (3)

HISP 400 Methods and Assessment for Bilingual Education and ESL (3)

\*SPAN 411 Spanish for Bilingual Education I (3)

\*SPAN 412 Spanish for Bilingual Education II (3)

and select one of the following two courses:

\*\*MAS 100 Introduction to Mexican American Studies (3)

\*\*HISP 102 Hispanic Cultures in the United States (3)

and select one of the following two courses:

ANT 210 Field Methods in Cultural Anthropology (3)

\*\*\*SPCO 323 Intercultural Communication (3)

Undergraduate Degree Programs

**Notes:** (\*Students must have completed the Intermediate Spanish courses and the 300-level skill-building courses, or equivalent, before enrolling.)

\*\*Students may not use either course to satisfy the GenEd Category 7.b. requirement.

\*\*\*Students may not use SPCO 323 to satisfy the GenEd Category 7.a. requirement.

Students must pass the Hispanic Studies Department's oral proficiency interview at the advanced level before being allowed to enter student teaching. Students who have not completed SPAN 202, or who have not completed a minimum of four years of high school Spanish, or are native speakers with no formal training in Spanish may have to complete additional Spanish courses to meet requirements.

### Biology Concentration

#### Required Major Credits — 18 hours

BIO 111 Survey of Organismal Biology (4)

BIO 220 Genetics (4)

BIO 360 Ecology (4)

One upper division BIO prefix (4)

++BIO 494 Practicum in College Biological Science Instruction (1)

**Notes:** Students must take BIO 110 instead of BIO 265 as the General Education science requirement. They must also take BIO 494 and act as an Elementary Laboratory Assistant for BIO 265.

++Non-licensure students may substitute another course for this requirement with approval from their advisor.

### Chemistry Concentration

#### Required Major Credits — 18 hours

CHEM 112 Principles of Chemistry II (5)

CHEM 331 Organic Chemistry I (5)

CHEM 360 Environmental Chemistry (2)

++CHED 495 Seminar in Teaching Chemistry (2)

++CHEM 422 Directed Studies, Lab Assistant (1)

++PHYS 475 Seminar in Teaching Physics (2)

**Notes:** Students must take CHEM 111 instead of SCI 265 as the General Education science requirements. They must also take CHEM 422 and act as an Elementary Laboratory Assistant for SCI 265.

The total number of hours in this concentration is 17 because the number of hours of general education in chemistry is increased from four to five hours.

++Non-licensure students may substitute another course for this requirement with approval from their advisor.

### Civics (Political Science) Concentration

#### Required Major Credits — 18 hours

\*PSCI 100 United States National Government (3)

\*PSCI 105 Fundamentals of Politics (3)

Select two 300-400 level Political Science courses (6)

Select one 300-400 level course from the standards-based area:

Economics, Geography or History (3)

Select one 300-400 level course from the following areas:

Anthropology, Psychology or Sociology (3)

\*If PSCI 100 or PSCI 105 is used to satisfy General Education requirements, an additional 300-400 level Political Science course must be selected.

### Earth Science Concentration

#### Required Major Credits — 18 hours

GEOL 202 Historical Geology (4)

MET 205 General Meteorology (4)

OCN 301 Physical and Chemical Oceanography (4)

or

OCN 302 Geological and Biological Oceanography (4)

AST 301 Classical Astronomy (3)

or

AST 302 Modern Astronomy (3)

++ESCI 450 Strategies in Teaching in Earth Sciences (1)

++and select one of the following four courses (2):

AST 422 Directed Studies Lab Assistant

GEOL 422 Directed Studies Lab Assistant

MET 422 Directed Studies Lab Assistant

OCN 422 Directed Studies Lab Assistant

**Notes:** Students will take one of the Directed Studies listed above and act as an Elementary Laboratory Assistant for ESCI 265.

++Non-licensure students may substitute another course for this requirement with approval from their advisor.

### Economics Concentration

#### Required Major Credits — 18 hours

\*ECON 103 Introduction to Economics: Macroeconomics (3)

\*ECON 105 Introduction to Economics: Microeconomics (3)

Select two 300-400 level Economics courses (6)

Select one 300-400 level course from the standards-based area:

Political Science, Geography or History (3)

Select one 300-400 level course from the following areas:

Anthropology, Psychology or Sociology (3)

**Notes:** \*If ECON 103 or ECON 105 is used to satisfy General Education requirements, an additional 300-400 level Economics course must be selected.

### English Concentration

#### Required Major Credits — 18 hours

\*ENG 211 Survey of American Literature (3)

++EED 341 Methods and Materials for Teaching Language and Composition in the Secondary School (3)

Select one of the following two courses:

ENG 238 Introduction to Folklore (3)

ENG 414 Greek and Comparative Mythology (3)

Select one of the following three courses:

ENG 213 Survey of British Literature I (3)

\*ENG 214 British Literature II (3)

\*ENG 262 Masterpieces of World Literature (3)

Select one of the following two courses:

ENG 303 The Essay (3)

ENG 319 Advanced Expository Techniques (3)

Select one of the following two courses:

ENG 318 Traditional and Modern Grammars (3)

ENG 418 Advanced Topics in Linguistics (3)

**Notes:** \*Students who have taken this course to satisfy a General Education requirement must take ENG 131 to complete the requirements for this area of concentration. Qualified students may be exempted by examination from ENG 131.

++Non-licensure students may substitute another course for this requirement with approval from their advisor.

### Environmental Studies Concentration

#### Required Major Credits — 18 hours

*Required Core*

ENST 380 Sustainable Living (3)

\*ENST 100 Introduction to Environmental Studies (3)

*Social Processes (at least 2 of the following courses, 6 hours)*

ENST 205 Environment, Politics and Law (3)

ENST 215 Human Behavior and Environment (3)

ENST 335 Environmental and Resource Economics (3)

ENST 331 Global Population and Human Needs (3)

GEOG 315 Resource Management (3)

*Physical Resources (at least 2 of the following courses, 4-6 hours)*

ENST 225 Energy and the Environment (3)

ENST 235 Chemistry and the Environment (2)

ENST 255 Atmospheric Environment of Humans (2)

ENST 265 Conservation of Natural Resources (2)

ENST 355 Introduction to Environmental Health (3)

*Sensory Perceptions (at least 1 of the following courses, 2-3 hours)*

ENST 375 Literature and the Environment (3)

ENST 385 Art and the Environment (2)

**Note:** The intent of this concentration is to provide an avenue of preparation for those who wish to become environmentally literate and competent elementary education teachers, not environmental science or policy professionals. To this end the proposed core courses have a

strong focus on educational applications or environmental topics. The remainder of the program is comprised of a required distribution of courses in the current ENST Minor. Students must take at least 18 credit hours, at least half must be at the 300-400 level.

\*If ENST 100 is used to satisfy General Education requirements, an additional 300-400 level ENST course must be selected.

### ESL Concentration

#### Required Major Credits — 18 hours

ENG 318 Traditional and Modern Grammars (3)  
 ENG 419 Language and the History of English (3)  
 HISP 395 History and Philosophy of Bilingual Education (3)  
 SPCO 323 Intercultural Communication (3)  
 TESL 301 TESL Practicum I (2)  
 TESL 302 TESL Practicum II (1-2)  
 TESL 400 Methods and Approaches of ESL/EFL (3)

**Notes:** Students must take EDRD 419 to satisfy the second language arts core requirement.

\*Students may not use SPCO 323 to satisfy the General Education 7.a. requirement.

ESL Endorsement students must take MCS 101 to satisfy the 7b. requirement.

Students must complete a second language requirement equivalent to one year of college level studies.

### Ethnic and Gender Studies Concentration

#### Required Major Credits — 18 hours

Select one course from each of the four areas below. Select two additional courses from any of the four.

##### Africana Studies

\*AFS 100 Introduction to Africana Studies (3)  
 AFS 305 Survey of African American Literature (3)  
 AFS 395 Aspects of the African-American Experience (3)

##### Anthropology

ANT 312 North American Indians (3)  
 \*ANT 314 Sex Roles in a Cross-Cultural Perspective (3)  
 ANT 318 Native American Women (3)

##### Hispanic Studies

MAS 100 Introduction to Mexican American Studies (3)

##### Women's Studies

\*WS 101 Women in Contemporary Society (3)  
 WS 350 Feminist Theory (3)  
 WS 320 Representations of Women in Popular Culture (3)

\*Students may not use these courses to satisfy the General Education 7b. requirement.

### French Concentration

#### Required Major Credits — 18 hours

\*FR 116 Contemporary France (3)  
 \*\*FR 201 Intermediate French I (3)  
 FR 202 Intermediate French II (3)  
 FR 301 France: Its People and Culture (3)  
 FR 302 Current Events in France (3)  
 \*\*\*++FL 440 Methods of Teaching Foreign Languages in K-6 (3)

**Notes:** All 200-300 level FR courses are conducted in French.

**Notes:** \*Students may not use FR 116 to satisfy the General Education 7.a. requirement.

\*\*Students must have completed FR 102 or have demonstrated proficiency. Consent of instructor required.

\*\*\*FR 202 is a prerequisite for FL 440.

++Non-licensure students may substitute another course for this requirement with approval from their advisor.

### Fine Arts Concentration

#### Required Major Credits — 18 hours

*General Education Category 4a - select one course as an elective*

ART 181 History of Art I (4)  
 ART 182 History of Art II (4)  
 MUS 140 Introduction to Music (3)  
 THEA 130 Introduction to the Theatre (3)

#### Lower division courses (9 hours)

MUS 241 Perceiving the Arts (3)

*and select 2 courses with 2 different prefixes*

ART 181 History of Art I (4)  
 ART 182 History of Art II (4)  
 ART 183 Art I (3)  
 ART 184 Art II (3)  
 ART 190 Art Appreciation (3)  
 MIND 288 Contemporary Arts Connections (3)  
 MUS 140 Introduction to Music (3)  
 MUS 204 Music Fundamentals and Experiences (3)  
 THEA 130 Introduction to the Theatre (3)  
 THEA 160 Beginning Acting (3)

#### Upper division courses (9 hours)

*Select at least 3 courses to equal a minimum of 9 credit hours with 2 different prefixes:*

ART 356 Monotypes (3) (by consent of instructor)  
 ART 357 Artist's Books: Structures and Concepts (3) (by consent of instructor)  
 ART 381 Tribal Art (4)  
 ART 383 Pre-Columbian Art (4)  
 ART 385 Medieval Art (4)  
 ART 386 Renaissance Art (4)  
 ART 388 19th Century Art (4)  
 ART 389 Twentieth Century Art (4)  
 ART 437 Computer Art (3)  
 ART 443 Computer Technology in Art Education (2)  
 MUS 340 Survey of History and Literature of Jazz (3)  
 MUS 480 Mixed Concert Choir (1)  
 MUS 481 Women's Glee Club (1)  
 MUS 484 Men's Glee Club (1)  
 MUS 488 Concert Band (1-3)  
 MUS 490 Symphonic Band (1-3)  
 MUS 491 Wind Ensemble (1-3)  
 MUS 467 University Symphony Orchestra (1-3)  
 MT 330 History of Musical Theatre (3)  
 THEA 330 History of Theatre I (3)  
 THEA 331 History of Theatre II (3)  
 ++THEA 385 Methods of Teaching Drama (3)

**Notes:** Credit hours must total a minimum of 18 semester hours of 100-200 level and 300-400 level courses.

A course cannot count for both general education and the area of concentration. Catalog prerequisites may be waived for students in this area of concentration. Please see the Performing and Visual Arts' college representative for this concentration area.

++Non-licensure students may substitute another course for this requirement with approval from their advisor.

### Geography Concentration

#### Required Major Credits — 18 hours

GEOG 200 Human Geography (3)  
 GEOG 274 Maps and Data Analysis (3)

*(Students may substitute GEOG 232 Physical Geography (4) for GEOG 274; this selection would add one additional credit hour.)*

*Regional Geography — Select one 300-400 level course from the following:*

GEOG 318 Australia (2) (may be taken only if GEOG 232 is chosen)  
 GEOG 326 Africa (3)  
 GEOG 335 Geography of Middle America (3)  
 GEOG 340 Europe (3)  
 GEOG 344 Asia: Special Topics (3)  
 GEOG 350 Colorado (3)  
 GEOG 365 Russia and Eurasia (3)  
 GEOG 453 Geography of the Great Plains (3)

*Systematic Geography — Select one 300-400 level course from the following:*

GEOG 300 Advanced Human Geography: Topics (3)  
 GEOG 312 Economic Geography (3)  
 GEOG 320 Population Geography (3)  
 GEOG 360 Political Geography (3)  
 GEOG 370 Urban Geography (3)  
 GEOG 411 Geography Concepts and Issues (2) (May be taken only if GEOG 232 is chosen.)  
 GEOG 432 Rural Development in the American West (3)  
 GEOG 440 Biogeography (3)

*Select one 300-400 level course from the standards-based area:*

Political Science, History, Economics

And select one 300-400 level course from the following areas:

Anthropology, Sociology, Psychology

**Note:** Students must take GEOG 100 or GEOG 110 to satisfy the General Education Requirement

### German Concentration

#### Required Major Credits — 18 hours

\*GER 116 Contemporary Germany (3)

\*\*GER 201 Intermediate German I (3)

GER 202 Intermediate German II (3)

GER 301 Germany and the Germans I (3)

GER 302 Germany and the Germans II (3)

\*\*\*++FL 440 Methods of Teaching Foreign Languages in K-6 (3)

**Note:** All 200-300 level GER courses are conducted in German.

\*Students may not use GER 116 to satisfy the General Education 7.a. requirement.

\*\*Students must have completed GER 102 or have demonstrated proficiency. Consent of instructor required.

\*\*\*GER 202 is a prerequisite for FL 440.

++Non-Licensure students may substitute another course for this requirement with approval from their advisor.

### History Concentration

#### Required Major Credits — 18 hours

Students who have completed one of the following courses to satisfy the General Education requirement must select a different course listed below.

HIST 100 Survey of American History from Its Beginnings to 1877 (3)

HIST 120 Western Civilization from Ancient Greece to 1689 (3)

HIST 121 Western Civilization from 1689 to the Present (3)

Select three 300-400 level History courses. One course must be from a Non-Western Civilization course (9)

Select one 300-400 level course from the standards-based area:

Political Science, Economics or Geography (3)

Select one 300-400 level course from the following areas:

**Anthropology, Psychology or Sociology (3)**

### Mathematics Concentration

#### Required Major Credits — 18 hours

Students entering this program are expected to have the equivalent of four years of high school mathematics that will enable them to begin a study of calculus; students without these prerequisites may be required to take additional courses in algebra and trigonometry before beginning the calculus sequence.

STAT 150 Introduction to Statistical Analysis (3)

MATH 228 Discrete Mathematics (3)

MATH 341 Introduction to Modern Geometry I (3)

MATH 391 Introduction to Number Theory (3)

++MATH 395 Topics in Mathematics for Teachers (3)

MED 381 Fundamental Mathematics Education Lab (2)

**Notes:** Students must take MATH 131 instead of MATH 181 to satisfy part of the general education mathematics requirement. The other part of the requirement is MATH 182.

The total number of hours in this concentration is 17 because the number of hours of general education in Mathematics is increased from five to six.

++Non-licensure students may substitute another course for this requirement with approval from their advisor.

### Physics Concentration

#### Required Major Credits — 18 hours

PHYS 221 Introductory Physics II (5)

PHYS 301 Seminar in Physics (1)

PHYS 321 Elementary Modern Physics (3)

PHYS 422 Directed Studies Lab Assistant (1)

++PHYS 475 Seminar in Teaching Physics (2)

PHYS 495 Special Topics in Physics: Heat, Waves, Light & Sounds (3)

++CHED 495 Seminar in Teaching Chemistry (2)

**Notes:** Students must take PHYS 220 instead of SCI 265 as the General Education science requirement. They must also take PHYS 422 and act as an Elementary Laboratory Assistant for SCI 265.

Students with this concentration will need to have a good working knowledge of algebra and trigonometry.

A student with this concentration may substitute MATH 125 MATH 127 or MATH 131 for MATH 182 in General Education.

The total number of hours in this concentration is 17 because the number of hours of general education in physics is increased from four to five hours.

++Non-licensure students may substitute another course for this requirement with approval from their advisor.

### Spanish Concentration

#### Required Major Credits — 18 hours

\*SPAN 202 Intermediate Spanish II (3)

SPAN 301 Spanish Grammar (3)

SPAN 302 Spanish Composition (3)

SPAN 303 Spanish Conversation (3)

\*\*\*++FL 440 Methods of Teaching Foreign Languages in K-6 (3)

Select one of the following three courses:

SPAN 411 Spanish for Bilingual Education I (3)

SPAN 412 Spanish for Bilingual Education II (3)

SPAN 455 Spanish Readings (3)

**Notes:** All courses with a SPAN prefix are taught in Spanish.

\*Students must have the equivalent of one year of college-level Spanish as a prerequisite for SPAN 201.

\*\*SPAN 202 is a prerequisite for FL 440.

++Non-licensure students may substitute another course for this requirement with approval of their concentration representative.



## INTERDISCIPLINARY STUDIES, B.A.

Nonprofit Administration Emphasis

### Degree Requirements — 120 Credits

The program is designed to prepare individuals for entry-level positions in not-for-profit organizations such as the American Red Cross, Partners and other nonprofits. The program couples study in Business Administration with study in Sociology and related areas. This blend provides the student with a background to blend the business side of the organization with the needs of its clients. It is an attractive mix that provides the entry-level employee with a formidable set of skills to address the not-for-profit concerns.

The program is jointly developed by the Monfort College of Business and the Department of Sociology. There are coordinators from each department with primary advising and administration completed in the Monfort College of Business. Administration includes reviews for admissions, continuation and graduation.

#### Program Admission Requirements

Admission to the program as a freshman requires an index score of 98. Admission as a change of major or transfer with at least 30 semester credits requires a 2.75 GPA. Students with less than 30 credits must meet the freshman admission requirements. To continue in the program, the student must meet the continuation requirements established for the programs offered by the Monfort College of Business and Sociology. To graduate, the student must meet the graduation requirements established for the programs offered by the Monfort College of Business and the Sociology Department.

#### Required Major Credits — 48 hours

*Sociology (24 hours)*

- SOC 272 The Community (3)
- SOC 361 Social Research (3)
- SOC 362 Social Statistics (3)
- SOC 447 Introduction to Grant Proposal Writing (3)
- SOC 452 Applied Social Theory (3)
- SOC 448 Issues in Social Policy (3)
- SOC 490 Internship (3)
- SOC 494 Research Practicum (3)

*Business Administration (24 hours)*

- BAAC 220 Principles of Accounting I (3)
- BAAC 221 Principles of Accounting II (3)
- BACS 300 Information Systems (3)
- BAFN 231 Legal Environment of Business (3)
- BAFN 370 Business Finance (3)
- BAMG 350 Management of Organizations (3)
- BAMK 360 Marketing (3)
- BAMG 494 Not-For-Profit Management (3)

#### Required Supporting Credits — 12 hours

- ECON 105 Introduction to Economics: Microeconomics (3)
- STAT 251 Statistics for Business and Economics (3)

or

- BACS 291 Business Statistics I (3)
- PHIL 305 Ethics in Theory and Practice (3)
- HRS 480 Human Service Helping Skills (3)

#### Required Specified GenEd Credits — 10 hours

*Category 2. Mathematics*

- MATH 124 College Algebra (4)

*Category 5. Social Sciences*

- ECON 103 Introduction to Economics: Macroeconomics (3)
- SOC 100 Principles of Sociology (3)

#### Elective GenEd Credits — 30 hours

#### University-Wide Elective Credits — 20 hours

Students are also expected to meet the Monfort College of Business Computing Proficiency Requirement. For more information, please contact the Monfort College of Business Advising Center, Kepner 1055, 970.351.1233.



## JOURNALISM, B.A.

Select One Emphasis Area: News - Editorial, Public Relations and Advertising Media or Telecommunications

### Degree Requirements — 120 Credits

#### Program Requirements — 70 hours

##### Required Major Credits — 12 hours

- JMC 100 Introduction to Journalism and Mass Communications (3)
- JMC 210 Newswriting (3)
- JMC 390 Impact of Mass Communications on Society (3)
- JMC 497 Mass Communications Law (3)

##### Required Minor Credits — 18 hours

##### Elective GenEd Credits — 40 hours

See "Journalism and Mass Communications (B.A.) Requirements" on page 8

### News-Editorial Emphasis

The news-editorial emphasis is designed to provide a professional learning experience in reporting, writing and editing. Under the guidance of experienced news people, students perform news-oriented tasks of progressively greater complexity and scope. Students receive individualized assessments of their work on a regular basis.

Graduates of the news-editorial emphasis are qualified for employment in a wide variety of news organizations. These include, but are not limited to, weekly and daily newspapers, radio, TV and cable outlets and magazines. For some students, the news-editorial emphasis is a preparation for careers in related professions, such as law and government.

#### Program Requirements — 70 hours

##### Required Major Credits — 9 hours

- JMC 397 History of Mass Communication (3)
- JMC 350 News Editing and Layout (3)
- JMC 410 Advanced News and Feature Writing (3)

##### Elective Major Credits — 9 hours

- JMC 312 Reporting Contemporary Issues (3)
- JMC 340 Broadcast Newswriting (3)
- JMC 380 Public Relations (3)
- JMC 460 Media Management (3)
- JMC 492 Mass Communications Internship (1-3) (Internship strongly recommended)
- ART 271 Basic Photography (3)

and take six additional hours in Journalism and Mass Communications courses with a JMC prefix (6)

##### University-Wide Elective Credits — 32 hours

### Public Relations and Advertising Media Emphasis

Students in this emphasis learn the theory, writing skills and professional competencies they need to practice effective public relations and to effectively use media for advertising and promotion.

Students successful in the emphasis learn techniques and tools for entry-level employment in public relations, community relations, media relations, advertising or promotion. Students also become familiar with the history, ethical issues and professional problems in these areas and are thereby prepared to assume professional careers and/or undertake graduate study in these areas.

#### Program Requirements — 70 hours

##### Required Major Credits — 15 hours

- JMC 345 Broadcast Advertising and Promotion (3)
- JMC 350 News Editing and Layout (3)
- JMC 380 Public Relations (3)
- JMC 385 Media Planning and Research (3)

JMC 481 Public Relations Techniques (3)

**Elective Major Credits — 3 hours**

Take additional hours in courses with JMC prefixes.

**University-Wide Elective Credits — 32 hours**

(Internship strongly recommended)

*The following courses are recommended:*

- BAMK 360 Marketing (3)
- BAMK 365 Advertising (3)
- BAMK 461 Advertising Campaigns (3)
- BAMK 470 Direct Marketing (3)
- ECON 105 Introduction to Economics: Microeconomics (3)
- SPCO 100 Basics of Public Speaking (1)
- SPCO 103 Speaking Evaluation (2)
- SPCO 212 Professional Speaking (3)
- SPCO 330 Small Group Communication (3)
- SPCO 331 Organizational Communication (3)
- SPCO 343 Persuasion (3)

## Telecommunications Emphasis

Students learn writing, production and critical evaluation of radio and television content. The education and skills development are applicable to the full range of audio and video enterprises, including cablevision, educational media, corporate television and broadcast journalism.

This emphasis also familiarizes the student with the history, economics, effects and ethical issues behind radio and television, and thereby prepares students as professionals and potential graduate students in the field.

**Program Requirements — 70 hours**

**Required Major Credits — 11 hours**

- JMC 342 Television Production (4)
- JMC 443 Electronic Field Production (4)

*and select one of the following two courses:*

- JMC 241 Radio Production and Broadcast Announcing (3)
- JMC 340 Broadcast Newswriting (3)

**Elective Major Credits — 6-7 hours**

**University-Wide Elective Credits — 32-33 hours**

Take additional hours in courses with JMC prefixes.

(Internship strongly recommended)



## MATHEMATICS, B.S.

Select One Emphasis Area: Applied Statistics, Liberal Arts, Middle Grades Teaching or Secondary Teaching

**Degree Requirements — 120 Credits**

**Program Requirements — 54 hours**

**Required Major Credits — 14 hours**

- MATH 131 Listed under Specified General Education
- MATH 132 Listed under Specified General Education
- MATH 221 Elementary Linear Algebra (3)
- MATH 228 Discrete Mathematics (3)
- MATH 233 Calculus III (4)
- MATH 350 Elementary Probability Theory (4)

**Required Specified GenEd Credits — 8 hours**

*Category 2. Mathematics*

MATH 131 Calculus I (4)

*Category 6.c. Science and Mathematics*

MATH 132 Calculus II (4)

**Elective GenEd Credits — 32 hours**

## Applied Statistics Emphasis

Expanded scientific, statistical and mathematical knowledge, combined with growing needs in technological as well as social areas, have created increased demands for individuals trained in applied statistics.

The program focuses on statistical foundations and their applications to problems in varied disciplines, e.g., business, agriculture, medicine, law, literature, psychology and other social sciences.

Graduates are prepared for positions involving the design and analysis of statistical models in such areas as the military, governmental, industrial, environmental and social settings and for additional graduate study in the areas of applied statistics and operations research.

**Program Requirements — 54 hours**

**Required Major Credits — 12 hours**

- MATH 351 Elementary Statistics Theory (3)
- STAT 150 Introduction to Statistical Analysis (3)
- STAT 406 Multiple Linear Regression (3)
- STAT 409 Sampling Techniques (3)

**Required Elective Credits — 6 hours**

CS 195 Special Topics in Computer Science (C++) 3 hours, CS courses at the 200 level or higher.\* STAT courses at the 400 level, MATH courses at the 300 level or higher, other courses with the approval of the advisor.

\*These courses have additional prerequisites.

**University-Wide Elective Credits — 48 hours**

## Liberal Arts Emphasis

This program permits students to acquire the standard concepts of undergraduate mathematics including calculus, linear and abstract algebra, discrete mathematics, probability and statistics.

Graduates will be prepared to enter a graduate program in mathematics or some other discipline such as statistics. They may also begin a career in a variety of quantitative settings, including branches of engineering, physical and social science, finance and management, law and medicine.

**Program Requirements — 54 hours**

**Required Major Credits — 23 hours**

- MATH 321 Introduction to Abstract Algebra I (3)
- MATH 322 Introduction to Abstract Algebra II (3)
- MATH 335 Differential Equations I (3)
- MATH 431 Basic Analysis I (4)
- MATH 432 Basic Analysis II (4)
- MATH 460 Introduction to Complex Analysis (3)
- MATH 495 Topics in Mathematics (3)

**University-Wide Elective Credits — 43 hours**





## MATHEMATICS, B.S.

### Middle Grades Teaching Emphasis

#### Degree Requirements — 120 Credits

This program is designed for prospective middle grades teachers who are interested in mathematics and the teaching of mathematics. The content is designed to give students in-depth, yet well-rounded and relevant experience in mathematics. Pedagogical content knowledge is emphasized throughout the program. Graduates of this program are prepared to assume leadership roles in the curriculum development and teaching of mathematics at the middle school level.

#### Required Major Credits — 34 hours

MATH 131 Listed under Specified General Education  
 MATH 132 Listed under Specified General Education  
 MATH 181 Fundamentals of Mathematics I (3)  
 MATH 182 Fundamentals of Mathematics II (2)  
 MATH 221 Elementary Linear Algebra (3)  
 MATH 228 Discrete Mathematics (3)  
 MATH 341 Introduction to Modern Geometry I (3)  
 MATH 342 Introduction to Modern Geometry II (3)  
 MATH 391 Introduction to Number Theory (3)  
 MATH 395 Topics in Mathematics for Teachers (3)  
 MATH 464 Introduction to History of Mathematics (3)  
 MED 381 Fundamental Mathematics Education Lab (2)  
 \*MED 441 Methods of Teaching Mathematics (3)  
 STAT 150 Introduction to Statistical Analysis (3)

#### Elective Major Credits — 3 hours

Select one of the following courses:

CG 110 BASIC Programming (3)  
 CG 120 Pascal Programming (3)  
 CG 130 C++ Programming (3)

#### Required Specified GenEd Credits — 8 hours

Category 2. Mathematics

MATH 131 Calculus I (4)

Category 6.c. Science and Mathematics

MATH 132 Calculus II (4)

#### Required PTEP Credits — 41 hours

See "Middle Grades Professional Teacher Education Program" on page 221

#### Elective GenEd Credits — 32 hours

#### University-Wide Elective Credits — 2 hours



## MATHEMATICS, B.S.

### Secondary Teaching Emphasis

#### Degree Requirements — 120 Credits

This program prepares students to teach mathematics, such as arithmetic, algebra, geometry, trigonometry and mathematical analysis and applications at the secondary school level (grades 7-12).

Students entering this program are expected to have the equivalent of four years of high school mathematics that will enable them to begin a study of calculus; students without these prerequisites may be required to take additional courses in algebra and trigonometry before beginning the calculus sequence.

Graduates of this program are prepared and will be qualified for licensure to teach mathematics in grades 7-12 in the state of Colorado. The program also prepares students for graduate study in mathematics education.

#### Required Major Credits — 32 hours

MATH 131 Listed under Specified General Education  
 MATH 132 Listed under Specified General Education  
 MATH 221 Elementary Linear Algebra (3)  
 MATH 228 Discrete Mathematics (3)  
 MATH 233 Calculus III (4)  
 MATH 321 Introduction to Abstract Algebra I (3)  
 MATH 322 Introduction to Abstract Algebra II (3)  
 MATH 341 Introduction to Modern Geometry I (3)  
 MATH 342 Introduction to Modern Geometry II (3)  
 MATH 350 Elementary Probability Theory (4)  
 MATH 437 Mathematical Modeling (3)  
 MATH 464 Introduction to History of Mathematics (3)

#### Elective Major Credits — 3 hours

Select one of the following courses:

CG 110 BASIC Programming (3)  
 CG 120 Pascal Programming (3)  
 CG 130 C++ Programming (3)

#### Required Specified GenEd Credits — 8 hours

Category 2. Mathematics

MATH 131 Calculus I (4)

Category 6.c. Science and Mathematics

MATH 132 Calculus II (4)

#### Required PTEP Credits — 40 hours

See "Secondary Professional Teacher Education Program" on page 222 and

See "Mathematics, B.S. — PTEP Program" on page 223

#### Elective GenEd Credits — 32 hours

#### University-Wide Elective Credits — 5 hours



## MEXICAN AMERICAN STUDIES, B.A.

Liberal Arts Emphasis

### Degree Requirements — 120 Credits

The fundamental objective of the bachelor's in Mexican American Studies is to provide the student with knowledge and understanding of the historical development and cultural experience of the largest Latino community in the United States: Mexican Americans. Emphasis is placed on its contemporary reality by various theoretical perspectives and areas of academic inquiry through the humanities and social sciences: history, literature, sociology, political science, gender studies and psychology. This integrative approach seeks to help the student develop critical thinking and writing skills in order to establish a solid foundation in the liberal arts. It provides the essential tools for making informed judgments about the complex nature of our diverse society. The program culminates with the capstone course, an extensive research project, which fuses theoretical concepts with practical knowledge. The Mexican American Studies major prepares the student to pursue careers in the fields of law, business, public service, and education.

#### Required Major Credits — 13 hours

MAS 225 Latina/Latino History (3)

or

HIST 225 Latina/Latino History (3)

MAS 301 Mexican American Politics and Leadership (3)

MAS 346 Chicana/o Theory (3)

or

ENG 346 Chicana/o Theory (3)

MAS 450 Research Internship in Mexican American Studies (4)

#### Elective Major Credits — 6 hours

MAS 275 Education of Mexican American Students (3)

MAS 280 Topics in Chicana/Chicano Art and Culture (3)

MAS 395 Topics in Gender Issues (3)

MAS 337 Chicana/o Literature and Theory (3)

or

ENG 337

#### Required Supporting Credits — 12 hours

ANT 311 Latin American Cultures (3)

ENG 236 Ethnic American Literature, 3

MAS 141 Mexican Civilization and Culture (3)

HISP 395 History and Philosophy of Bilingual Education (3)

HIST 118 History of Mexico (3)

PSY 467 Psychology of Prejudice (3)

SOC 237 Sociology of Minorities (3)

#### Required Specified GenEd Credits — 6 hours

*Category 7.b. Interdisciplinary and International Studies, and Multicultural Studies*

(3 semester hours still required from Gen.Ed. 7.)

MAS 100 Introduction to Mexican American Studies (3)

MAS 110 Contemporary Chicano Literature (3)

or

ENG 236 Ethnic American Literature (3)

#### Elective GenEd Credits — 34 hours

#### University-Wide Elective Credits — 49 hours

At least 50 percent of the courses taken to complete the major must be upper division courses, 300-400 level.



## MUSIC, B.A.

Liberal Arts Emphasis

### Degree Requirements — 120 Credits

The Bachelor of Arts degree with a major in music is a program designed for the study of music within a liberal arts curriculum. It emphasizes broad coverage of the field of music, including coursework in music theory and literature and the development of performance skills and competencies.

The degree provides an appropriate background for prospective candidates for advanced degrees who are preparing for such careers as musicologists, composers and music librarians.

See "Liberal Arts Emphasis Requirements" on page 42

#### Required Major Credits — 46 hours

MUS 100 Recitals, Concerts and Productions (0)

MUS 101 Sight-Singing and Theory I (4)

MUS 102 Sight-Singing and Theory II (4)

MUS 141 Music Literature and Styles I (2)

MUS 142 Music Literature and Styles II (2)

MUS 201 Advanced Sight-Singing and Theory I (3)

MUS 202 Advanced Sight-Singing and Theory II (3)

MUS 301 18th Century Counterpoint (2)

MUS 302 Form and Analysis (2)

Individual Performance (16)

Major Musical Organization (8)

#### Elective Major Credits — 6 hours

#### Required Supporting Credits (Foreign Language) — 10 hours

#### Required Minor Credits (Outside Music) — 18 hours

#### Required Specified GenEd Credits — 6 hours

*Category 4. Arts and Letters (a. Fine Arts)*

MUS 243 History of Music I (3)

MUS 244 History of Music II (3)

#### Elective GenEd Credits — 34 hours



## MUSIC, B.M.

Degree requirements for all Emphasis Areas: Instrumental Performance, Music Theory and Composition, Piano, or Vocal Performance

### Degree Requirements — 120-124 Credits

The Bachelor of Music degree is the initial professional degree in music. Its primary emphasis is on development of the skills, concepts and sensitivity essential to the professional life of a musician. It also prepares students for advanced study in graduate school.

See "Music (B.M.) Requirements" on page 42

### Program Requirements — 62 Credits

#### Required Major Credits — 22 hours

MUS 100 Recitals, Concerts and Productions (0)  
 MUS 101 Sight-Singing and Theory I (4)  
 MUS 102 Sight-Singing and Theory II (4)  
 MUS 141 Music Literature and Styles I (2)  
 MUS 142 Music Literature and Styles II (2)  
 MUS 201 Advanced Sight-Singing and Theory I (3)  
 MUS 202 Advanced Sight-Singing and Theory II (3)  
 MUS 301 18th Century Counterpoint (2)  
 MUS 302 Form and Analysis (2)

#### Required Specified GenEd Credits — 6 hours

Category 4. Arts and Letters (a. Fine Arts)

MUS 243 History of Music I (3)  
 MUS 244 History of Music II (3)

#### Elective GenEd Credits — 34 hours

## Instrumental Performance Emphasis

### Emphasis Requirements — 120 hours

#### Program Requirements — 62 Credits

#### Required Major Credits — 38 hours

MUS 303 Instrumentation (2)  
 MUS 307 History of Instruments and Instrumental Practice (3)  
 MUS 319 Instrumental Techniques and Conducting (1)  
 MUS 403 Acoustics of Music (2)  
 Major Musical Organization (Minimum) (8)  
 Individual Performance (Minimum) (28)

#### Elective Major Credits — 14 hours

A minimum of two credits must be in the major area.

String Majors will take either Small Ensembles or Chamber Orchestra in lieu of electives in consultation with an advisor.

Woodwind Majors will take 4 hours of Small Ensemble and 4 hours of electives in consultation with an advisor.

Select four credits (in consultation with advisor):

MUS 160 Beginning Class Piano I (1)  
 MUS 161 Beginning Class Piano II (1)  
 MUS 260 Intermediate Class Piano I (1)  
 MUS 261 Intermediate Class Piano II (1)  
 MUS 271 Individual Performance in Piano (2-4)  
 MUS 471 Individual Performance in Piano (2-4)

and select two credits from the following:

MUS 426 Orchestral Excerpts: Percussion (1)  
 MUS 427 Orchestral Excerpts: Strings (1)  
 MUS 428 Orchestral Excerpts: Brass (1)  
 MUS 429 Orchestral Excerpts: Woodwind (1)

## Music Theory and Composition Emphasis

### Emphasis Requirements — 120-124 Credits

#### Program Requirements — 62 Credits

#### Required Major Credits — 40 hours

MUS 277 Individual Instruction in Composition (8)  
 MUS 477 Individual Instruction in Composition (8)  
 MUS 303 Instrumentation (2)  
 MUS 319 Instrumental Techniques and Conducting (1)  
 MUS 323 Choral Techniques and Conducting (2)  
 MUS 403 Acoustics of Music (2)

MUS 422 Directed Studies in Music (Form and Analysis) (3)  
 MUS 422 Directed Studies in Music (3) (Electronic Music)  
 MUS 422 Directed Studies in Music (3) (Pedagogy of Theory)  
 Major Musical Organization (8)

#### Elective Major Credits — 18-22 hours (Select courses in consultation with advisor.)

Select elective credits (10)

and select 8-12 credits from the following courses:

MUS 160 Beginning Class Piano I (1)  
 MUS 161 Beginning Class Piano II (1)  
 MUS 260 Intermediate Class Piano I (1)  
 MUS 261 Intermediate Class Piano II (1)  
 MUS 271 Individual Performance in Piano (2-4)  
 MUS 471 Individual Performance in Piano (2-4)

## Piano Emphasis

### Emphasis Requirements — 121 Credits

#### Program Requirements — 62 Credits

#### Required Major Credits — 56 hours

MUS 323 Choral Techniques and Conducting (2)  
 MUS 348 Accompanying and Coaching I (2)  
 MUS 349 Accompanying and Coaching II (2)  
 MUS 352 Principles of Piano Teaching I (2)  
 MUS 353 Principles of Piano Teaching II (2)  
 MUS 403 Acoustics of Music (2)  
 MUS 415 Keyboard Literature I (2)  
 MUS 416 Keyboard Literature II (2)  
 MUS 454 Pedagogical Approaches to Keyboard Literature (4)  
 Individual Performance in Piano (28)  
 Major Musical Organization (8)

#### Elective Major Credits — 3 hours

## Vocal Performance Emphasis

### Emphasis Requirements — 124 Credits

#### Program Requirements — 62 Credits

#### Required Major Credits — 44 hours

MUS 323 Choral Techniques and Conducting (2)  
 MUS 410 Vocal Pedagogy (2)  
 MUS 444 English Diction (1)  
 MUS 445 German Diction (1)  
 MUS 446 French Diction (1)  
 MUS 447 Italian Diction (1)  
 Major Musical Organization (8)  
 Individual Performance (28)

#### Elective Major Credits — 8 hours (Selected in consultation with advisor.)

Select four credits from the following:

MUS 160 Beginning Class Piano I (1)  
 MUS 161 Beginning Class Piano II (1)  
 MUS 260 Intermediate Class Piano I (1)  
 MUS 261 Intermediate Class Piano II (1)  
 MUS 271 Individual Performance in Piano (2-4)  
 MUS 471 Individual Performance in Piano (2-4)

and select four credits (Placement is by audition.):

MUS 285 Performance in Opera Theatre (1-3)  
 MUS 485 Performance in Opera Theatre (1-12)  
 MUS 286 Scene Studies in Opera (1-3)  
 MUS 486 Scene Studies in Opera (1-3)

#### Required Supporting Credits — 10 hours

Two foreign language courses may count toward GenEd requirements and electives in the content area.



## MUSIC EDUCATION, B.M.E.

### Instrumental Music K-12 Teaching Emphasis

#### Degree Requirements — 128 Credits

The Bachelor of Music Education degree emphasizes competencies in basic musicianship and professional education and breadth of general studies, with attention to attitudes relating to human considerations and to social, economic and cultural components that give individual communities their identity.

The degree program assists students in becoming broadly based, knowledgeable and skilled school music educators with licensure to teach Music K-12.

#### Required Major Credits — 44 hours

MUS 100 Recitals, Concerts and Productions (0)  
 MUS 101 Sight-Singing and Theory I (4)  
 MUS 102 Sight-Singing and Theory II (4)  
 MUS 201 Advanced Sight-Singing and Theory I (3)  
 MUS 202 Advanced Sight-Singing and Theory II (3)  
 MUS 319 Instrumental Techniques and Conducting (1)  
 MUS 320 Wind Literature, Pedagogy and Conducting (2)  
 MUS 330 String Techniques (1)  
 MUS 360 Voice Class (1)  
 MUS 361 Clarinet and Saxophone Class (1)  
 MUS 362 Double Reed and Flute Class (1)  
 MUS 364 Brass and Percussion Class (2)  
 Individual Performance (14)  
 Major Musical Organization (7)

#### Elective Major Credits — 2 hours

Select two credits from the following (*Wind and Percussion Majors*):

MUS 292 Marching Band (1)  
 MUS 492 Marching Band (1)

#### Required Specified GenEd Credits — 6 hours

Category 4. Arts and Letters (a. Fine Arts)

MUS 243 History of Music I (3)  
 MUS 244 History of Music II (3)

#### Required PTEP Credits — 42 hours

See "K-12 Professional Teacher Education Program" on page 225 and

See "Music Education, B.M.E. — PTEP Program" on page 225 and complete the following *PTEP Methods Courses (16 hours)*:

MUS 210 Introduction to Music Education (1)  
 MUS 310 Teaching General Music in Elementary Schools (2)  
 MUS 311 Teaching General Music in Secondary Schools (2)  
 MUS 312 Teaching Instrumental Music in Elementary Schools (2)  
 MUS 317 Teaching Instrumental Music in Secondary Schools (2)  
 MUS 325 Choral Methods and Literature for Elementary and Secondary Schools (1)  
 MUS 331 String Pedagogy and Literature for the Instrumental Music Teacher (2)  
 MUS 356 Marching Band Techniques (1)  
 MUS 414 Contemporary Issues in Music Education (2)  
 MUS 450 Seminar in Student Teaching for Music Educators (1)

#### Elective GenEd Credits — 34 hours



## MUSIC EDUCATION, B.M.E.

### Vocal, Piano and General Music K-12 Teaching Emphasis

#### Degree Requirements — 126 Credits

The Bachelor of Music Education degree emphasizes competencies in basic musicianship and professional education and breadth of general studies, with attention to attitudes relating to human considerations and to social, economic and cultural components that give individual communities their identity.

The degree program assists students in becoming broadly based, knowledgeable and skilled school music educators with licensure to teach music K-12.

#### Required Emphasis Credits — 43 hours

MUS 100 Recitals, Concerts and Productions (0)  
 MUS 101 Sight-Singing and Theory I (4)  
 MUS 102 Sight-Singing and Theory II (4)  
 MUS 201 Advanced Sight-Singing and Theory I (3)  
 MUS 202 Advanced Sight-Singing and Theory II (3)  
 MUS 314 Guitar in the Classroom (1)  
 MUS 323 Choral Techniques and Conducting (2)  
 MUS 330 String Techniques (1)  
 MUS 359 Woodwind Class (1)  
 MUS 367 Materials and Techniques for Brass and Percussion (1)  
 MUS 410 Vocal Pedagogy (2)  
 Individual Performance (14)  
 Major Musical Organization (7)

#### Elective Major Credits — 4 hours

Select four credits from the following courses:

MUS 269 Individual Performance in Voice for Those with Non-Voice Emphasis (2-4)  
 MUS 469 Individual Performance in Voice for Those with Non-Voice Emphasis (2-4)

#### Required Specified GenEd Credits — 6 hours

Category 4. Arts and Letters (a. Fine Arts)

MUS 243 History of Music I (3)  
 MUS 244 History of Music II (3)

#### Required PTEP Credits — 39 hours

See "K-12 Professional Teacher Education Program" on page 225 and

See "Music Education, B.M.E. — PTEP Program" on page 225 and complete the following *PTEP Methods Courses (13 hours)*:

MUS 210 Introduction to Music Education (1)  
 MUS 310 Teaching General Music in Elementary Schools (2)  
 MUS 311 Teaching General Music in Secondary Schools (2)  
 MUS 312 Teaching Instrumental Music in Elementary Schools (2)  
 MUS 324 Choral Conducting and Pedagogy for Elementary and Secondary Schools (2)  
 MUS 325 Choral Methods and Literature for Elementary and Secondary Schools (1)  
 MUS 414 Contemporary Issues in Music Education (2)  
 MUS 450 Seminar in Student Teaching for Music Educators (1)

#### Elective GenEd Credits — 34 hours



## MUSICAL THEATRE, B.A.

### Degree Requirements — 120 Credits

A Bachelor of Arts in Musical Theatre prepares students for professional careers in musical theatre. This program is intended to produce the highest achievement possible in the level of performance of the actor/dancer/singer through study of musical skills, theatrical skills and dance and movement skills. This degree prepares students to perform professionally in a variety of musical theatre styles.

See “Musical Theatre (B.A.) Requirements” on page 43

#### Required Major Credits — 70 hours

DNCE 175 Tap Dance I (2)  
 DNCE 183 Tap Dance II (2)  
 MT 101 Musical Theatre Sight Singing and Ear Training (2)  
 MT 160 Class Piano for Musical Theatre (2)  
 MT 161 Introduction to Musical Theatre Performance (1)  
 MT 250 Voice Class for Musical Theatre I (1)  
 MT 251 Voice Class for Musical Theatre II (1)  
 MT 260 Acting in Musical Theatre (3)  
 MT 285 Performance in Musical Theatre (2)  
 MT 485 Performance in Musical Theatre (2)  
 MT 342 Workshop in Directing Musical Theatre (3)  
 MT 360 Scene Study in Musical Theatre (3)  
 MT 370 Musical Theatre Dance (2)  
 MT 390 Advanced Musical Theatre Scene Study (2)  
 MT 465 Musical Theatre Workshop (3)  
 MT 470 Senior Project in Musical Theatre (3)  
 THEA 100 Individual Performance in Theatre (2) (crew work)  
 THEA 135 Playscript Analysis (3)  
 THEA 160 Beginning Acting (3)  
 THEA 193 Stage Speech and Dialects (3)  
 THEA 240 Beginning Stage Directing (3)  
 THEA 250 Stage Make Up I (3)  
 THEA 260 Scene Study (3)  
 DNCE 166 Ballet I (2)  
 DNCE 170 Jazz Dance I (2)  
 DNCE 180 Ballet II (3)  
 DNCE 181 Jazz Dance II (3)  
 MT 369 Individual Performance in Musical Theatre Voice (4)  
 \*Major Vocal Ensemble (2 semester hours)

#### Elective Major Credits — 10 hours (with advisor approval)

DNCE 167 Ballroom Dance I (2)  
 DNCE 171 Modern Dance I (2)  
 DNCE 182 Modern Dance II (3)  
 DNCE 293 Advanced Jazz Dance (3)  
 DNCE 296 Choreography and Improvisation I (3)  
 DNCE 354 Dance Performance I (3)  
 DNCE 454 Dance History and Philosophy (2)  
 MT 285 Performance in Musical Theatre (2)  
 MT 485 Performance in Musical Theatre (2)  
 MT 343 Choreographing the Musical (2)  
 MT 369 Individual Performance in Musical Theatre Voice (2)  
 MUS 260 Intermediate Class Piano I (1)  
 MUS 269 Individual Performance in Voice for Those with Non-Voice Emphasis (2)  
 MUS 469 Individual Performance in Voice for Those with Non-Voice Emphasis (2)  
 MUS 286 Scene Studies in Opera (1-3)  
 MUS 486 Scene Studies in Opera (1-3)  
 MUS 285 Performance in Opera Theatre (1-3)  
 MUS 485 Performance in Opera Theatre (1-12)  
 MUS 407 Individual Coaching in Musical Theatre Repertory (2)  
 THEA 110 Performance in a Theatrical Production (2)  
 THEA 149 Orientation to Technology (3)  
 THEA 360 Advanced Acting Styles I (3)  
 THEA 361 Advanced Acting Styles II (3)  
 THEA 464 Audition Techniques (3)  
 \*Major Vocal Ensemble (2 semester hours)

#### Required Specified GenEd Credits — 3 hours

Category 4.a. Arts and Letters

MT 330 History of Musical Theatre (3)

#### Elective GenEd Credits — 37 hours



## NURSING, B.S.

### Degree Requirements — 129 Credits

The undergraduate program in nursing is a nine semester program leading to a bachelor of science degree. Nursing is an independent professional discipline requiring critical inquiry and discriminating judgment to assist individuals, families and communities to attain and maintain health. Qualified students are prepared as professional nurses and receive a foundation for graduate study in nursing.

See “Nursing (B.S.) Requirements” on page 38

#### Required Major Credits — 68 hours (Non-RN students)

NURS 310 Foundations of Professional Practice I (3)  
 NURS 312 Health Assessment (3)  
 NURS 314 Health Assessment Practicum (1)  
 NURS 324 Therapeutic Interventions (4)  
 NURS 335 Foundations of Professional Practice II (3)  
 NURS 344 Health Promotion Practicum (2)  
 NURS 345 Health Promotion of Individuals and Families Across the Lifespan (2)  
 NURS 364 Childbearing Families Practicum (4)  
 NURS 365 Childbearing Families (3)  
 NURS 384 Episodic Alterations in Adult/Child Health Practicum (7)  
 NURS 385 Episodic Alterations in Adult/Child Health I (4)  
 NURS 386 Episodic Alterations in Adult/Child Health II (4)  
 NURS 404 Community and Public Health Nursing Practicum (3)  
 NURS 405 Community and Public Health Nursing (3)  
 NURS 410 Foundations of Professional Practice III (3)  
 NURS 414 Psychiatric Mental Health Nursing Practicum (3)  
 NURS 415 Psychiatric Mental Health Nursing (3)  
 NURS 435 Foundations of Professional Practice IV (3)  
 NURS 465 Professional Roles with Individuals, Families and Communities (10)

*Required for RN's seeking a B.S. (30 hours)*

NURS 310 Foundations of Professional Practice I (3)  
 NURS 328 Health Assessment (for RNs only) (4)  
 NURS 335 Foundations of Professional Practice II (3)  
 NURS 410 Foundations of Professional Practice III (3)  
 NURS 435 Foundations of Professional Practice IV (3)  
 NURS 453 Community Health Nursing for RNs (4)  
 NURS 454 Community Health Nursing Practicum for RNs (4)  
 NURS 464 Professional Roles for RNs (5)  
 Nursing Elective (1 hour minimum)

**Note:** The RN student is awarded 38 hours of upper division nursing course work per the Colorado Articulation Agreement upon completion of one semester of nursing course work at UNC. Total credits required for RN's (120)

#### Required Supporting Credits — 21 hours

BIO 351 Microbiology (4)  
 FND 357 Nutrition in Health and Illness (4)  
 BIO 341 Human Anatomy (3)  
 BIO 350 Human Physiology (4)  
 BIO 355 Medical Pharmacology (3)  
 NURS 326 Pathophysiology (3)

#### Required Specified GenEd Credits — 18 hours

Category 1.b. Composition (Intermediate)

ENG 123 College Research Paper (3)

Category 2. Mathematics

STAT 250 Statistics for Health Sciences (3)

Category 5.e. Social Sciences (Psychology)

PSY 230 Human Growth and Development (3)

Category 6.b. Science and Mathematics (Life Sciences)

BIO 101 Biological Perspectives (4)

CHEM 108 Fundamentals of Chemistry I (5) (d. Physical Science)

#### Elective GenEd Credits — 22 hours



## PHILOSOPHY, B.A.

Select Philosophy, B.A. or Ethics and Public Policy Emphasis

### Degree Requirements — 120 Credits

Philosophy is the attempt to remain true to the spirit of the Socratic dictum: "The unexamined life is not worth living." It thus entails serious reflection on all our fundamental beliefs with an eye to the clarification of the concepts they involve and the discovery of reasons either for continuing to accept them or for giving them up as false.

The major in philosophy is designed to provide both a solid undergraduate education in philosophy and a foundation for the further study of philosophy at the graduate level. It is an excellent major not only for students interested in philosophy itself but also for pre-professional students—especially, perhaps, for those who intend to study the law. Students may want to consider a double major because of the ways the study of philosophy can enhance one's ability to investigate fundamental issues in other fields.

### Program Requirements — 39 hours

#### Required Major Credits — 12 hours

PHIL 260 History of Ancient Philosophy (3)  
 PHIL 261 History of Modern Philosophy (3)  
 PHIL 350 Ethics (3)  
 PHIL 495 Advanced Seminar (3)

#### Required Minor Minimum Credits — 18 hours

#### Elective Major Credits — 9 hours

**Note:** At least 50 percent of the courses taken to complete the major must be upper division courses, i.e., courses offered at the 300 or 400 level.

A minor is required unless the philosophy major is part of a double major. The minor is chosen in consultation with the major advisor.

To graduate, students must complete the department's major evaluation form.

No more than 6 credit hours of PHIL 497 may be counted toward the major. (Not applicable to the Ethics and Public Policy Emphasis.)

In addition, the Department of Philosophy recommends that philosophy majors take at least two years of a foreign language—preferably French or German.

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## Philosophy

### Program Requirements — 39 hours

#### Required Major Credits — 12 hours

PHIL 240 Formal Logic I (3)  
 PHIL 241 Formal Logic II (3)  
 PHIL 385 Epistemology (3)  
 PHIL 390 Metaphysics (3)

#### Elective GenEd Credits — 40 hours

#### University-Wide Elective Credits — 29 hours

**Note:** Eligible electives include all other PHIL prefix courses and are chosen with major advisor.

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## Ethics and Public Policy Emphasis

In a society that offers most of its students only technical training, those who wish to distinguish themselves in their chosen fields must pay special attention to questions of ethics and public policy. Many programs claim to teach students how to get where they are going. Applied philosophy teaches them to evaluate their goals—both those they set for themselves and those they set for their society. Applied philosophy is thus relevant to students' vocations in the traditional sense of the word: instead of being just the first in a series of trainings and retrainings designed to keep them abreast of recent developments in the changing job market, it provides students with a firm foundation for further learning, whatever their callings might be.

### Program Requirements — 39 hours

#### Required Major Credits — 9 hours

PHIL 220 The Nature of Legal Reasoning (3)  
 PHIL 300 Topics in Philosophy (3)\*  
 PHIL 355 Social and Political Philosophy (3)

\* Specific offerings to be chosen in consultation with the major advisor.

#### Required Specified GenEd Credits — 3 hours

Category 4.e. Arts and Letters

PHIL 305 Ethics in Theory and Practice (3)

#### Elective GenEd Credits — 37 hours

#### University-Wide Elective Credits — 32 hours

*Ethnic and Public Policy Emphasis Electives:*

**Note:** Electives in philosophy and/or another discipline is chosen in consultation with the major advisor.



## PHYSICS, B.S.

Select One Emphasis Area: Computer Science, Engineering Physics, Liberal Arts, Mathematical Physics, Physical Science Middle Grades and Secondary Teaching or Secondary Teaching

### Degree Requirements — 120 Credits

#### Program Requirements — 55 hours

##### Required Major Credits — 37 hours

PHYS 240 Listed under Specified General Education  
 PHYS 241 General Physics II (5)  
 PHYS 301 Seminar in Physics (1)  
 PHYS 320 Mathematical Applications (3)  
 PHYS 321 Elementary Modern Physics (3)  
 PHYS 340 Mechanics I (3)  
 PHYS 341 Electricity and Magnetism I (3)  
 PHYS 345 Atomic and Quantum Physics (5)  
 PHYS 347 Optics (4)  
 PHYS 420 Thermodynamics and Statistical Physics (3)  
 PHYS 421 Mathematical Applications in Physics II (3)  
 PHYS 440 Mechanics II (2)  
 PHYS 441 Electricity and Magnetism II (2)

##### Required Specified GenEd Credit — 18 hours

###### Category 2 Mathematics

MATH 131 Calculus I (4)

###### Category 6. Science and Mathematics

MATH 132 Calculus II (4) (c. Mathematics)  
 CHEM 111 Principles of Chemistry I (5) (d. Physical Science)  
 PHYS 240 General Physics I (5) (d. Physical Science)

### Computer Science Emphasis

The computer science emphasis of the physics major focuses on the connection and mutual interaction of physics, electronics and computer science through a combination of courses in these fields. This emphasis is strongly oriented toward the physical construction and interfacing of computers. Students can take additional courses in programming and computer architecture to broaden their backgrounds.

Upon completion of this emphasis, students will have a solid foundation of knowledge in physics, electronics and computer science. They will be prepared for employment in industry or research laboratories and for graduate study in these fields.

#### Program Requirements — 55 hours

##### Required Emphasis Credits — 12 hours

PHYS 343 Digital and Analog Electronics (4)  
 PHYS 443 Electronic Systems and Controls (4)  
 PHYS 470 Senior Research (4)

##### Required Supporting Credits — 25 hours

CS 101 Introduction to Computer Science (3)  
 CS 102 Structured Programming (3)  
 CS 200 Object-Oriented Analysis, Design, and Programming (3)  
 CS 222 Computer Architecture/Organization (3)  
 CHEM 111 Listed under Specified General Education  
 MATH 131 Listed under Specified General Education  
 MATH 132 Listed under Specified General Education  
 MATH 233 Calculus III (4)  
 Electives in Computer Science numbered 300 and above (with consent of advisor) (6)

and select one of the following courses:

CG 120 Pascal Programming (3)  
 CG 130 C++ Programming (3) (Recommended)

(An advanced CS course may be substituted for CS 101 with an approved petition.)

##### Elective GenEd Credits — 25 hours

##### University-Wide Elective Credits — 3 hours

### Engineering Physics Emphasis

The Engineering emphasis of the B. S. in Physics provides practical application of the theories and methods of physics. Students take more courses in the theory of physics than they would in the typical engineering curriculum and more courses in applications related to the engineering fields than they would in the traditional physics degree.

Graduates will be well prepared for engineering-type positions in industry and research laboratories or for graduate work in engineering or physics-related fields. Because of the strong emphasis on both theory and applications, graduates can quickly assimilate rapid changes in these fields.

#### Program Requirements — 55 hours

##### Required Emphasis Credits — 23 hours

PHYS 310 Machining Skills (2)  
 PHYS 343 Digital and Analog Electronics (4)  
 PHYS 443 Electronic Systems and Controls (4)  
 PHYS 445 Nuclear and Condensed Matter Physics (5)  
 PHYS 447 Electro-optics (4)  
 PHYS 470 Senior Research (4)

##### Required Supporting Credits — 15 hours

CHEM 111 Listed under Specified General Education  
 CHEM 112 Principles of Chemistry II (5)  
 MATH 131 Listed under Specified General Education  
 MATH 132 Listed under Specified General Education  
 MATH 233 Calculus III (4)  
 MATH 335 Differential Equations I (3)

and select one of the following courses:

CG 120 Pascal Programming (3)  
 CG 130 C++ Programming (3) (Recommended)

##### Elective GenEd Credits — 25 hours

Recommended: Category 7.a. Interdisciplinary and International Studies, and Multicultural Studies

ENST 225 Energy and the Environment (3)

##### University-Wide Elective Credits — 2 hours

### Liberal Arts Emphasis

This emphasis focuses on the main laws and principles of physics through a basic core of physics and support courses and provides flexibility for the student by requiring a minimum of emphasis courses. Students can take a variety of elective courses at the junior/senior level to tailor the program toward their future goals.

Graduates have a solid foundation in physics for pursuing their individual career goals, including employment in industry and research laboratories and graduate studies in physics, engineering, health or the environment.

#### Program Requirements — 55 hours

##### Required Emphasis Credits — 9 hours

PHYS 343 Digital and Analog Electronics (4)  
 PHYS 445 Nuclear and Condensed Matter Physics (5)

##### Required Supporting Credits — 16 hours

CHEM 111 Listed under Specified General Education  
 MATH 131 Listed under Specified General Education  
 MATH 132 Listed under Specified General Education  
 MATH 233 Calculus III (4)  
 Elective Credits in Physics (consent of advisor) (6)  
 Elective Credits in Mathematics (consent of advisor) (3)

and select one of the following courses:

CG 120 Pascal Programming (3)  
 CG 130 C++ Programming (3) (Recommended)

##### Elective GenEd Credits — 25 hours

Recommended: Category 7.a. Interdisciplinary and International Studies, and Multicultural Studies

ENST 225 Energy and the Environment (3)

##### University-Wide Elective Credits — 15 hours

### Mathematical Physics Emphasis

This program, offered through the cooperation of the physics and mathematics departments, focuses on the laws, principles and mathematical foundations of physics.

The student is required to have an advisor in each of the Departments of Physics and Mathematics.

This emphasis is an excellent preparation for graduate school in mathematics, applied mathematics, physics, mathematical physics or other similar programs. It is also excellent preparation for many types of positions in industry or in research laboratories.

### Program Requirements — 55 hours

#### Required Emphasis Credits — 8 hours

PHYS 445 Nuclear and Condensed Matter Physics (5)

PHYS 449 Advanced Quantum Mechanics (3)

#### Elective Emphasis Credits — 4 hours

Elective Credits in Physics (consent of advisors) (4)

#### Required Supporting Credits — 25 hours

CHEM 111 Listed under Specified General Education

MATH 131 Listed under Specified General Education

MATH 132 Listed under Specified General Education

MATH 233 Calculus III (4)

MATH 335 Differential Equations I (3)

MATH 221 Elementary Linear Algebra (3)

MATH 321 Introduction to Abstract Algebra I (3)

MATH 460 Introduction to Complex Analysis (3)

Elective Credits in Mathematics (consent of advisors) (6)

*and select one of the following courses:*

CG 120 Pascal Programming (3)

CG 130 C++ Programming (3) (Recommended)

#### Elective GenEd Credits — 25 hours

#### University-Wide Elective Credits — 3 hours

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## Physical Science Middle Grades and Secondary Teaching, or Secondary Teaching Emphases

This programs is listed on the next column or page.



## PHYSICS, B.S.

### Physical Science Middle Grades and Secondary Teaching Emphasis

#### Degree Requirements — 128 Credits

A graduate with this degree and licensure at the secondary level could teach physical science at the junior high or high school level. This degree would also be useful in a rural or small private school system in which one teacher may be required to teach physics, chemistry and other sciences. A graduate with this degree and licensure at the middle grades level could teach in a middle school, and could be a Science Specialist within a teaching team. Administered by the Physics Department.

A thesis is required. This could be a library study or a research project, and could be completed as part of PHYS 301, or by taking HON 451 or PHYS 470 A "C" average or better is required in the courses listed under Physical Science.

#### Required Major (Physical Science) Credits — 19 hours

PHYS 240 Listed under Specified General Education

PHYS 241 General Physics II (5)

PHYS 301 Seminar in Physics (1)

PHYS 320 Mathematical Applications (3)

PHYS 321 Elementary Modern Physics (3)

PHYS 347 Optics (4)

PHYS 422 Directed Studies: Lab Assistantship (1)

PHYS 475 Seminar in Teaching Physics (2)

#### Required Supporting Credits — 25-28 hours

AST 301 Classical Astronomy (3)

BIO 110 Listed under Specified General Education

CHEM 111 Listed under Specified General Education

CHEM 112 Principles of Chemistry II (5)

MATH 131 Listed under Specified General Education

MATH 132 Calculus II (4)

*and select one course only for Middle or Secondary School*

CHED 495 Seminar in Teaching Chemistry (2) (Middle School)

CHEM 331 Organic Chemistry I (5) (Secondary)

*Elective in Biology, selected from the following courses (4 hours)*

BIO 220 Genetics (4)

BIO 245 Introduction to Human Anatomy and Physiology (4)

BIO 111 Survey of Organismal Biology (4) (BIO 111 may be substituted for one of the above courses)

*Earth Science elective, selected from the following courses (3hrs) (A 200 level course in one of these prefixes may be substituted, as long as two prefixes are used for the Earth Science electives)*

GEOL 110 Our Geological Environment (3)

OCN 110 Our Ocean Systems (3)

MET 110 Our Violent Atmosphere (3)

*Earth Science elective, selected from the following courses (4hrs) (Earth Science electives must be of differing prefixes)*

GEOL 201 Physical Geology (4)

MET 205 General Meteorology (4)

OCN 200 General Oceanography (4)

OCN 301 Physical and Chemical Oceanography (4)

OCN 302 Geological and Biological Oceanography (4)

#### Required Specified General Education — 21 hours

*Category 2 Mathematics*

MATH 131 Calculus I (4)

*Category 6. Science and Mathematics*

BIO 110 Principles of Biology (4) (b. Life Sciences)

CHEM 111 Principles of Chemistry I (5) (d. Physical Science)

PHYS 240 General Physics I (5) (d. Physical Science)

*Category 7.a. Interdis. and Internat. Studies, and Multicul. Studies*

ENST 225 Energy and the Environment (3)

#### Required PTEP Credit — 38-41 hours

See "Middle Grades Professional Teacher Education Program" on page 221

See "Secondary Professional Teacher Education Program" on page 222 and

See "Physics, B.A. — PTEP Program" on page 221

#### Elective GenEd Credits — 22 hours





## PHYSICS, B.S.

### Secondary Teaching Emphasis

#### Degree Requirements — 128 Credits

The program emphasizes the laws, principles and applications of physics and other sciences, along with the communication skills and teaching methods to effectively teach these concepts at the junior high and high school levels (grades 7-12).

Graduates of this degree would help to combat a shortage of physical science teachers and help meet the nationwide goals of excellence in science preparation.

With additional physics and mathematics courses, students could qualify for graduate study in physics or for employment in industry or governmental research laboratories.

A thesis is required. This could be a library study or a research project, and could be completed as part of PHYS 301, or by taking HON 451 or PHYS 470. A "C" average or better is required in PHYS prefix courses for graduation.

#### Required Major Credits — 29 hours

PHYS 240 Listed under Specified General Education

PHYS 241 General Physics II (5)

PHYS 301 Seminar in Physics (1)

PHYS 320 Mathematical Applications (3)

PHYS 321 Elementary Modern Physics (3)

PHYS 340 Mechanics I (3)

PHYS 341 Electricity and Magnetism I (3)

PHYS 345 Atomic and Quantum Physics (5)

PHYS 347 Optics (4)

PHYS 475 Seminar in Teaching Physics (2)

#### Required Supporting Credits — 18 hours

AST 301 Classical Astronomy (3)

BIO 110 Listed under Specified General Education

CHEM 111 Listed under Specified General Education

CHEM 112 Principles of Chemistry II (5)

MATH 131 Listed under Specified General Education

MATH 132 Calculus II (4)

Elective Credits in Biological Sciences (consent of advisor) (3)

Elective Credits in Earth Sciences (consent of advisor) (3)

#### Required Specified GenEd Credits — 21 hours

*Category 2 — Mathematics*

MATH 131 Calculus I (4)

*Category 6. Science and Mathematics*

BIO 110 Principles of Biology (4) (*b. Life Sciences*)

CHEM 111 Principles of Chemistry I (5) (*d. Physical Science*)

PHYS 240 General Physics I (5)

*Category 7.a. Interdisciplinary and International Studies, and Multicultural Studies*

ENST 225 Energy and the Environment (3)

#### Required PTEP Credits — 38 hours

See "Secondary Professional Teacher Education Program" on page 222 and

See "Physics, B.A. — PTEP Program" on page 221

#### Elective GenEd Credits — 22 hours



## POLITICAL SCIENCE, B.A.

### Degree Requirements — 120 Credits

Political Science is the study of how societies are organized and how they change. Political Scientists are, therefore, concerned with how public policy is made and the normative values that undergird political thinking. The department emphasizes the development of undergraduate writing skills; it also offers qualified students opportunity to complete an internship in organizations such as Weld County government, the United States Congress and the Colorado Governor's Office. The department values serious discussion of political issues among faculty and students and conducts many classes as discussions rather than as lectures.

#### Required Major Credits — 9 hours\*

\*PSCI 100 United States National Government (3)

\*PSCI 105 Fundamentals of Politics (3)

and select one of the following courses:

PSCI 405 Problems in American Politics (3)

PSCI 415 Problems in Comparative Politics (3)

PSCI 425 Problems in International Relations (3)

PSCI 435 Problems in Political Philosophy (3)

#### Elective Major Credits — 27 hours

Select at least two courses from each of the following groups:

##### Group A — American Politics

PSCI 203 Colorado Politics (3)

ENST 205 Environment, Politics and Law (3)

PSCI 207 Women and Politics (3)

PSCI 208 Introduction to Public Administration (3)

PSCI 301 Electoral Politics in the United States (3)

PSCI 302 Power in America (3)

PSCI 303 Public Policy in the United States (3)

PSCI 305 Politics of Education (3)

PSCI 306 Constitutional Law (3)

PSCI 392 Internship (3-10)

PSCI 405 Problems in American Politics (3)

PSCI 422 Directed Studies (1-3)

##### Group B — International Relations

PSCI 220 Introduction to International Relations (3)

PSCI 320 American Foreign Policy (3)

PSCI 321 War and Peace (3)

PSCI 325 Conflict in the Middle East (3)

PSCI 328 International Law and Organizations (3)

PSCI 422 Directed Studies (1-3)

PSCI 425 Problems in International Relations (3)

##### Group C — Political Philosophy

PSCI 331 Political Philosophy I (3)

PSCI 332 Political Philosophy II (3)

PSCI 335 American Political Philosophy (3)

PSCI 422 Directed Studies (1-3)

PSCI 435 Problems in Political Philosophy (3)

##### Group D — Comparative Politics

PSCI 210 Politics in the European Community (3)

PSCI 230 The Evolution of the Modern State (3)

PSCI 310 Politics of Central and East European States (3)

PSCI 315 Comparative Public Policy (3)

PSCI 318 The Politics of the Developing States (3)

PSCI 319 Pacific Rim Politics (3)

PSCI 415 Problems in Comparative Politics (3)

PSCI 422 Directed Studies (1-3)

#### Required Specified GenEd Credit — 6 hours (Completed)

Category 5.d. Social Sciences

\*PSCI 100 and PSCI 105 meet this requirement. And, select one course from a different area to complete requirements.

#### \*\*Elective GenEd Credits — 34 hours

#### University-Wide Elective Credits — 50 hours

The following courses are recommended but not required for completion of the major.

HIST 100 Survey of American History from Its Beginnings to 1877 (3)

HIST 101 Survey of American History from 1877 to the Present (3)

HIST 120 Western Civilization from Ancient Greece to 1689 (3)

HIST 121 Western Civilization from 1689 to the Present (3)

\*\**(Any one of the four courses above will satisfy the General Education requirement for a course in Category 4. c.)*

ECON 103 Introduction to Economics: Macroeconomics (3)

ECON 105 Introduction to Economics: Microeconomics (3)

\*\**(Either course above will satisfy the General Education requirement for a course in Category 5. b.)*

STAT 150 Introduction to Statistical Analysis (3)

\*\**(The course above will satisfy the General Education requirement for a course in Category 2.)*

**Notes:** While PSCI 405, PSCI 415, PSCI 425 or PSCI 435 may be counted as one of the two elective courses required for an elective group, the credit hours may not be counted toward the 27 semester hour elective requirement. Should a student take a second course from among those identified above, the credit hours earned will count toward the 27 semester hour elective requirement.

Majors in political science must, in addition to meeting the above requirements, satisfy the following:

- take the nationally standardized test administered by the Department in the senior year; and
- complete the student evaluation of the major questionnaire.

You may take up to 10 hours in the Political Science Internship Program, but only a maximum of 6 hours can apply toward the political science major. Admission to the Internship Program is selective. Applications are available in the department office and must be submitted to the director, Internship Program, no later than the time of preregistration for the semester of the proposed internship. Students must have accumulated 12 hours in political science at time of application.

Students interested in licensure for teaching political science must major in social sciences rather than political science.

Qualified students are invited to enroll in the Honors Program in Political Science. Consult the director, Honors Program in Political Science.



## PSYCHOLOGY, B.A.

### Degree Requirements — 120 Credits

Psychology is the scientific study of behavior. The goal of psychology is to understand the processes involved in actions, feelings, thoughts, and experiences. Psychologists study these processes in both humans and animals. Psychologists develop theories to explain behavior and to generate hypotheses that are tested through scientific, both quantitative and qualitative, research methods. Depending on the situation, psychologists may attempt to describe, explain, predict, and change behavior.

Psychology students develop transferable skills in several areas including research design and analysis, the ability to understand human behavior, recognition of and tolerance for diversity, report writing and presentation, establishing rapport in groups, and critical thinking. With these skills, graduates gain employment as for example: educators, counselors, administrators, managers, personnel analysts, researchers (including market researchers), police and corrections officers, and sales people. Graduates also enter masters and doctoral programs in many areas of psychology and in rehabilitation, special education, business and social work. Recent demographic analyses predict a continued high demand for individuals with a background in psychology.

See "Psychology (B.A.) Requirements" on page 10

#### Required Major Credits — 16 hours

PSY 200 Psychological Statistics and Design (3)  
 PSY 400 Research Design and Analysis (5)  
 PSY 480 Physiological Psychology (5)  
 PSY 491 Psychology Field Experience (3-6) (minimum 3 hours)

#### Elective Major Credits — 20 hours

Select one course from each of the following groups:

##### Foundation Group

PSY 230 Human Growth and Development (3) (*Gen.Ed. 5.e.*)  
 PSY 265 Social Psychology (3) (*Gen.Ed. 5.e.*)  
 PSY 271 Psychological Testing and Measurements (3)

##### Clinical/Counseling Group

PSY 342 Cognitive and Behavioral Change: Theory, Assessment and Application (3)  
 PSY 407 Introduction to Counseling Theories (3)  
 PSY 455 Abnormal Psychology (3)

##### Diversity Group

PSY 467 Psychology of Prejudice (3)  
 PPSY 468 Psychology of Women (2)

##### Experimental Group

PSY 341 Principles of Learning (3)  
 PSY 375 Sensation and Perception (3)  
 PSY 440 Cognition (3)

Psychology electives to bring to a total of (20)

PSY elective denotes any psychology course with a PSY designation.

All PSY courses are listed in the Catalog. You may take more than one course from the designated psychology "groups" with the additional semester hours going toward psychology elective credits.

#### Required Supporting Credits — 4 hours

Select one of the following courses:

BIO 101 Biological Perspectives (4)  
 BIO 110 Principles of Biology (4) (*Gen.Ed. 6.b.*)  
 BIO 245 Introduction to Human Anatomy and Physiology (4)

#### Required Specified GenEd Credit — 4 hours

Category 5.e Social Sciences

PSY 120 Principles of Psychology (4)

#### Elective GenEd Credits — 36 hours

#### University-Wide Elective Credits — 40 hours

## PUBLIC SERVICE, B.A.S.

Select One Emphasis Area: Allied Health or Resource Development

### Degree Requirements — 120 Credits\*

Students holding the A.A.A. or A.A.S. degree should take approximately 24 months (based on continuous enrollment) to complete the degree. The curriculum is designed for distance education allowing students to participate at their home, workplace or through their local community college. Required degree courses and electives are listed.

#### \*Required A.A.A. or A.A.S. Degree — 60 hours

Students must have completed an A.A.A. or A.A.S. degree. If their transferred Associates degree program is less than 60 semester hours, students will be required to fulfill the 120 total credit hour requirement through additional coursework.

#### Program Requirements — 33 hours

BA 205 Business Communications (3)  
 BAMK 260 Introduction to Marketing (3)  
 ENST 355 Introduction to Environmental Health (3)  
 GERO 465 Management Concepts and Resource Development in Health and Human Services (3)  
 HHS 496 Entrepreneurship: Theory and Practice (3)  
 PHIL 101 Critical Thinking and Writing (3)  
 PHIL 305 Ethics in Theory and Practice (3)  
 PSY 366 Industrial Psychology (3)  
 SOC 447 Introduction to Grant Proposal Writing (3)  
 SPCO 323 Intercultural Communication (3)  
 SPCO 331 Organizational Communication (3)



### Allied Health Emphasis

The Allied Health program is designed for the A.A.A. or A.A.S. degree recipient who is working in the health or human services field and wants to acquire the knowledge or skills necessary to move into management or administrative positions. The program emphasizes personnel management, social policy, legislative issues, program planning and evaluation, interpersonal communication skills, health and social care systems, and cultural issues.

#### Program Requirements — 33 hours

##### Required Emphasis Credits — 27 hours

CH 299 Community Health Systems (3)  
 CH 405 Health Communications and the Media (3)  
 CH 410 Introduction to Program Planning and Evaluation (3)  
 HHS 394 Practicum in Public Service (3)  
 HHS 431 Informatics for Health Care Professionals (2)  
 HHS 492 Internship in Public Service (7)  
 HRS 480 Human Service Helping Skills (3)  
 NURS 318 Health Care Systems (3)



### Resource Development Emphasis

The Resource Development Emphasis is designed to produce graduates with competencies, skills and attitudes necessary for success in the workplace. The program is designed for the A.A.A. or A.A.S. degree recipient who wants to acquire the knowledge emphasizing personnel management, interpersonal communication skills, program planning and evaluation, management of information technology resources and services and the development of technology systems for use in organization processes.

#### Program Requirements — 33 hours

##### Required Emphasis Credits — 27 hours

ET 425 Computer Applications (3)  
 ENST 205 Environment, Politics and Law (3)  
 HHS 394 Practicum in Public Service (3)  
 HHS 492 Internship in Public Service (9)  
 SPCO 330 Small Group Communication (3)  
 SPCO 431 Communication and Leadership (3)  
 SOC 330 Sociology of Organizations (3)



## RECREATION, B.S.

Select Recreation, B.S. or Therapeutic Recreation Emphasis

### Degree Requirements — 120 Credits

A student may earn a bachelor of science degree (non-teaching) in Recreation preparing the student to assume entry level leadership roles in municipal, youth, commercial, non-profit, outdoor and therapeutic settings.

The Recreation program is designed to provide the student with leadership and mid-management skills as well as concepts and theories applicable to a variety of employment settings. Students complete a three credit Practicum experience and a 12-credit Internship experience. Current Advanced First Aid and CPR are prerequisites for these experiences as are specified hours of practical experience (50 clock hours for the practicum and 500 clock hours for the internship). A grade of "D" or "F" in recreation major or minor courses must be repeated. Enrolled students transferring into Recreation from another UNC major or undeclared must possess an overall GPA of 2.3 to be admitted into the Recreation major or minor. Students are approved for their practicum and their internship by a professional advisory committee. Students must have completed all required courses in the major and have a minimum GPA of 2.5 in major courses before beginning their internship.

### Program Requirements — 42 hours

REC 203 Introduction to Recreation and Leisure (3)  
 REC 204 Introduction to Therapeutic Recreation (3)  
 REC 206 Commercial Recreation and Tourism (3)  
 REC 351 Areas and Facilities in Parks and Recreation (3)  
 REC 368 Programs in Recreation (3)  
 REC 372 Recreation Leadership (3)  
 REC 394 Practicum in Recreation and Therapeutic Recreation (3)  
 REC 444 Professional Participation and Issues (3)  
 REC 451 Administration of Leisure Delivery Systems (3)  
 REC 492 Internship in Recreation and Therapeutic Recreation (12)  
 REC 494 Recreation Evaluation and Research (3)

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## Recreation

### Program Requirements — 42 hours

#### Required Supporting Credits — 6 hours

SES 232 Leadership in Outdoor Education and Recreation (3)  
 SES 461 Administration and Law (3)

#### Required Specified GenEd Credits — 10 hours

*Category 2. Mathematics, select one of the following:*

STAT 150 Introduction to Statistical Analysis (3)  
 STAT 250 Statistics for Health Sciences (3)

*Category 3. Physical Activity*

SES 132 Challenge Ropes Course (1)

*Category 5. Social Sciences (e. Psychology)*

PSY 230 Human Growth and Development (3)

*Category 7. Interdis. and Internat. Studies, and Multicul. Studies*

GERO 205 Introduction to Gerontology (3) (a. Interdisciplinary)

#### Elective GenEd Credits — 30 hours

#### University-Wide Elective Credits — 32 hours

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## Therapeutic Recreation Emphasis

Students who elect to complete the Therapeutic Recreation Emphasis will be prepared to work with individuals with disabilities in clinical and community settings. Certification of therapeutic recreation personnel is often required by such agencies and is administered by the National Council for Therapeutic Recreation Certification (NCTRC).

### Program Requirements — 42 hours

#### Required Major Credits — 12 hours

REC 415 Clinical Aspects in Therapeutic Recreation (3)

REC 416 Techniques of Therapeutic Recreation (3)  
 REC 421 Program Design in Therapeutic Recreation (3)  
 REC 426 Management and Issues in Therapeutic Recreation (3)

#### Required Supporting Credits — 16 hours

BIO 245 Introduction to Human Anatomy and Physiology (4)  
 HRS 480 Human Service Helping Skills (3)  
 PSY 455 Abnormal Psychology (3)  
 SES 232 Leadership in Outdoor Education and Recreation (3)  
 SES 461 Administration and Law (3)

#### Required Specified GenEd Credits — 14 hours

*Category 2. Mathematics*

*Select one of the following two courses:*

STAT 150 Introduction to Statistical Analysis (3)  
 STAT 250 Statistics for Health Sciences (3)

*Category 3. Physical Activity*

SES 132 Challenge Ropes Course (1)

*Category 5. Social Sciences*

PSY 120 Principles of Psychology (4)

PSY 230 Human Growth and Development (3)

*Category 7. Interdisciplinary and International Studies, and Multicultural Studies*

GERO 205 Introduction to Gerontology (3) (a. Interdis.)

#### Elective GenEd Credits — 26 hours

#### University-Wide Elective Credits — 10 hours



## SOCIAL SCIENCE, B.A.

Liberal Arts Emphasis

### Degree Requirements — 120 Credits

This multidisciplinary B.A. program provides a general, theoretical and applied background in the social sciences and selected areas of the humanities. In particular the curriculum gives students a basis for thinking analytically about human behavior and the social environment with a broad introduction to the social sciences.

The program prepares students for careers in human services, research, program planning, graduate school and law school. Examples of human services careers include positions such as agency management, probation counseling, environmental and social impact analysis, city planning and local, state and federal government positions.

Students selecting this emphasis must complete a minor in a discipline of their choice. In addition to the 18-24 credit hours for the minor, these students must take additional elective courses to have sufficient credits for graduation.

#### Required Major Credits — 15 hours

ANT 100 Introduction to Anthropology (3) (*Gen.Ed.Cat.5*)  
 PSCI 100 United States National Government (3)  
 SOC 100 Principles of Sociology (3)  
 SOSOC 400 Senior Seminar (3)

and select one of the following two courses:

GEOG 100 World Geography (3)  
 GEOG 110 Geography of the United States and Canada (3)

#### Elective Major Credits — 27 hours

In addition to the preceding specified required courses and specified General Education courses:

- 24 semester hours must be taken from the areas of ANT, ECON, GEOG, HIST, PSCI, PSY or SOC.
- No more than 6 semester hours can be taken from any one area.
- 18 of the 24 semester hours must be at the 300-400 level.
- Students taking a minor in one of the social sciences cannot count credit received for Required Elective Credits toward that minor.

An additional 3 semester hours must be taken from one of the following areas: AFS, HISP or WS.

#### Required Minor Credit — 18 hours

#### Elective GenEd Credits — 40 hours

#### University-Wide Elective Credits — 20 hours



## SOCIAL SCIENCE, B.A.

Social Studies Middle Grades and  
 Secondary Grades Teaching Emphasis

### Degree Requirements — 120-123 Credits

This multidisciplinary major provides students with the academic subject content background necessary for teaching social studies at the secondary (grades 7-12) and middle grades (grades 5-9) levels in Colorado. Upon successful completion of this program and the requirements of the Professional Teacher Education Program, students will qualify to be licensed to teach social studies at the secondary or middle grades levels.

#### Required Major Credits — 15 hours

ECON 105 Introduction to Economics: Microeconomics (3)  
 GEOG 100 World Geography (3)  
 HIST 101 Survey of American History from 1877 to the Present (3)  
 PSCI 100 United States National Government (3)  
 SOSOC 400 Senior Seminar (3)

#### Select Either the Middle or Secondary Grades Concentration — 27 hours

##### Middle Grades Concentration — 27 hours

ANT 100 Introduction to Anthropology (3)  
 SOC 100 Principles of Sociology (3)

Select three courses from at least two of the following areas: (9 hours)

Anthropology, Sociology, and Psychology

Select one course from one of the following areas: (3 hours)

Economics

or

Political Science

Select three courses from the following areas: (9 hours)

Geography and History

##### Secondary Concentration — 27 hours

- History 9 semester credit hours, of which 3 must be taken from history courses in Africa, Asia or Latin America.
- Economics 3-6 semester credit hours.
- Geography 6-9 semester credit hours.

Political Science 6-9 semester credit hours.

#### Required Specified GenEd Credits — 12-13 hours

Category 4. Arts and Letters

HIST 100 Survey of American History from Its Beginnings to 1877 (3)

Category 5. Social Sciences

ECON 103 Introduction to Economics: Macroeconomics (3)

and select one of the following courses:

ANT 100 Introduction to Anthropology (3)

PSY 120 Principles of Psychology (4)

SOC 100 Principles of Sociology (3)

\*PSY 120 is required for the Middle Grades concentration

#### Required PTEP Credit — 38-41 hours

See "Middle Grades Professional Teacher Education Program" on page 221

See "Secondary Professional Teacher Education Program" on page 222 and

See "Social Science, B.A. — PTEP Program" on page 223

#### Elective GenEd Credits — 27-28 hours



## SOCIOLOGY, B.A.

Select One Emphasis: Applied Sociology, Family Studies, Social Issues or Sociology of Education

### Degree Requirements — 120 Credits

#### Program Requirements — 33 hours

##### Required Major Courses — 12 hours

SOC 351 Classical Social Theory (3)  
 SOC 352 Contemporary Social Theory (3)  
 SOC 361 Social Research (3)  
 SOC 362 Social Statistics (3)

##### Required Minor Minimum Credits — 18 hours

##### Required Specified GenEd Credits — 3 hours

Category 5.f. Sociology

SOC 100 Principles of Sociology (3)

*Recommended for Category 2. Mathematics: STAT 150 Introduction to Statistical Analysis (3)*

See "Sociology (B.A.) Requirements" on page 11

### Applied Sociology Emphasis

A Bachelor of Arts degree in Sociology with an emphasis in Applied Sociology includes and examination of basic theories and methods in sociology and the application sociological knowledge to a specific concentration in either Health/Medical/Aging; Childhood and Youth; Social Psychology, or Social Policy/Evaluation.

Graduates will be prepared for employment in a variety of social and private agencies, social research, and related areas.

#### Program Requirements — 33 hours

##### Required Major Credits — 9 hours

SOC 131 Introduction to Sociological Practice (3)  
 SOC 258 Contemporary Social Issues (3)  
 SOC 492 Practicum in Applied Sociology (3-9)

##### Elective Major Credits — 9 hours

Choose only one course (3 hours) at the 100 or 200 level.

##### Required Concentration Credits — 9 hours

Select 3 courses within any one of the following concentrations:

##### a. Health/Medicine/Aging Concentration:

SOC 275 Sociology of Mental Illness (3)  
 SOC 322 Women and Aging (3)  
 SOC 371 Sociology of Aging (3)  
 SOC 375 Medical Sociology (3)

##### b. Childhood and Youth Concentration:

SOC 221 Sociology of Gender (3)  
 SOC 222 Sociology of Popular Culture (3)  
 SOC 326 Sociology of Childhood and Adolescence (3)  
 SOC 340 Juvenile Delinquency (3)  
 SOC 378 Sociology of Education (3)

##### c. Social Psychology Concentration:

SOC 247 Social Deviance (3)  
 SOC 278 Sociology of Emotions (3)  
 SOC 332 Social Psychology (3)  
 SOC 377 Self in Modern Society (3)

##### d. Social Policy/Evaluation Concentration:

SOC 447 Introduction to Grant Proposal Writing (3)  
 SOC 448 Issues in Social Policy (3)  
 SOC 563 Qualitative Methods (3)

##### Elective General Education Credits — 37 hours

##### University-Wide Elective Credits — 23 hours

### Family Studies Emphasis

The Bachelor of Arts in Sociology with an emphasis in Family Studies includes an examination of major contemporary family issues and social policy. The applied research practicum experience with a social agency or organization that delivers family-relevant services is the capstone course.

Graduates will be prepared for employment in a variety of state, local and private agencies involved in delivering family services.

#### Program Requirements — 33 hours

##### Required Major Credits — 18 hours

SOC 221 Sociology of Gender (3)  
 SOC 324 Issues in the Family (3)  
 SOC 326 Sociology of Childhood and Adolescence (3)  
 SOC 423 Violence and the Family (3)  
 SOC 493 Practicum in Family Studies (3)  
 SOC 120 Introduction to Family Studies (3) (GenEd Cat. 5.f)

##### Elective Major Credits — 9 hours

##### Elective GenEd Credits — 34 hours

##### University-Wide Elective Credits — 26 hours

### Social Issues Emphasis

A Bachelor of Arts degree in Sociology with an emphasis in social issues combines basic principles, theories and methods and applies them to an understanding of social relations, institutional arrangements, and social activism. The curriculum includes an examination of major issues in sociology, social change, social psychology and other elective areas.

Graduates will be prepared for employment in social agencies, social research and related areas.

#### Program Requirements — 33 hours

##### Required Major Credits — 6 hours

SOC 272 The Community (3)  
 SOC 409 Senior Seminar in Sociology (3)

##### Elective Major Credits — 21 hours

Select at least four courses from the following:

SOC 235 Social Change (3)  
 SOC 237 Sociology of Minorities (3)  
 SOC 330 Sociology of Organizations (3)  
 SOC 332 Social Psychology (3)  
 SOC 333 Social Class and Inequality (3)  
 SOC 373 Political Sociology (3)  
 SOC 491 Internship in Social Issues (3-9)

Additional Sociology courses may be chosen to fulfill the 21 elective major credits. At least half of the total credits must be at or above the 300 level.

##### Elective GenEd Credits — 37 hours

##### University-Wide Elective Credits — 23 hours

### Sociology of Education Emphasis

The Bachelor of Arts Degree in Sociology with an emphasis in Education includes an examination of major theories of self and issues of the family, education, community and social structures.

Graduates will be prepared for knowledgeable and productive citizenship roles, will have an understanding of socialization beginning with the self and progressing through the family, schools and the community and have knowledge and skills related to educational institutions.

#### Program Requirements — 33 hours

##### Required Major Credits — 18 hours

SOC 326 Sociology of Childhood and Adolescence (3)  
 SOC 332 Social Psychology (3)  
 SOC 333 Social Class and Inequality (3)  
 SOC 378 Sociology of Education (3)  
 SOC 409 Senior Seminar in Sociology (3)  
 SOC 237 Sociology of Minorities (3) (GenEd Cat. 5.f.)

##### Elective Major Credits — 9 hours

##### Elective GenEd Credits — 34 hours

##### University-Wide Elective Credits — 26 hours



## SPANISH, B.A.

### Bilingual Bicultural Middle Grades Teaching Emphasis

#### Degree Requirements — 120 Credits

Students develop a functional proficiency in the four language skills (listening, speaking, reading and writing) with an understanding of the role of the bilingual teacher in the classroom at the middle grades (5-9).

Students become competent bilingual/bicultural middle grades teachers.

Competency in the Spanish language must be demonstrated on the Hispanic Studies Department's oral proficiency interview at the advanced level at least one semester prior to the student teaching semester.

See "Spanish (B.A.) Requirements" on page 7

#### Required Major Credits — 24 hours

HISP 395 History and Philosophy of Bilingual Education (3)  
\*HISP 400 Methods and Assessment for Bilingual Education and ESL (3)

SPAN 301 Spanish Grammar (3)  
SPAN 302 Spanish Composition (3)  
SPAN 303 Spanish Conversation (3)  
SPAN 407 Spanish for Oral Proficiency (3)  
SPAN 411 Spanish for Bilingual Education I (3)  
SPAN 412 Spanish for Bilingual Education II (3)

#### Elective Major Credits — 3 hours

Select one of the following courses:

SPAN 304 Introduction to Hispanic Literature (3)  
SPAN 321 Spanish Civilization and Culture (3)  
SPAN 331 Latin American Civilization and Culture (3)  
SPAN 406 Introduction to Translation (3)

#### Required Supporting Credits — 3 hours

Select one of the following courses:

ANT 210 Field Methods in Cultural Anthropology (3)  
SPCO 323 Intercultural Communication (3) (*Gen.Ed. 7.a.*)

#### Required Specified GenEd Credits — 9 hours

*Category 4.b. Arts and Letters*

SPAN 201 Intermediate Spanish I (3)  
SPAN 202 Intermediate Spanish II (3)

(3 additional hours are required for *Category 4.*)

*Category 7.b. Interdisciplinary and International Studies, and Multicultural Studies*

MAS 100 Introduction to Mexican American Studies (3)

#### Required PTEP Credits — 43 hours

See "Middle Grades Professional Teacher Education Program" on page 221

#### Elective GenEd Credits — 31 hours

#### University-Wide Elective Credits — 7 hours



## SPANISH, B.A.

### Liberal Arts Emphasis

#### Degree Requirements — 120 Credits

Students develop a functional proficiency in the four language skills (listening, speaking, reading and writing) and an appreciation and understanding of the civilization and culture of the Hispanic world.

Students become functionally proficient in the Spanish language with a broad understanding and knowledge of the civilization and culture of the Spanish-speaking world.

See "Spanish (B.A.) Requirements" on page 7

#### Required Major Credits — 30 hours

SPAN 301 Spanish Grammar (3)  
SPAN 302 Spanish Composition (3)  
SPAN 303 Spanish Conversation (3)  
SPAN 304 Introduction to Hispanic Literature (3)  
SPAN 321 Spanish Civilization and Culture (3)  
SPAN 331 Latin American Civilization and Culture (3)  
SPAN 350 Masterpieces of Spanish Literature (3)  
SPAN 351 Masterpieces of Latin American Literature (3)  
SPAN 405 Spanish Phonetics and Dialects (3)  
SPAN 407 Spanish for Oral Proficiency (3)

#### Elective Major Credits — 3 hours

SPAN 406 Introduction to Translation (3)  
SPAN 453 Spanish Literature of the 20th Century (3)  
SPAN 454 Latin American Literature of the 20th Century (3)  
SPAN 455 Spanish Readings (3)  
SPAN 456 Spanish and Latin American Short Story (3)  
SPAN 457 Literature of U. S. Hispanics (3)  
SPAN 459 Hispanic Drama (3)

#### Required Minor Minimum Credits — 18 hours

#### Required Specified GenEd Credits — 6 hours

*Category 4.b. Arts and Letters*

SPAN 201 Intermediate Spanish I (3)  
SPAN 202 Intermediate Spanish II (3)

#### Elective GenEd Credits — 34 hours

#### University-Wide Elective Credits — 29 hours



## **SPANISH, B.A.** Secondary Teaching Emphasis

### **Degree Requirements — 120 Credits**

Students develop a functional proficiency in the four language skills (listening, speaking, reading and writing) with an appreciation and understanding of the civilization and culture of the Hispanic world. Students become competent secondary school teachers of Spanish.

#### **Required Major Credits — 33 hours**

SPAN 301 Spanish Grammar (3)  
SPAN 302 Spanish Composition (3)  
SPAN 303 Spanish Conversation (3)  
SPAN 304 Introduction to Hispanic Literature (3)  
SPAN 321 Spanish Civilization and Culture (3)  
SPAN 331 Latin American Civilization and Culture (3)  
SPAN 350 Masterpieces of Spanish Literature (3)  
SPAN 351 Masterpieces of Latin American Literature (3)  
SPAN 405 Spanish Phonetics and Dialects (3)  
SPAN 407 Spanish for Oral Proficiency (3)  
SPAN 414 Contrastive Features of Spanish and English (3)

#### **Required Supporting Credits — 3 hours**

\*FL 341 Methods of Teaching in the Secondary School (3)

#### **Required Specified GenEd Credits — 6 hours**

Category 4.b. Arts and Letters  
SPAN 201 Intermediate Spanish I (3)  
SPAN 202 Intermediate Spanish II (3)

#### **Required PTEP Credits — 38 hours**

See "Secondary Professional Teacher Education Program" on page 222 and

See "Spanish, B.A. — PTEP Program" on page 223

#### **Elective GenEd Credits — 34 hours**

#### **University-Wide Elective Credits — 5-6 hours**





## SPECIAL EDUCATION, B.A.

### Special Education K-12 Teaching Emphasis

#### Degree Requirements — 122-131 Credits

The curriculum consists of recommended general education requirements, courses in professional teacher preparation, courses in special education theory, practice, and pedagogy and courses in general education content to ensure teachers have the breadth of knowledge needed to be a special education teacher. Strong emphasis is placed on literacy and mathematics in both general education requirements and content area coursework. Students are required to take technology courses; and the use of technology is incorporated into the special education coursework. The program is organized around nine themes including individual differences (disabilities, culture, and language), interpersonal/collaborative skills, direct instruction, legal responsibilities/processes, organizational/systemic processes, behavioral management, knowledge and access of resources, inquiry skills, and implementation of special educator roles. Topics emphasized within these themes include normal developmental learning, general assessment concepts, foundational characteristics of disabilities, service delivery models, and technology.

#### Required Major Credits – 33-35 hours

EDSE 201 Culture of Special Education (3)  
 EDSE 203 The Individualized Education Program and the Collaborative Process (3)  
 EDSE 320 Assessment in Special Education (3)  
 EDSE 321 Advanced Assessment in Special Education (2)  
 EDSE 322 K-12 Methods in Special Education (5)  
 EDSE 325 Behavioral Dimensions of Students with Exceptionalities I (2)  
 EDSE 326 Behavioral Dimensions of Students with Exceptionalities II (3)  
 EDSE 442 Language and Literacy for Students with Severe Delays (3)  
 EDSE 443 Support System in Special Education (3)  
 EDSE 460 Culturally and Linguistically Diverse Students with Disabilities (3)

and select one of the following courses (3-5 hours):

EDSE 254 American Sign Language 1 (3)  
 (ASL I) or \*\*any foreign language

#### Required Supporting Credits – 23 hours

CMDS 266 Normal Speech and Language Development (3)  
 CMDS 365 Language Disorders in Children (3)  
 EDRD 410 Achieving Effective Instruction in Developmental Reading (3)  
 EDRD 411 Elementary Reading Diagnosis and Individualization (3)  
 EED 341 Methods and Materials for Teaching Language and Composition in the Secondary School (3)  
 MATH 181 Fundamentals of Mathematics I (3)  
 MATH 182 Fundamentals of Mathematics II (2)  
 PSY 330 Child and Adolescent Psychology (3)

#### Required Specified GenEd Credits — 33 hours

Category 2 (3 hours)

STAT 150 Introduction to Statistical Analysis (3)

Category 4 (9 hours)

HIST 100 Survey of American History from Its Beginnings to 1877 (3)

or

HIST 101 Survey of American History from 1877 to the Present (3)

AND One course from subgroup (a); AND one course from any subgroup (a-e) for at least (\*\*6 credits)

Category 5 (6 hours)

PSY 230 Human Growth and Development (3)

and select one of the following courses:

GEOG 100, GEOG 110, PSCI 100, or PSCI 105 (3)

Category 6 (9 hours)

(Select three courses for at least 9 credits in at least 2 different subgroups (a-c)

a. GEOL 100 (4) or GEOL 110 (3); ESCI 265 (3); b. BIO 265 (3); c. SCI 265 (4)

Category 7 (6 hours)

Select one of the following courses:

ANT 110, ANT 314, GEOG 335, HISP 131, MAS 141, HIST 110, HIST 118, SPCO 323, MUS 247

and select one of the following courses:

AFS 101, ENG 236, MAS 101, HISP 102, MAS 110, SOC 237, HRS 290 or MCS 101

\*\*Cannot be counted as both a General Education Credit and Required Major Credit.

#### Required PTEP Credits — 26-33 hours

See “K-12 Professional Teacher Education Program” on page 225 and

See “Special Education, B.A. — PTEP Program” on page 225

EDSE 444 Student Teaching in Special Education (12)

and select one of the following courses:

ET 247 Technology in Education for Elementary Teaching (1)

ET 248 Technology in Education for Middle Grades Teaching (1)

ET 249 Technology in Education for Secondary Teaching (1)

and select one of the following courses:

ET 347 Educational Technology Applications for Elementary Teaching (1)

ET 348 Educational Technology Applications for Middle Grades Teaching (1)

ET 349 Educational Technology Applications for Secondary Teaching (1)

ET 349 Educational Technology Applications for Secondary Teaching (1)

ET 349 Educational Technology Applications for Secondary Teaching (1)

#### Elective GenEd Credits — 7 hours

Category 1, ENG 122 and one course from b. (6 hours); Category 3, one course (1 hour). All students must choose at least one catalog-approved physical education course (SES).



## SPORT AND EXERCISE SCIENCE, B.S.

Select One Emphasis Area: Athletic Training, Exercise Science, Physical Education Liberal Studies or Physical Education K-12 Teaching

### Degree Requirements — 120 Credits

#### Program Requirements — 9 hours

SES 220 Anatomical Kinesiology (3)  
SES 221 Biomechanics (3)  
SES 323 Motor Learning and Development (3)

See "Sport and Exercise Science (B.S.) Requirements" on page 39

### Athletic Training Emphasis

This program is designed for the undergraduate who wishes to prepare for a career as a Certified Athletic Trainer. Preparation for this allied health profession focuses on the areas of prevention, management and rehabilitation of injuries that occur in sport. Upon successful completion of this program, the student will have fulfilled the requirements to take the National Certification Examination administered by the Board of Certification of the National Athletic Trainers Association.

#### Program Requirements — 9 hours

##### Required Major Credits — 47 hours

SES 181 Introduction to Clinical Athletic Training (1)  
SES 322 Exercise Physiology I (3)  
SES 324 Exercise Physiology II (3)  
SES 333 Psychological Analysis of Sports, Exercise and Physical Activity (3)  
SES 380 Prevention and Care of Sports Injuries (2)  
SES 381 Clinical Practicum in Athletic Training Level I: Practice Preparation (3)  
SES 382 Clinical Practicum in Athletic Training Level II: Protective Padding and Equipment Fitting (3)  
SES 383 Clinical Practicum in Athletic Training Level III: Evaluation and Rehabilitation (3)  
SES 390 Cardiopulmonary Resuscitation Certification (1)  
SES 404 Exercise Nutrition and Body Composition (3)  
SES 481 Clinical Practicum in Athletic Training Level IV: Therapeutic Modalities (3)  
SES 482 Clinical Practicum in Athletic Training Level V: Senior Seminar (3)  
SES 485 Mechanisms and Evaluation of Sports Injury (5)  
SES 486 Clinical Methods of Sports Injury Rehabilitation (4)  
SES 487 Therapeutic Modalities (3)  
SES 488 Athletic Training Administration (2)  
SES 489 Medical Conditions (2)

##### Required Supporting Credits — 20 hours

BIO 341 Human Anatomy (3)  
BIO 350 Human Physiology (4)  
BIO 355 Medical Pharmacology (3)  
CG 105 Personal Computer Applications (3)  
FND 210 Medical Terminology (2)  
SES 436 Social Influences on Sport and Exercise Behavior (3)  
SES 233 Advanced First Aid and Cardiopulmonary Resuscitation (2)

##### Required Specified GenEd Credits — 23 hours

###### Category 2 – Mathematics

STAT 250 Statistics for Health Sciences (3)

###### Category 3 – Physical Activity

SES 153 Weight Training (1)

###### Category 5.e. – Social Sciences (Psychology)

PSY 120 Principles of Psychology (4)

###### Category 5.f. – Social Sciences (Sociology)

CH 205 Issues in Health (3)

###### Category 6.b. – Science and Mathematics (Life Sciences)

BIO 110 Principles of Biology (4)

FND 250 Principles of Nutrition (3)

###### Category 6.d. – Science and Mathematics (Physical Sciences)

CHEM 108 Fundamentals of Chemistry I (5)

or

CHEM 111 Principles of Chemistry I (5)

**Elective GenEd Credits — 21 hours**

### Exercise Science Emphasis

The Exercise Science program is designed to provide students quality academic and professional preparation in the scientific study of human movement. The program offers a sound theoretical foundation and practical applications. Graduates will be prepared to work in one or more of the following areas: cardiac rehabilitation, corporate fitness, occupational fitness, work rehabilitation, gerontological fitness, fitness and exercise program management, conditioning of athletes, biomechanics, ergonomics, sport and exercise leadership, and/or stress management. Students preparing for physical therapy school or a health-related professional school should consult with a faculty advisor.

#### Program Requirements — 9 hours

##### Required Major Credits — 36 hours

SES 300 Fitness Management (3)  
SES 322 Exercise Physiology I (3)  
SES 324 Exercise Physiology II (3)  
SES 380 Prevention and Care of Sports Injuries (2)  
SES 404 Exercise Nutrition and Body Composition (3)  
SES 410 Cardiac Rehabilitation (3)  
SES 490 Exercise Assessment and Programming (4)  
\*SES 492 Internship in Sport and Exercise Science (12)  
*and select one of the following two courses:*  
SES 333 Psychological Analysis of Sports, Exercise and Physical Activity (3)  
SES 436 Social Influences on Sport and Exercise Behavior (3)

\*SES 492 can be taken in 6-semester hour blocks.

##### Required Supporting Credits — 9 hours

CHEM 109 Fundamentals of Chemistry II (5)  
or  
CHEM 112 Principles of Chemistry II (5)  
BIO 245 Introduction to Human Anatomy and Physiology (4)  
or  
BIO 350 Human Physiology (4)

##### Required Specified GenEd Credits — 6 hours

###### Category 3. Physical Activity

SES 145 Activity for Stress Management (1)

###### Category 6.d. Science and Mathematics (Physical Science)

CHEM 108 Fundamentals of Chemistry I (5)

or

CHEM 111 Principles of Chemistry I (5)

**Elective GenEd Credits — 34 hours**

**University-Wide Elective Credits — 26 hours**

### Physical Education Liberal Studies Emphasis

Physical Education and sport have become diverse fields with multiple career opportunities. This emphasis combined with an appropriate minor enables students to combine sport and physical education interests with another discipline in preparation for the continually changing world of sport (e.g., sport journalism, sport business, youth development). Students who select this emphasis are **not** eligible for teacher licensure in Sport and Exercise Science.

#### Program Requirements — 9 hours

##### Required Minor — minimum 18 hours

*With advisor approval, students must complete a minor (or second major) in a subject area related to physical education.*

##### Required Major Credits — 22 hours

SES 322 Exercise Physiology I (3)  
SES 338 Teaching Diverse Populations (3)  
SES 436 Social Influences on Sport and Exercise Behavior (3)  
*and take the following courses (8 hours)*  
SES 134 Self Defense (1)

SES 200 Weight Training and Conditioning (1)  
 SES 243 Outdoor and Adventure Programming (3)  
 Students must select three additional physical activity courses  
 (3) (Advisor approval required.)

*Select one of the following Content courses:*

SES 125 Backpacking and Hiking (1)  
 SES 126 Canoeing (1)  
 SES 127 Cross-Country Skiing (1)  
 SES 128 Cycling (1)  
 SES 130 Kayaking (1)  
 SES 131 Orienteering (1)  
 SES 135 Rock Climbing (1)

*and select one of the following Content courses:*

SES 111 Bowling (1)  
 SES 113 Fly Fishing/Trap Shooting (1)  
 SES 114 Golf (1)

*and select one of the following Content courses:*

SES 118 Swimming (1)  
 SES 120 Lifeguard Training (1)  
 SES 133 Scuba Diving (1)  
 SES 152 Swimming Conditioning (1)

*and select two of the following Content courses:*

SES 100 Basketball (1)  
 SES 102 Soccer (1)  
 SES 103 Softball (1)  
 SES 104 Volleyball (1)  
 SES 110 Badminton (1)

*With advisor approval the Content course listed above may be substituted with the following courses:*

SES 240 Games I (3)  
 SES 241 Games II (3)

**Required GenED Credits — 40 hours**

**University-Wide Elective Credits — 31 hours**

## Physical Education K-12 Teaching Emphasis

This program is listed on the next column or page.



## SPORT AND EXERCISE SCIENCE, B.S.

Physical Education K-12 Teaching Emphasis

### Degree Requirements — 123 Credits

The mission of the Sport and Exercise Science pedagogy program is to prepare professionals capable of delivering programs that promote self-directed, responsible, physically active lifestyles in school-aged children and youth across the state and region. The focus of Physical Education Teacher Education (sport and fitness focus) is to graduate entry level professional physical educators who possess a personal and professional commitment to physical activity and will demonstrate the knowledge and skills requisite to promoting learning in the area of physical activity.

#### Required Major Credits — 40 hours

SES 220 Anatomical Kinesiology (3)  
 SES 221 Biomechanics (3)  
 SES 322 Exercise Physiology I (3)  
 SES 323 Motor Learning and Development (3)  
 SES 436 Social Influences on Sport and Exercise Behavior (3)

*Content and Pedagogical Content Knowledge*

*and select one of the following (advisor approval required)*

SES 126 Canoeing (1)  
 SES 130 Kayaking (1)  
 SES 237 Paddle Sports (2)\*

*and select one of the following (advisor approval required)*

SES 111 Bowling (1)  
 SES 113 Fly Fishing/Trap Shooting (1)  
 SES 114 Golf (1)

*and select one of the following (advisor approval required)*

SES 116 Water Safety Instructor (2)\*  
 SES 118 Swimming (1)  
 SES 120 Lifeguard Training (1)  
 SES 133 Scuba Diving (1)  
 SES 152 Swimming Conditioning (1)

*all of the following courses are required:*

SES 134 Self Defense (1)  
 SES 200 Weight Training and Conditioning (1)  
 SES 201 Track and Field (1)  
 SES 209 Dance Activities (1)  
 SES 210 Developmentally Appropriate Elementary Activities (3)  
 SES 240 Games I (3)  
 SES 241 Games II (3)  
 SES 243 Outdoor and Adventure Programming (3)  
 SES 441 Learner Assessment and Physical Education Technology (3)  
 SES 461 Administration and Law (3)

\* Students who choose this course(s) will have a minimum of 1 hour above the 123 and a maximum of 2 hours above 123.

#### Required PTEP Credits — 43 hours

See "K-12 Professional Teacher Education Program" on page 225 and

See "Sport and Exercise Science, B.S. — PTEP Program" on page 226

*SES/PTEP Methods Courses - 15 semester hours*

SES 338 Teaching Diverse Populations (3)  
 SES 340 Planning and Instructional Design (3)  
 SES 342 Teaching Health-Related Fitness (3)  
 SES 440 Developing Pedagogical Skills in Elementary Physical Education (3)  
 SES 442 Developing Pedagogical Skills in Secondary Physical Education (3)

\*\*Corequisites

#### Elective GenEd Credits — 40 hours



## THEATRE ARTS, B.A.

Select Theatre Arts, B.A.; Dance or Secondary Teaching Emphasis

### Degree Requirements — 120 Credits

A major in Theatre Arts provides pre-professional training for students who have professional theatre employment as their career goal. The program cultivates an appreciation and understanding of theatre as part of American society and culture.

See "Theatre Arts (B.A.) Requirements" on page 43

#### Required Major Credits — 17 hours

THEA 135 Playscript Analysis (3)  
THEA 149 Orientation to Technology (3)  
THEA 160 Beginning Acting (3)  
THEA 240 Beginning Stage Directing (3)  
THEA 250 Stage Make Up I (3)  
THEA 324 Masterpieces in Theatrical Production (2)

#### Select one Concentration Area: 1) Acting, 2) Design Technology, or 3) General Theatre — 34-44 hours

##### 1) \*Acting Required Credits — 44 hours

THEA 150 Actor's Lab (1)  
THEA 190 Stage Speech I (2)  
THEA 193 Stage Speech and Dialects (3)  
THEA 260 Scene Study (3)  
THEA 275 Stage Movement I (2)  
THEA 276 Stage Movement II (2)  
THEA 335 Advanced Voice Production (2)  
THEA 360 Advanced Acting Styles I (3)  
THEA 361 Advanced Acting Styles II (3)  
THEA 464 Audition Techniques (3)  
MT 261 Singing for Actors (2)  
Required Theatre Elective Credits (4)

and complete the following:

THEA 100 Individual Performance in Theatre (14)  
(This requirement may be met by taking a minimum of 6 credits of THEA 100; the remaining 8 credits may be taken with a combination of THEA 100 and THEA 110 credits.)

##### 2) Design Technology Required Credits — 38 hours

THEA 100 Individual Performance in Theatre (8)  
THEA 210 Drafting and Painting for the Theatre (3)  
THEA 220 Stage Costume (3)  
THEA 230 Stage Lighting Design for the Theatre (3)  
THEA 300 Advanced Individual Performance in Theatre (6)  
THEA 310 Beginning Scene Design (3)  
THEA 349 Intermediate Stagecraft (3)  
THEA 449 Theatre Technical Seminar (3)  
THEA 450 Design and Technology Practicum (3)  
ART 183 Art I (3)

Elective Credits Required — 21 hours

ART 332 Watermedia Painting (3)  
ART 184 Art II (3)  
ART 231 Painting I (3)  
ART 234 Drawing I (3)  
THEA 221 Costume History (3)  
THEA 222 Costume Technology I (3)  
THEA 245 Sound Design (3)  
THEA 311 Scenic Painting for the Theatre (3)  
THEA 320 Stage Costume Design (3)  
THEA 322 Costume Technology II (3)  
THEA 332 Advanced Lighting Design for the Theatre (3)  
THEA 375 Stage Management for the Theatre (3)  
THEA 410 Advanced Design and Technology (3)  
THEA 420 Advanced Costume Technical Design (3)  
THEA 430 Lighting Seminar (3)  
THEA 445 Advanced Sound Design (3)  
THEA 480 Theatre Technical Director (3)

\*\*and select one of the following two courses:

ART 181 History of Art I (4) (GE Cat. 4.a. Fine Arts)  
ART 182 History of Art II (4) (GE Cat. 4.a. Fine Arts)

##### 3) General Theatre Arts Required Credits — 34 hours

Required Courses (15 hours)

THEA 100 Individual Performance in Theatre (14)  
THEA 150 Actor's Lab (1)

Elective Credits Required — 19 hours

MT 342 Workshop in Directing Musical Theatre (3)  
MT 360 Scene Study in Musical Theatre (3)  
THEA 220 Stage Costume (3)  
THEA 230 Stage Lighting Design for the Theatre (3)  
THEA 275 Stage Movement I (2)  
THEA 276 Stage Movement II (2)  
THEA 320 Stage Costume Design (3)  
THEA 340 Workshop in Directing I (3)  
THEA 341 Workshop in Directing II (3)  
THEA 401 Practicum in Theatre (1-4)  
THEA 420 Advanced Costume Technical Design (3)  
THEA 440 Directing the One-Act Play (3)

#### Required Specified GenEd Credits — 6 hours

Category 4.a. Arts and Letters  
THEA 330 History of Theatre I (3)  
THEA 331 History of Theatre II (3)

#### \*\*Elective GenEd Credits — 34 hours

#### University-Wide Elective Credits — 19-29 hours

## Dance Emphasis

### Degree Requirements — 120-121 Credits

The emphasis in dance provides students with the opportunity to train for work with a dance company, for teaching in non-public school settings, or for some form of therapeutic or rehabilitative work. Students can also combine a dance emphasis with pursuit of another major, or with course work in other fields. An apprenticeship, practicum or internship is also part of the dance emphasis.

Those individuals who want to teach dance in a public school setting must obtain a teaching major such as physical education or theatre arts education. These students must also complete the Professional Teacher Education Program (PTEP) as outlined in this Catalog.

See "Dance Emphasis (B.A.) Requirements" on page 44

#### Required Major Credits — 52 hours

DNCE 180 Ballet II (3)  
DNCE 292 Ballet III (3)  
DNCE 181 Jazz Dance II (3)  
DNCE 293 Jazz Dance III (3)  
DNCE 182 Modern Dance II (3)  
DNCE 294 Modern Dance III (3)  
Additional technique hours in Dance (3 hours)

and complete all of the following courses:

DNCE 295 Dance Theory (1)  
DNCE 296 Choreography and Improvisation I (3)  
DNCE 397 Choreography and Improvisation II (3)  
DNCE 440 Labanotation (2)  
DNCE 453 Teaching Methods, Rhythmic Analysis and Accompaniment (3)  
DNCE 455 Dance Philosophy/Trends (3)  
DNCE 456 Choreography and Improvisation III (2)  
DNCE 459 Dance Production in High School and College (2)  
DNCE 460 Dance Kinesiology (3)  
DNCE 480 Junior/Senior Seminar (1)  
THEA 100 Individual Performance in Theatre (2)  
THEA 149 Orientation to Technology (3)

and select one of the following courses:

DNCE 354 Dance Performance I (3)  
DNCE 355 Dance Performance II (3)  
DNCE 356 Dance Performance III (3)  
DNCE 357 Dance Performance IV (3)

#### Elective Major Credits — 25 hours

The following electives are chosen under advisement:

Technique classes in ballet, up to 12 total hours; modern and jazz up to 8 hours, as additional elective credits.  
DNCE 167 Ballroom Dance I (2)  
DNCE 169 Partnering (1)  
DNCE 174 Dance Conditioning (2)  
DNCE 183 Tap Dance II (2)  
DNCE 290 Ballet Partnering (1)  
DNCE 184 Ballroom Dance II (2)  
DNCE 490 Dance Apprenticeship (3)  
DNCE 492 Internship in Dance Leadership (3)  
DNCE 493 Practicum in Dance Teaching (3)  
SES 221 Biomechanics (3)

SES 322 Exercise Physiology I (3)  
 SES 323 Motor Learning and Development (3)  
 SES 380 Prevention and Care of Sports Injuries (2)  
 SES 404 Exercise Nutrition and Body Composition (3)  
 MUS 140 Introduction to Music (3)  
 MT 370 Musical Theatre Dance (2)  
 THEA 275 Stage Movement I (2)

or one of the following two courses:

SES 220 Anatomical Kinesiology (3)  
 SES 200 Weight Training and Conditioning (1)

#### Required Specified GenEd Credits — 2 hours

Category 4.a. Arts and Letters

DNCE 454 Dance History and Philosophy (2)

#### Elective GenEd Credits — 38 hours

#### University-Wide Elective Credits — 3 hours



## THEATRE ARTS, B.A.

Secondary Teaching Emphasis

#### Degree Requirements — 125 Credits

A major in Theatre Arts with an emphasis in Teaching provides training for students who have teaching of drama in the secondary school as their career goal. The program cultivates an appreciation and understanding of theatre as part of American society and culture.

A major in Theatre Arts with an emphasis in Teaching prepares students to teach drama in grades 7-12.

#### Required Major Credits — 44 hours

THEA 135 Playscript Analysis (3)  
 THEA 149 Orientation to Technology (3)  
 THEA 160 Beginning Acting (3)  
 THEA 190 Stage Speech I (2)  
 THEA 240 Beginning Stage Directing (3)  
 THEA 250 Stage Make Up I (3)  
 THEA 260 Scene Study (3)  
 THEA 275 Stage Movement I (2)  
 THEA 380 Design fundamentals for Secondary Education (4)  
 THEA 324 Masterpieces in Theatrical Production (2)  
 \*THEA 385 Methods of Teaching Drama (3)  
 THEA 440 Directing the One-Act Play (3)

and complete the following:

THEA 100 Individual Performance in Theatre (10)  
 (This requirement may be met by taking a minimum of 6 credits of THEA 100; the remaining 4 credits may be taken with a combination of THEA 100 and THEA 110 credits.)

#### Elective Major Credits — 3 hours

and select one of the following two courses:

THEA 340 Workshop in Directing I (3)  
 THEA 341 Workshop in Directing II (3)

#### Required Specified GenEd Credits — 6 hours

Category 4.a. Arts and Letters

THEA 330 History of Theatre I (3)  
 THEA 331 History of Theatre II (3)

#### \*Required PTEP Credits — 38 hours

See "Secondary Professional Teacher Education Program" on page 222 and

See "Theatre Arts, B.A. — PTEP Program" on page 224

#### Elective GenEd Credits — 34 hours



## VISUAL ARTS, B.A.

Select One Emphasis Area: Art, Graphic Arts or Art K-12 Teaching

#### Degree Requirements — 120 Credits

#### Program Requirements — 6 hours

#### Required Major Credits — 6 hours

Complete the following four Freshman Foundation Courses First

\*ART 181 (Under Specified General Education 4.a.)

\*ART 182 (Under Specified General Education 4.a.)

ART 183 Art I (3)

ART 184 Art II (3)

See "Visual Arts (B.A.) Requirements" on page 44

#### Art Emphasis

The art emphasis is a liberal arts program designed to give students broad exposure to the studio arts and art history.

It prepares the artist and crafts person. It is an ideal preparatory program for students planning to do advanced or graduate study in art and art history.

#### Program Requirements — 6 hours

#### Elective Major Credits — 29 hours

Select required art elective credits (13)

At least one advanced art history course must be taken (4)

Art Core I, select two of the following courses (6):

ART 231 Painting I (3)

ART 234 Drawing I (3)

ART 252 Printmaking I (3)

ART 271 Basic Photography (3)

Art Core II, select two of the following courses (6):

ART 211 Ceramic Design (3)

or

ART 212 Wheel Throwing (3)

ART 221 Fiber Design I (3)

ART 261 Sculpture I (3)

ART 265 Jewelry (3)

#### Required Concentration Credits — 9 hours (minimum)

Select courses from one of the following areas of concentration (300 level or above courses): art history, ceramics, computer graphics, drawing, painting, photographic imaging, printmaking or sculpture.

Art Major Credits - Specified:

Drawing Area of Concentration

ART 252 Printmaking I (3)

Painting Area of Concentration

ART 356 Monotypes (3)

#### Required Specified GenEd Credits — 11 hours

Category 4.a. Arts and Letters (Fine Arts)

\*ART 181 History of Art I (4)

\*ART 182 History of Art II (4)

Category 4.a.c.d. Arts and Letters

MIND 181 Great Traditions of Asia: India, China and Japan (3)

#### Elective GenEd Credits — 29 hours

#### University-Wide Elective Credits — 36 hours

Note: A grade of "C" or higher is required in all emphasis courses; you must retake the course until a "C" is earned.

#### Graphic Arts Emphasis

The graphic arts emphasis prepares students for careers in the commercial fields of art, such as computer graphics, graphic design, illustration, advertising, photography, publications and other areas of visual communications.

Students work toward the completion of a required professional quality placement portfolio.

#### Program Requirements — 6 hours

#### Required Major Credits — 15 hours

Core Courses

ART 231 Painting I (3)  
 ART 234 Drawing I (3)  
 ART 261 Sculpture I (3)  
 ART 270 Graphic Design I (3)  
 ART 375 Publication Production (3)

**Elective Major Credits (Advanced Art History) — 4 hrs**  
**Select one Required Concentration Area (19-27 hours):**

**1) Computer Graphics Concentration (19 semester hours)**

This concentration focuses on two and three dimensional computer graphics, introduction to animation production, computer art, multimedia, web-based techniques, visualization and information graphics, teaching and corporate training. Students graduating from the Computer Graphics area may find employment in a variety of areas including: animation, web graphics, web site development, 2D and 3D graphics, publications, visualization, multimedia and illustration.

ART 171 Computer Based Technology in Visual Arts (2)  
 ART 333 Life Drawing (3)  
 ART 437 Computer Art (3)  
 ART 439 Computer Graphics Studio (1-3)  
 ART 443 Computer Technology in Art Education (2)  
 ART 469 Web Style Design (3)  
 ART 471 Computer Graphics (3)

**2) Graphic Design Concentration (27 semester hours)**

This program prepares students to work as visual thinkers and communicators using a variety of traditional print and emerging electronic media. Students are prepared to work professionally as designers, art directors, creative directors, and illustrators for design firms, corporate design groups, advertising agencies, publishers, television stations, or nonprofit organizations.

ART 252 Printmaking I (3)  
 ART 271 Basic Photography (3)  
 ART 333 Life Drawing (3)  
 ART 370 Graphic Design II (3)  
 ART 376 Typography (3)  
 ART 380 Graphic Design III (3)  
 ART 469 Web Style Design (3)  
 ART 470 Publication Design (3)  
 ART 473 Corporate Identity (3)

**3) Photographic Imaging Concentration (21 semester hours)**

Courses in photographic imaging have been designed to increase an understanding of the most universal language in the world today - that of photographic images. Courses are designed to provide experiences in the fundamentals of photographic imaging which will lead to the achievement of objectives. Traditional photographic techniques as well as experimental, non-traditional and digital imaging techniques are included in the curriculum.

ART 271 Basic Photography (3)  
 ART 371 Photographic Design (3)  
 ART 434 Drawing II (3)  
 ART 475 Color Photography -Transparencies (3)  
 ART 476 Advanced Black and White Photography (3)  
 ART 477 Photographic Illustration and Lighting Techniques (3)  
 ART 472 Photography Studio (3)

**Required Specified GenEd Credits — 8 hours**

*Category 4.a. Arts and Letters*  
 ART 181 History of Art I (4)  
 ART 182 History of Art II (4)

**Elective GenEd Credits — 32 hours**

**University-Wide Elective Credits — 28-34 hours**

**Note:** Three hours of internship (ART 492) is strongly recommended. Student must have a minimum grade point average of 3.0 in Art and a 2.8 GPA for overall University coursework to apply for a Graphic Arts internship.



**VISUAL ARTS, B.A.**  
 Art K-12 Teaching Emphasis

**Degree Requirements — 127 Credits**

The art education emphasis is a K-12 teacher education program preparing students to teach visual arts in elementary, middle and secondary schools. The art education program requires competency in visual art technique and processes, analysis of the place of the arts in our historical heritage and current community and the ability to apply the arts to human growth and learning. Satisfactory completion of requirements leads to K-12 art education licensure.

**Required Major Credits — 26 hours**

*Complete the following four Freshman Foundation Courses First*

\*ART 181 (Under Specified General Education 4.a.)  
 \*ART 182 (Under Specified General Education 4.a.)  
 ART 183 Art I (3)  
 ART 184 Art II (3)

*and complete the following courses:*

ART 171 Computer Based Technology in Visual Arts (2)  
 ART 231 Painting I (3)  
 ART 234 Drawing I (3)  
 ART 252 Printmaking I (3)  
 ART 261 Sculpture I (3)  
 ART 265 Jewelry (3)  
 ART 271 Basic Photography (3)

**Elective Major Credits — 10 hours**

*and select one of the following two courses:*

ART 211 Ceramic Design (3)  
 ART 212 Wheel Throwing (3)

*and select one of the following two courses:*

ART 221 Fiber Design I (3)  
 ART 223 Weaving (3)

and complete one upper division art history course (4)

**Required Concentration Credits — 9 hours**

A minimum of nine semester hours must be completed in one of the following areas of concentration (300 level or above credits): art history, ceramics, computer graphics, drawing, graphic design, painting, photographic imaging, photographic communications, printmaking, or sculpture.

**Required Supporting Credits — 3 hours**

\*\*SPCO 100 Basics of Public Speaking (1)  
 \*\*SPCO 103 Speaking Evaluation (2)

**Required Specified GenEd Credits — 8 hours**

*Category 4.a. Arts and Letters*  
 \*ART 181 History of Art I (4)  
 \*ART 182 History of Art II (4)

**Required PTEP Credits — 39 hours**

See "K-12 Professional Teacher Education Program" on page 225 and

See "Visual Arts, B.A. — PTEP Program" on page 226

*Visual Arts Methods Courses (13 hours)*

ART 248 Art for the Exceptional Child (2)  
 ART 340 Clinical Experience: K-12 Art (2) (Repeatable for a total of 4 hours)  
 ART 440 Foundations of Art Education (2)  
 ART 441 Cultural Studies in the K-12 Curriculum (2)  
 ART 442 Curriculum and Instruction in Art: Studio Strategies (2)  
 ART 443 Computer Technology in Art Education (2)  
 ART 466 Visual Arts Student Teaching Seminar (1)

**Elective GenEd Credits — 32 hours**

**Art K-12 Teaching Emphasis**

This program is listed on the next column or page.

## ENDORSEMENT PROGRAMS



### BILINGUAL BICULTURAL EDUCATION - ENDORSEMENT

Elementary Education, Middle School  
Education and Secondary Education

#### Endorsement Requirements — 18-23 Credits

##### Elementary Education and Middle School Education Endorsement — 18 hours

Courses for a Bilingual Bicultural Education Endorsement will be provided by the Department of Hispanic Studies to Elementary Education and Middle School Education students who wish to be licensed to teach in elementary (K-6) and middle school (5-9) Bilingual Bicultural Education programs. Courses are provided in Spanish language skills, culture of the Southwest and of Hispanics in the United States, methodology, language skill assessment theory and practice. For elementary education, this program can be combined with a major in other Arts and Sciences subjects or realized within our Spanish major. For middle school, this program can be combined with an approved major for middle school. This program is administered by the Department of Hispanic Studies.

##### Required Credits — 18 hours

HISP 395 History and Philosophy of Bilingual Education (3)  
HISP 400 Methods and Assessment for Bilingual Education and ESL (3)  
SPAN 411 Spanish for Bilingual Education I (3)  
SPAN 412 Spanish for Bilingual Education II (3)

*and select one of the following two courses:*

MAS 100 Introduction to Mexican American Studies (3)  
HISP 102 Hispanic Cultures in the United States (3)

*and select one of the following two courses:*

ANT 210 Field Methods in Cultural Anthropology (3)  
SPCO 323 Intercultural Communication (3)

**Note:** Students must have completed the Intermediate Spanish courses and 300-level skill-building courses or equivalent before enrolling in SPAN 411 and SPAN 412.

Students must pass the Hispanic Studies Department's oral proficiency interview in Spanish at the intermediate level before being allowed to enter student teaching. Students who have not completed SPAN 202 or who have not completed, as a minimum, 4 years of high school Spanish or are native speakers with no formal training in Spanish may have to complete additional Spanish courses to meet requirements.

##### Secondary Education Endorsement — 23 Credits

Courses for Bilingual Bicultural Education Endorsement are provided by several program areas across two colleges: Hispanic Studies, English and Speech Communication in the College of Arts and Sciences; and the Department of Elementary Education and the Department of Educational Foundations and Curriculum Studies in the College of Education. The College of Arts and Sciences and the College of Education share a commitment to the TESL endorsement.

Students enrolled in the Secondary Professional Teacher Education Program or who hold teacher licensure at the secondary level (grades 7-12) are eligible to participate in this program.

##### Required Credits — 20 hours

HISP 395 History and Philosophy of Bilingual Education (3)  
TESL 400 Methods and Approaches of ESL/EFL (3)  
HISP 400 Methods and Assessment for Bilingual Education and ESL (3)  
SPAN 411 Spanish for Bilingual Education I (3)  
SPAN 412 Spanish for Bilingual Education II (3)  
EDFE 401 Practicum (2)

*and select one of the following courses:*

MAS 100 Introduction to Mexican American Studies (3)  
HISP 102 Hispanic Cultures in the United States (3)

*and select one of the following two courses:*

SPCO 323 Intercultural Communication (3)  
ANT 210 Field Methods in Cultural Anthropology (3)

##### Required supporting credits — 3 hours

*Literacy and reading courses can include the following:*

SPAN 304 Introduction to Hispanic Literature (3)  
SPAN 350 Masterpieces of Spanish Literature (3)  
SPAN 351 Masterpieces of Latin American Literature (3)  
SPAN 455 Spanish Readings (3)

**Note:** Students must be enrolled in the Secondary Professional Teacher Education Program or hold teacher licensure at the secondary level (grades 7-12) level.

**Prerequisite:** HISP 395 History and Philosophy of Bilingual Education (3) and HISP 400 Methods and Assessment for Bilingual Education and ESL (3) or TESL 400 Methods and Approaches of ESL/EFL (3) must be taken prior to doing Practica.

Students must take the English as a Second Language PLACE assessment to be eligible for licensure in Colorado.



## TEACHING ENGLISH AS A SECOND LANGUAGE - ENDORSEMENT

Elementary Education, Middle School  
Education, and Secondary Education

### Endorsement Requirements — 20-24 Credits

**Note:** Requirement for all programs. HISP 395 History and Philosophy of Bilingual Education (3) and HISP 400 Methods and Assessment for Bilingual Education and ESL (3) or TESL 400 Methods and Approaches of ESL/EFL (3) must be taken prior to doing Practica.

### Elementary Education and Middle School Education Endorsement — 20 Credits

This endorsement program in Teaching English as a Second Language (ESL) provides the student with the study of the structures of English and with the theory and practice related to the teaching of English as a second language. Students successfully completing this program will be recommended for the Linguistically Diverse: English as a Second Language endorsement in Elementary or Middle grades. This program must be completed in conjunction with the Elementary Education or Middle School Licensure program. This program is administered by the Department of Hispanic Studies.

#### Required Credits — 20 hours

ENG 318 Traditional and Modern Grammars (3)  
ENG 419 Language and the History of English (3)  
HISP 395 History and Philosophy of Bilingual Education (3)  
MCS 101 Multiculturalism in the United States: Concepts and Issues (3)  
SPCO 323 Intercultural Communication (3)  
TESL 301 TESL Practicum I (2)  
TESL 400 Methods and Approaches of ESL/EFL (3)

**Note:** Students must complete a second language requirement equivalent to one year of college level studies.

### Secondary Education Endorsement — 23-24 Credits

Courses for Teaching English as a Secondary Language (TESL) Endorsement are provided by several programs across two colleges: Hispanic Studies, English, and Speech Communication in the College of Arts and Sciences; and the Department of Elementary Education and the Department of Educational Foundations and Curriculum Studies share a commitment to the TESL endorsement.

Students enrolled in the Secondary Professional Teacher Education Program or who hold teacher licensure at the secondary level (7-12) are eligible to participate in this program.

#### Required Credits — 20 hours

HISP 395 History and Philosophy of Bilingual Education (3)  
TESL 301 TESL Practicum I (2)  
TESL 400 Methods and Approaches of ESL/EFL (3)  
ENG 318 Traditional and Modern Grammars (3)  
ENG 419 Language and the History of English (3)  
SPCO 323 Intercultural Communication (3)  
MAS 100 Introduction to Mexican American Studies (3)?

#### Required supporting credits in literacy and reading — 3-4 hours

*Literacy and reading courses can include the following:*

EED 341 Methods and Materials for Teaching Language and Composition in the Secondary School (3)  
EED 402 Methods and Materials for Teaching Young Adult Literature in the Secondary Schools (4)

#### Requirements

Students must be enrolled in the Secondary Professional Teacher Education Program or hold teacher licensure at the secondary (grades 7-12) level.

Students must take the English as a Secondary Language PLACE assessment to be eligible for licensure in Colorado.



## MINORS

### AEROSPACE STUDIES (AIR FORCE)

#### Minor Requirements - 20 Credits

See "Reserve Officer Training Corps (ROTC)" on page 72

#### Required General Military Credits — 8 semester hours

AS 101 The Foundations of the United States Air Force I (1)  
 AS 103 General Military Course Leadership Laboratory I (1)  
 AS 102 The foundations of the United States Air Force II (1)  
 AS 104 General Military Course Leadership Laboratory II (1)  
 AS 201 The Evolution of USAF Air and Space Power I (1)  
 AS 203 General Military Course Leadership Laboratory III (1)  
 AS 202 The Evolution of USAF Air and Space Power II (1)  
 AS 204 General Military Course Leadership Laboratory IV (1)

#### Professional Officer Credits — 12 semester hours

AS 301 Air Force Leadership Studies I (3)  
 AS 302 Air Force Leadership Studies II (3)  
 AS 401 National Security Affairs/Preparation for Active Duty I (3)  
 AS 402 National Security Affairs/Preparation for Active Duty II (3)

**Notes:** Students normally complete the four-week Field Training Course with four semesters remaining before graduation and prior to entering the Professional Officer Course (AS 300- and AS 400-level courses). Students can complete the six-week Field Training Course and receive up to eight hours of transfer credit for general military course credits.

Leadership Laboratory is mandatory for all AFROTC cadets (ART 100, ART 200, ART 300 and ART 400-level). Special students (those students taking the course for credit but not pursuing a commission as an Air Force Officer) are not required to attend Leadership Laboratories.



### AFRICANA STUDIES

#### Minor Requirements — 18 Credits

##### Required Credits — 9 hours

AFS 100 Introduction to Africana Studies (3)  
 AFS 104 Survey of Africa (3)  
 AFS 240 Dynamics of Racism (3)

##### Required Elective Credits — 9 hours

AFS 305 Survey of African American Literature (3)  
 AFS 332 Pan-Africanism (3)  
 AFS 340 The Black Family (3)  
 AFS 360 Music and the Black Experience (3)  
 AFS 386 Modern African World (3)  
 AFS 395 Aspects of the African-American Experience (3)  
 AFS 396 African and African American World Views (3)  
 AFS 399 Community Study Project (1-4)  
 AFS 420 Black Urban Politics (3)  
 AFS 422 Directed Studies (1-4)  
 AFS 456 Leadership and the Black Church (3)  
 AFS 490 Seminar in Africana Studies (3)  
 AFS 513 Professional Renewal (1-4)  
 ID 308 Interpersonal Growth Workshop (3)

**Notes:** AFS 395, Aspects of the African American Experience, is a variable subtitle course that students may take more than once under different subtitles.

AFS 399, AFS 422, AFS 508 or AFS 513, when taken by minors, must always be taken for three semester hours.



### ANTHROPOLOGY

#### Minor Requirements — 21 Credits

The anthropology minor introduces students to the sub-field of cultural, physical and archaeological anthropology within the context of an inquiry based curriculum. An anthropology minor complements majors in all of the social sciences, humanities and many of the natural sciences. Anthropology minors will learn skills of scientific inquiry and interpretation of issues relating to the human condition within a holistic, comparative and evolutionary context.

##### Required Anthropology Core Credits — 9 hours

ANT 110 Introduction to Cultural Anthropology (3)

*and select one of the following courses in consultation with advisor:*

ANT 120 World Archaeology (3)  
 ANT 121 Archaeology of Colorado (3)  
 ANT 130 Introduction to Physical Anthropology (3)  
 MCS 101 Multiculturalism in the United States: Concepts and Issues (3)

*and select one of the following courses in consultation with advisor:*

ANT 210 Field Methods in Cultural Anthropology (3)  
 ANT 220 Archaeological Research Methods (3)  
 ANT 230 Anthropometrics (3)  
 ANT 315 Life History and Culture (3)

##### Required Elective Credits — 12 hours

*Select four of the following courses in consultation with advisor:*

ANT 310 World Cultures (3)  
 ANT 312 North American Indians (3)  
 ANT 313 Modernization and Development (3)  
 ANT 314 Sex Roles in a Cross-Cultural Perspective (3)  
 ANT 317 Contemporary Native American Issues (3)  
 ANT 321 Prehistory of the Americas (3)  
 ANT 323 Ancient Civilizations (3)  
 ANT 325 Fieldwork in Archaeology (4)  
 ANT 330 Forensic Anthropology (3)  
 ANT 430 Human Evolutionary Anatomy (3)  
 ANT 470 Seminar in Anthropology (3)  
 ANT 492 Internship (3)  
 ENST 331 Global Population and Human Needs (3)



### ANTHROPOLOGY/MULTI-CULTURAL ANTHROPOLOGY

#### Minor Requirements — 18 Credits

Multicultural Anthropology explores the bases of pluralism and cultural diversity in the U.S. This minor focuses on comparative concepts and issues related to multicultural behavior and group dynamics in contemporary society. The experiences of ethnic groups, social classes and the cultural context of gender and sexuality provide the base for this program.

##### Required content and method courses — 9 hours

MCS 101 Multiculturalism in the United States: Concepts and Issues (3)  
 ANT 110 Introduction to Cultural Anthropology (3)

*and select one of the following courses:*

ANT 210 Field Methods in Cultural Anthropology (3)  
 ANT 315 Life History and Culture (3)

##### Required Elective Courses — 9 semester hours

*Select three courses in consultation with advisor:*

ANT 310 World Cultures (3)  
 ANT 312 North American Indians (3)  
 ANT 313 Modernization and Development (3)  
 ANT 314 Sex Roles in a Cross-Cultural Perspective (3)  
 ANT 317 Contemporary Native American Issues (3)  
 ANT 321 Prehistory of the Americas (3)

ANT 492 Internship (3)  
 AFS 305 Survey of African American Literature (3)  
 AFS 340 The Black Family (3)  
 AFS 360 Music and the Black Experience (3)  
 AFS 396 African and African American World Views (3)  
 MAS 301 Mexican American Politics and Leadership (3)  
 MAS 395 Topics in Gender Issues (3)  
 MAS 337 Chicana/o Literature and Theory (3)  
 HIST 347 United States Women's History to 1877 (3)  
 HIST 348 United States Women's History Since 1877 (3)  
 PSY 467 Psychology of Prejudice (3)  
 WS 350 Feminist Theory (3)

**Note:** Different courses to fulfill this elective requirement may be chosen with the consent of the minor advisor.



## APPLIED STATISTICS

### Minor Requirements — 20-21 Credits

#### Required Credits — 17 hours

Select one of the following courses:

STAT 150 Introduction to Statistical Analysis (3)  
 STAT 250 Statistics for Health Sciences (3)

and complete the following courses:

MATH 131 Calculus I (4)  
 MATH 132 Calculus II (4)  
 MATH 350 Elementary Probability Theory (4)

and select one of the following courses:

STAT 406 Multiple Linear Regression (3)  
 STAT 409 Sampling Techniques (3)

#### Required Elective Credits — 2-3 hours

STAT courses numbered 300 or higher or MATH 351 with approval of advisor.



## ASIAN STUDIES

### Minor Requirements — 23 Credits

This minor is designed to provide students with a broad-based interdisciplinary understanding of Asian culture through a coordinated program of studying language, history, philosophy, art, geography or political science. The program is administered by a faculty coordinator and committee in the Department of English (970.351.2851). All Asian Studies Minors are required to see an advisor to work out a program of study that will meet their specific needs and interests. At least 50% of the courses in the minor must be at the 300- or 400- level, and no more than 9 semester hours of courses with the same prefix may be counted toward the minor.

#### Specified GenEd — 5 hours

CHIN 101 Beginning Chinese (5)

or

JAPN 101 Beginning Japanese (5)

#### Required Credits — 8 hours

MIND 181 Great Traditions of Asia: India, China and Japan (3)

CHIN 102 Elementary Chinese II (5)

or

JAPN 102 Elementary Japanese II (5)

Students who demonstrate first-year-language competency in either Chinese or Japanese may bypass the 102 course and take 15 hours of electives rather than 10.

#### Required Elective Credits — 10 hours

\*ANT 310 World Cultures (3)  
 \*ENG 262 Masterpieces of World Literature (3)  
 GEOG 344 Asia: Special Topics (3)  
 HIST 112 Asian Civilization I: From Prehistory to the 1600s (3)  
 HIST 113 Asian Civilization II: The Modern Transformation (3)  
 HIST 307 History of China to 1840 (3)

HIST 309 Modern Southeast Asia (3)  
 HIST 310 Modern China (3)  
 HIST 311 Modern Japan (3)  
 HIST 313 India (3)  
 JAPN 116 Contemporary Japan (3)  
 JAPN 201 Intermediate Japanese I (3)  
 JAPN 202 Intermediate Japanese II (3)  
 \*PHIL 300 Topics in Philosophy (3)  
 PSCI 319 Pacific Rim Politics (3)  
 Independent Study (1-4)

**Notes:** \*Variable topic courses must be relevant to Asian Studies and approved by the student's minor advisor.

Independent Study projects must be approved by the minor advisor. These projects may be taken in any of the following departments: Anthropology, Art, Business, Economics, English, Foreign Languages, Geography, History, Philosophy, Political Science, Sociology, Mind, Honors.

ANT 310, GEOG 344 and PSCI 410 have prerequisites.

Students must maintain a grade point average of 2.0 or higher in those courses that count toward the minor.



## BIOLOGICAL SCIENCES

### Minor Requirements — 20 Credits

#### Required Credits — 8 hours

BIO 110 Principles of Biology (4)  
 BIO 111 Survey of Organismal Biology (4)

#### Elective Minor Credits — 12 hours (minimum)

Select one of the following courses:

BIO 210 Cell Biology (3)  
 BIO 220 Genetics (4)

Select from the following courses — 8-9 semester hours

BIO or BCHM courses at 300 level or higher (Consult faculty advisor on selection to help match career goals.)



## BUSINESS ADMINISTRATION

### Minor Requirements — 40-41 Credits

The Business Administration minor is designed for students who have a major in another school or college but wish to pursue a collateral area in Business Administration.

Completion of the minor provides broad exposure to the functional areas in Business Administration. These include accounting, computer information systems, finance, management and marketing. The minor is not open to students who major in Business Administration.

The Business Administration minor will range from 40-41 semester hours depending on the student's selections in General Education.

#### Required Credits — 30-31 hours

BAAC 220 Principles of Accounting I (3)  
 BAAC 221 Principles of Accounting II (3)  
 BACS 291 Business Statistics I (3)

or

STAT 251 Statistics for Business and Economics (3)  
 BACS 300 Information Systems (3)  
 BACS 305 Intermediate Business Statistics (3)  
 BAFN 231 Legal Environment of Business (3)  
 BAFN 370 Business Finance (3)  
 BAMG 350 Management of Organizations (3)  
 BANK 360 Marketing (3)

and select one of the following two courses:

MATH 131 Calculus I (4)  
 MATH 176 Topics in Calculus (3)  
 (MATH 176 is recommended)

#### GenEd Credits — 10 hours

Students are expected to complete the prerequisites for all courses in the minor. The prerequisites are also part of the General Education program and can be included in General

Education preparation. The prerequisites are ECON 105 (BAMK 360), ECON 103 and ECON 105 (BAFN 370) and MATH 124 (MATH 176 or MATH 131).

**Notes:** Students may transfer a maximum of 12 semester hours toward the minor from other institutions. To graduate with a Business minor, a student must attain a 2.0 or better cumulative Business GPA or attain a grade of "C" or better in every course required for the minor.

See "Course Prerequisites" on page 18

See "Computing Proficiency" on page 18

Only students who have a declared major in Business Administration may count more than 30 semester credits in Business Administration (courses with a BA\_\_ prefix) toward their graduation. For more information, please contact the MCB Advising Center, Kepner 1055 970.351.1233.



## CHEMISTRY/LIBERAL ARTS

### Minor Requirements — 21 Credits

#### Required Credits — 8-10 hours

Select one of the following groups:

- CHEM 111 Principles of Chemistry I (5)
- CHEM 112 Principles of Chemistry II (5)

or

- CHEM 115 General Chemistry II (4)
- CHEM 114 General Chemistry I (4)

#### Required Elective Credits — 11-13 hours

- CHEM 320 Theory and Use of Analytical Instruments (1)
- CHEM 331 Organic Chemistry I (5)
- CHEM 332 Organic Chemistry II (5)
- CHEM 360 Environmental Chemistry (2)
- CHEM 441 Inorganic Chemistry I (2)
- CHEM 442 Inorganic Chemistry II (2)
- CHEM 481 General Biochemistry I (3)
- CHEM 483 Experimental Biochemistry I (1)

**Notes:** At least half the credit hours for the minor must be at the 300-level or above.

Students earning a minor in chemistry must earn a grade of "C" or better in all courses having a CHEM prefix which count toward the minor.

Neither CHEM 422 nor CHEM 499 (research and seminar) may be used to satisfy the requirements for the Chemistry Minor.



## CHEMISTRY/TEACHING

### Minor Requirements — 21 Credits

#### Required Credits — 10-12 hours

CHED 495 Seminar in Teaching Chemistry (2)

and select one of the following groups:

- CHEM 111 Principles of Chemistry I (5)
- CHEM 112 Principles of Chemistry II (5)

or

- CHEM 115 General Chemistry II (4)
- CHEM 114 General Chemistry I (4)

#### Required Elective Credits — 9-11 hours

- CHEM 320 Theory and Use of Analytical Instruments (1)
- CHEM 321 Chemical Analysis (4)
- CHEM 331 Organic Chemistry I (5)
- CHEM 332 Organic Chemistry II (5)
- CHEM 360 Environmental Chemistry (2)
- CHEM 441 Inorganic Chemistry I (2)
- CHEM 442 Inorganic Chemistry II (2)
- CHEM 481 General Biochemistry I (3)
- CHEM 483 Experimental Biochemistry I (1)

**Notes:** Students must take CHED 495 or a substitute course in another science discipline with approval of the advisor. If a substitute course for CHED 495 is approved, an additional 2

semester hours of chemistry electives must be taken. At least half the credit hours for the minor must be at the 300-level or above.

Students earning a minor in chemistry must earn a grade of "C" or better in all courses having a CHEM prefix which count toward the minor.

Neither CHEM 422 nor CHEM 499 (research and seminar) may be used to satisfy the requirements for the Chemistry Minor.

State licensure regulations require a minimum of 24 semester hours distributed in appropriate science subject areas to teach any secondary science if someone is licensed in another subject area. Hours required in this minor will apply toward this requirement. See advisor for other courses to meet requirement. This minor does not lead to teacher licensure.



## COMMUNICATION DISORDERS

### Minor Requirements — 19 Credits

#### Required Credits — 19 semester hours

- CMD5 160 Introduction to Human Communication and Its Disorders (3)
- CMD5 260 Introduction to Phonetics (2)
- CMD5 265 Fundamentals of Physiological and Biological Acoustics (2)
- CMD5 266 Normal Speech and Language Development (3)
- CMD5 267 Anatomy and Physiology of the Speech and Hearing Mechanism (3)
- CMD5 365 Language Disorders in Children (3)
- CMD5 370 Basic Audiology (3)

**Notes:** The purpose of this minor is to acquaint interested students with various aspects of disorders of human communication. The minor includes coursework in the diagnosis and management of disorders of hearing, speech and language.

The minor in Communication Disorders does not lead to licensure or certification that would permit practice in either Speech-Language Pathology or Audiology.



## COMMUNITY HEALTH EDUCATION

### Minor Requirements — 24 Credits

#### Required Credits — 18 semester hours

- CH 205 Issues in Health (3)
- CH 209 Foundations of Health Promotion/Health Education (3)
- CH 299 Community Health Systems (3)
- CH 330 Health Promotion/Health Education Techniques (3)
- CH 342 Modern Concepts of Health and Disease (3)
- CH 410 Introduction to Program Planning and Evaluation (3)

#### Required Elective Credits — 6 hours

Elective units selected with consent of advisor.



## COMPUTER INFORMATION SYSTEMS

### Minor Requirements — 18 Credits

The Computer Information Systems minor is designed for students who wish to pursue collateral work in the computing, technology and communications/networking areas. Completion of the minor prepares a student to successfully employ technology and integrate information systems into his or her career activities. The CIS minor is attractive to students majoring in other areas of Business Administration as well as to majors from other schools and colleges. It complements their work in these other areas. The program is not designed to prepare individuals to become programmers or systems

personnel, but does provide a broad exposure to the area of corporate information systems.

#### Required Credits — 9 hours

BACS 288 Object Oriented Systems I (3)  
BACS 287 Graphical Interface Programming (3)  
BACS 485 Database Management Systems (3)

#### Required Elective Credits — 9 hours

BACS 380 Networking and Data Communications Systems (3)  
BACS 381 Object Oriented Systems II (3)  
BACS 392 Systems Platforms and Network Development (3)  
BACS 482 Management Support Systems (3)  
BACS 487 Systems Analysis and Design (3)  
BACS 488 Senior CIS Project (3)  
BACS 495 Special Topics in CIS (1-3)

**Notes:** Business majors who seek admission to a Computer Information Systems minor must obtain written approval from the College of Business Advising Coordinator.

See "Course Prerequisites" on page 18

See "Computing Proficiency" on page 18

BACS 495, Special Topics in CIS, may be used to fulfill minor requirements. It may not exceed 3 semester hours.

To graduate with a Computer Information Systems minor, a student must attain at least a "C" grade in each course required for the minor.

Students may transfer a maximum of 9 semester hours toward the minor from other institutions.

Only students who have a declared major in Business Administration may count more than 30 semester credits in Business Administration (courses with a BA\_\_ prefix) toward their graduation. For more information, please contact the MCB Advising Center, Kepner 1055 970.351.1233.



## COMPUTER SCIENCE

### Minor Requirements — 21 Credits

#### Required Credits — 15 hours

CS 101 Introduction to Computer Science (3)  
CS 102 Structured Programming (3)  
CS 200 Object-Oriented Analysis, Design, and Programming (3)  
CS 222 Computer Architecture/Organization (3)  
CS 301 Algorithms and Data Structures (3)

#### Required Elective Credits — 6 hours

Two upper-division CS courses (6)



## CRIMINAL JUSTICE

### Minor Requirements — 18-19 Credits

#### Required Credits — 9 hours

CRJ 110 Introduction to Criminal Justice (3)  
CRJ 220 Policing Systems (3)  
CRJ 230 Judicial Process (3)

#### Elective Credits — 9-10 hours

*select at least three courses from the following:*  
CRJ 370 Justice Professionalism and Ethics (3)  
CRJ 380 Justice Research and Statistics (3)  
CRJ 390 The Criminal Justice Profession (1)  
CRJ 395 Topics in Criminal Justice (1-3)  
CRJ 410 Comparative Justice Systems (3)  
CRJ 492 Internship (3)  
SOC 347 Sociology of Corrections (3)

**Note:** A maximum of 9 credit hours may be transferred for the minor from other institutions. At least 9 hours of the minor must be 300-400-level courses. No more than 3 hours of CRJ 395 may be counted for this minor. No more than 3 hours of CRJ 492 may be counted for this minor.



## CULTURAL STUDIES

### Minor Requirements — 18 Credits

Cultural studies is an interdisciplinary field in which the traditional concerns of the humanities and social sciences intersect. Cultural studies' understanding of "cultural" includes objects and practices (popular or mass culture, for example) not normally associated with the definition of culture as art or "taste." Cultural studies is a method which interprets cultural productions (for example: film, fashion, food, popular music, architecture and cityscapes) as if they were texts. The minor will familiarize students with the critical traditions underlying the cultural studies approach and its roots in such disciplines and schools as anthropology and folklore, feminism and post-structuralism, the Frankfurt and Birmingham schools. Students will also learn to employ a critical interpretive vocabulary in analyses of cultural productions.

#### Required Core Credits — 9 hours

ENG 238 Introduction to Folklore (3)  
ENG 250 Introduction to Cultural Studies (3)  
ENG 495 Advanced Cultural Studies (3)

#### Required Elective Credits — 9 hours

Elective credits may be chosen from any category, with the advance approval of the minor's advisor. The student will be expected to work closely with the minor advisor to choose a concentration area and sequence of courses tailored to her particular interests. The concentration area should be chosen preferably after the student has completed ENG 238 and ENG 250, and should focus on a particular culture, period, topic, or theme. Courses taken in the concentration area must bear at least two prefixes. Two of these courses must be taken at the 300-400 level.



## DANCE

### Minor Requirements — 23 Credits

#### Required Credits — 23 hours

DNCE 180 Ballet II (3)  
DNCE 181 Jazz Dance II (3)  
DNCE 182 Modern Dance II (3)  
DNCE 295 Dance Theory (1)  
DNCE 296 Choreography and Improvisation I (3)  
DNCE 397 Choreography and Improvisation II (3)  
DNCE 453 Teaching Methods, Rhythmic Analysis and Accompaniment (3)  
DNCE 454 Dance History and Philosophy (2)  
DNCE 456 Choreography and Improvisation III (2)  
DNCE 459 Dance Production in High School and College (2)  
SES 220 Anatomical Kinesiology (3)

**Notes:** The dance minor focuses on the development of skills and teaching strategies that will enhance the student's ability to teach or work with dance in a variety of settings. The Dance minor can be selected by students in conjunction with most other majors at the University. Approval by the major department is required for this minor.

If a student wishes to teach in the public schools, licensure must be obtained through the appropriate major. Suggested combinations of programs of study for public school teacher licensure are a Dance Minor with a Theatre Arts Education major or a Dance Minor plus a Physical Education major. At present there is no public school licensure for dance in Colorado's public schools.

A grade of "B" or better must be achieved in a technique class in order to progress to the next level.



## EARLY CHILDHOOD

### Minor Requirements — 18 Credits

#### Required Credits — 18 hours

- EDEC 336 Child Within the Family (3)
- EDEC 333 Development and Guidance of Young Children (3)
- EDEC 439 Parent/Child/Teacher Relationships (3)
- EDEC 460 Early Childhood Curriculum I (3)
- EDEC 462 Classroom Management in Early Childhood (3)

*Child Care Center Director*

- EDEC 231 Development of Infants and Toddlers (3)
- EDEC 334 Preschool/Kindergarten Curriculum and Methods (3)
- EDEC 437 Administration of Programs for Young Children (3)
- FND 250 Principles of Nutrition (3)

**Notes:** Students seeking designation as Director Qualified for Child Care Centers as determined by the State Department of Social Services should consult with an Early Childhood advisor and should be prepared to complete the above courses in addition to the minor.

Students should be aware that some school districts require coursework in Early Childhood for their teachers assigned to Kindergarten and Primary levels. Courses in the Early Childhood minor program are recommended for that purpose.

Students may elect any of the courses in Early Childhood to enhance their elementary program.



## EARTH SCIENCES

### Minor Requirements — 20 Credits

#### Required Elective Credits — 20 hours

Courses with AST, ESCI, GEOL, MET and OCN prefixes may be used for the minor and must be selected in consultation with the minor advisor. No more than 8 semester hours of courses numbered between 100 and 199 may be counted for the minor.



## ECONOMICS

### Minor Requirements — 18 Credits

#### Required Credits — 6 hours

- ECON 103 Introduction to Economics: Macroeconomics (3)
- ECON 105 Introduction to Economics: Microeconomics (3)

#### Required Elective Credits — 12 hours

##### *Group A - Macroeconomics*

- ECON 301 Money and Banking (3)
- ECON 303 Intermediate Macroeconomics (3)
- ECON 305 Intermediate Microeconomics (3)
- ECON 320 Comparative Economic Systems (3)
- ECON 341 Public Finance (3)
- ECON 344 International Economics (3)
- ECON 350 Application of Mathematics to Economics (3)
- ECON 360 Economics of Growth and Development (3)
- ECON 362 Economic History of the United States (3)
- ECON 422 Directed Study (1-4)
- ECON 452 Econometrics (3)
- ECON 470 History of Economic Thought (3)
- MIND 286 Value Issues in Political Economy (3)

##### *Group B - Microeconomics*

- ECON 245 Urban Planning Economics (3)
- ECON 301 Money and Banking (3)
- ECON 303 Intermediate Macroeconomics (3)
- ECON 304 Economics of Gender (3)
- ECON 305 Intermediate Microeconomics (3)
- ECON 315 Labor/Management Economics (3)
- ECON 341 Public Finance (3)
- ECON 350 Application of Mathematics to Economics (3)

- ECON 356 Water Resource Economics (3)
- ECON 362 Economic History of the United States (3)
- ECON 400 Managerial Economics (3)
- ECON 422 Directed Study (1-4)
- ECON 452 Econometrics (3)
- ECON 470 History of Economic Thought (3)
- ENST 335 Environmental and Resource Economics (3)

**Notes:** Students must select the required elective credits from either Group A or Group B. Students selecting Group A must take ECON 303. Students selecting Group B must take ECON 305.

Students who desire a strong theoretical background are encouraged to take both ECON 303 and ECON 305. At least 9 credit hours must be taken at the 300-400 level.



## ENGLISH

### Minor Requirements — 18 Credits

#### Required Credits — 6 hours

- ENG 131 Introduction to Literature (3)
- ENG 211 Survey of American Literature (3)

#### Required Elective Credits — 12 hours

One 300 OR 400 level elective (3 hours)

*and select one of the following two courses:*

- ENG 213 Survey of British Literature I (3)
- ENG 214 British Literature II (3)

*and select one of the following two courses:*

- ENG 303 The Essay (3)
- ENG 319 Advanced Expository Techniques (3)

*and select one of the following two courses:*

- ENG 318 Traditional and Modern Grammars (3)
- ENG 419 Language and the History of English (3)

**Note:** Qualified students may be exempted by examination from ENG 131.



## ENVIRONMENTAL STUDIES

### Minor Requirements — 22 Credits

The environmental studies minor enhances a student's ability to help find solutions to the growing environmental problems facing humanity caused by increasing human demands on the finite physical resources of the planet. This focus has two branches: 1) increasing the knowledge base about the natural resource and human components of environmental issues, which includes population growth; pollution of land, air and water; urban and rural land use; food production possibilities; existing and alternative energy technologies; wilderness preservation; and species extinction; 2) developing an understanding of the methods and paradigms of various disciplines from the natural sciences, the social sciences and the humanities and their potential contributions and limitations in the context of environmental problems. Thus, students develop insights and problem-solving skills not as readily available within single disciplines.

The minor is useful for students majoring in disciplines that contribute to the solution of environmental problems. Students acquire a broad perspective of the nature of environmental problems and their possible solutions. The minor facilitates cooperative, interdisciplinary problem-solving in subsequent employment or graduate study.

Employment opportunities are diverse and are shaped by the student's major. Environmental jobs can be laboratory, people, writing or outdoor oriented. Typical employers include resource development companies, environmental consulting firms, government agencies, educational facilities (public and private, traditional and innovative) and environmental groups. There are also self-employment opportunities.

#### Required Environmental Studies Credits — 6 hours

- ENST 100 Introduction to Environmental Studies (3)

**ENST 405 Senior Seminar (3)****Required Elective Credits — 16 hours***Social Processes (select two of the following courses):*

- ENST 205 Environment, Politics and Law (3)
- ENST 215 Human Behavior and Environment (3)
- ENST 331 Global Population and Human Needs (3)
- ENST 335 Environmental and Resource Economics (3)
- GEOG 315 Resource Management (3)

*Physical Resource Science (select two of the following courses):*

- ENST 225 Energy and the Environment (3)
- ENST 235 Chemistry and the Environment (2)
- ENST 255 Atmospheric Environment of Humans (2)
- ENST 265 Conservation of Natural Resources (2)
- ENST 355 Introduction to Environmental Health (3)

*Sensory Perception (select one of the following two courses):*

- ENST 375 Literature and the Environment (3)
- ENST 385 Art and the Environment (2)

*Special Problems*

- ENST 380 Sustainable Living (3)
- ENST 422 Directed Studies (1-3)
- ENST 492 Internship in Environmental Studies (4-15)

Take courses appropriate to the specific minor

**Notes:** At least 8 of the 16 elective hours must be taken at or above the 300-level.

At least 15 hours of the minor must be taken as formal coursework and should be completed before enrollment in the internship (if elected) and the senior seminar.

The type of internship or particular elective courses are determined jointly by the coordinator and student in the light of the student's goals.

**FILM STUDIES****Minor Requirements — 18 Credits**

This minor has been designed for students who wish a coherent study of film as an art form. This interdisciplinary program will allow students to proceed beyond an introduction to film to specialized courses which consider cinema from distinct aesthetic, cultural, historical, and theoretical perspectives. Introductory and variable topics courses will allow students to consider both western and non-Western cinema, however this minor places more emphasis on better understanding American film within the context of western aesthetic and narrative traditions and theories. A capstone course, FL 400, which may be team taught, encourages students to use their interpretational research skills in order to forge connections between differing film traditions and understand contemporary cinema in a more global context.

**Required Credits — 9 hours**

- HUM 120 Introduction to Film (3)
- HUM 320 Topics in Film (3)
- FL 400 Traditions in International Film (3)

**Required Elective Credits — 9 hours**

- ART 389 Twentieth Century Art (4)
- \*AFS 395 Aspects of the African-American Experience (3)
- \*HON 200 Honors Connections Seminar II (2)
- \*HIST 430 Topics in American History (3)
- \*HUM 320 Topics in Film (3)
- \*\*JMC 390 Impact of Mass Communications on Society (3)
- \*JMC 408 Special Topics (3)
- \*PHIL 300 Topics in Philosophy (3)

**Notes:** \*These variable topic courses may be taken for credit toward the film studies minor only when they are approved for credit by the student's Film Studies Minor advisor. In addition to the requirement of 3 hours of HUM 320, this course may be taken for an additional 6 hours of elective credit if topic varies.

\*\* This course has a prerequisite. Consult course description in the Catalog.

Students must maintain a grade point average of 2.0 or higher in those courses that count toward the minor.

At least 50% of the courses in the minor must be upper division courses, i.e. 300 or 400 level courses.

No more than 12 semester hours of courses with the same prefix may be counted toward the minor.

For further information and an updated list of offerings, contact the Film Studies Minor director in the English Department, 970.351.2971.

**FRENCH****Minor Requirements — 25 Credits****Required Credits — 23 hours**

- FR 201 Intermediate French I (3)
- FR 251 Intermediate French Lab I (1)
- FR 202 Intermediate French II (3)
- FR 252 Intermediate French Lab II (1)
- FR 301 France: Its People and Culture (3)
- FR 302 Current Events in France (3)
- FR 311 French Civilization and Literature Survey I (3)
- FR 312 French Civilization and Literature Survey II (3)
- FR 407 French for Oral Proficiency (3)

**Required Elective Credits — 2 hours (minimum)**

- \*FR 251 Intermediate French Lab I (1)
- \*FR 252 Intermediate French Lab II (1)
- FR 401 Intensive French (4)
- FR 402 Contemporary Life in France (3)
- FR 403 France of the Ancient Regime (4)
- FR 404 Modern France (4)
- FR 411 France Then and Now (2)
- FR 412 French Politics and Society (2)
- FR 413 The Francophone World (2)
- FR 414 Language and Society (2)
- FR 450 Readings in French Literature (3)
- FR 475 Research Seminar: French Texts and Contexts (3)

**Notes:** \* No more than one credit hour of French lab courses (either FR 251 or FR 252) may count as elective credit.

\*\* This variable topic course may be taken for credit toward the French minor only when approved for credit by the student's faculty advisor in French.

Courses with FR prefix are conducted in French unless otherwise noted in course descriptions.

All work to be counted toward the French minor, liberal arts emphasis, must be beyond the first year level.

Students are encouraged to enrich their French language-related cultural awareness through regular participation in program-sponsored activities. Consult department advisor.

Students must maintain a minimum grade point average of 2.5 in those courses that count toward the minor and that are taken at UNC.

Advising with a faculty advisor for the French minor is suggested before registration.

**GEOGRAPHY****Minor Requirements — 18 Credits****Required Credits — 10 hours**

- GEOG 200 Human Geography (3)
- GEOG 232 Physical Geography (4)
- GEOG 274 Maps and Data Analysis (3)

**Required Elective Credits — 8 hours**

Elective Credits will be selected with the approval of a faculty advisor. At least 6 hours must be from Geography courses at the 300 or 400 level.



## GERMAN

### Minor Requirements — 25 Credits

#### Required Credits — 23 hours

GER 201 Intermediate German I (3)  
 GER 251 Intermediate German Lab I (1)  
 GER 202 Intermediate German II (3)  
 GER 252 Intermediate German Lab II (1)  
 GER 301 Germany and the Germans I (3)  
 GER 302 Germany and the Germans II (3)  
 GER 311 German Civilization and Literature Survey I (3)  
 GER 312 German Civilization and Literature Survey II (3)  
 GER 407 German for Oral Proficiency (3)

#### Required Elective Credits — 2 hours (minimum)

\*GER 251 Intermediate German Lab I (1)  
 \*GER 252 Intermediate German Lab II (1)  
 \*\*FL 395 Special Topics (1-4 credits)  
 GER 411 Germany Then and Now (2)  
 GER 412 Politics and Society (2)  
 GER 413 German Cultural Identity (2)  
 GER 414 Language, Society and the Profession (2)  
 GER 450 Literature, Self and Society (3)

**Notes:** \* No more than one credit hour of German lab courses (either GER 251 or GER 252) may count as elective credit.

\*\* This variable topic course may be taken for credit toward the German minor when approved for credit by the student's faculty advisor in German.

Courses with GER prefix are conducted in German unless otherwise noted in course descriptions.

All work to be counted toward the German minor, liberal arts emphasis, must be beyond the first year level.

Students are encouraged to enrich their German language-related cultural awareness through regular participation in program-sponsored activities. Consult department advisor.

Students must maintain a minimum grade point average of 2.5 in those courses that count toward the minor and that are taken at UNC.

Advising with a faculty advisor for the German minor is suggested before registration.



## GERONTOLOGY

### Degree Requirements — 24 Credits

#### Required Credits — 18 hours

GERO 205 Introduction to Gerontology (3)  
 GERO 460 Community Resources for the Elderly (4)  
 GERO 465 Management Concepts and Resource Development in Health and Human Services (3)  
 HRS 394 Practicum in Human Services (2)  
 PSY 331 Maturity and Aging (3)  
 HHS 415 Bio-Physical Changes in Aging (3)

#### Required Elective Credits — 6 hours (minimum)

CH 236 Health and Life-styles Among the Elderly (3)  
 CMDS 470 Communication Disorders of the Aging (2)  
 FND 252 Nutrition in the Life Cycle (3)  
 GERO 495 Special Topics in Gerontology (1-4)  
 REC 251 Leisure, Recreation and the Older Adult (3)

The minor in Gerontology is designed to provide students who are majoring in other areas a broad overview of the aging process.



## HISTORY

### Minor Requirements — 18 Credits

#### Required Elective Credits — 18 hours

Note that a minimum of 9 semester hours must be taken at the 200 level or higher.

**Notes:** History minors must obtain a grade of "C" or better in all history courses taken at UNC. Minors receiving a grade of "D" or lower in a history course must retake the course, or an equivalent approved by the academic advisor, and receive a grade of "C" or higher to have the course counted toward the minor.

It is recommended that at least one course should be drawn from the fields of Latin American, African or Asian history.

Students are encouraged to select electives with the advice and approval from their advisors.



## LEGAL STUDIES

### Minor Requirements — 21 Credits

#### Required Credits — 6 hours

PHIL 220 The Nature of Legal Reasoning (3)  
 ID 420 Legal Research and Writing (3)

#### Required Elective Credits — 15 hours

*Group I — Basic (select 6 credits from the following):*

BAFN 231 Legal Environment of Business (3)  
 BAFN 332 Business Administration and the Law (3)  
 ENST 205 Environment, Politics and Law (3)  
 HIST 340 American Constitutional History to 1870 (3)  
 HIST 341 American Constitutional History from 1870 (3)  
 JMC 497 Mass Communications Law (3)  
 PHIL 300 Topics in Philosophy (3) (Philosophical Issues in Employment Discrimination Law)  
 PSCI 105 Fundamentals of Politics (3)  
 PSCI 306 Constitutional Law (3)  
 PSCI 328 International Law and Organizations (3)  
 PSY 365 Psychology and the Law (3)  
 SOC 141 Introduction to Criminal Justice (3)  
 SOC 444 Sociology of Criminal Law (3)  
 SPCO 341 Courtroom Communication (3)

*Group II — Policy (select 6 credits from the following):*

BAMG 452 Business, Government and Society (3)  
 ECON 402 Contemporary Economic Problems (3)  
 HIST 262 American Cultural History (3)  
 MIND 286 Value Issues in Political Economy (3)  
 PHIL 305 Ethics in Theory and Practice (3)  
 PHIL 350 Ethics (3)  
 PHIL 355 Social and Political Philosophy (3)  
 PSCI 331 Political Philosophy I (3)  
 PSCI 332 Political Philosophy II (3)  
 PSCI 335 American Political Philosophy (3)  
 SOC 346 Criminology (3)  
 SOC 347 Sociology of Corrections (3)  
 SOC 445 Comparative Justice Systems (3)

*Group III - Skills (select 3 credits from the following):*

ECON 304 Economics of Gender (3)  
 ECON 305 Intermediate Microeconomics (3)  
 ENG 319 Advanced Expository Techniques (3)  
 ENST 100 Introduction to Environmental Studies (3)  
 PSCI 392 Political Science Internship (3) \*  
 PSY 265 Social Psychology (3)  
 PSY 366 Industrial Psychology (3)  
 SPCO 211 Argumentation and Debate (3)  
 SPCO 343 Persuasion (3)

\*Any other internship must be approved by your legal studies advisor. Students are strongly encouraged to elect an internship as part of a minor, and internships in community service are especially encouraged.

**Notes:** Students must complete 50 percent of their coursework at the 300 and 400 level. No more than 6 hours may be taken in one department.

A grade of "C" is required for a course to receive credit in the minor.

Some advanced courses have prerequisites. Please be certain that you meet the department's prerequisites if you plan to take such a course or you may check with the instructor to see if the prerequisite(s) may be waived, if you are capable of doing the work for the course.

Students are advised that the Required Courses are not offered every semester. Please contact the Legal Studies advisor at 351-2572 as soon as you declare the minor to plan your schedule so that you can graduate on time.



## MATHEMATICS/LIBERAL ARTS

### Minor Requirements — 20 Credits

#### Required Credits — 8 hours

MATH 131 Calculus I (4)  
MATH 132 Calculus II (4)

#### Required Elective Credits — 12 hours

MATH 221 Elementary Linear Algebra (3)  
MATH 228 Discrete Mathematics (3)  
MATH 233 Calculus III (4)  
MATH 321 Introduction to Abstract Algebra I (3)  
MATH 335 Differential Equations I (3)  
MATH 336 Differential Equations II (3)  
MATH 341 Introduction to Modern Geometry I (3)  
MATH 350 Elementary Probability Theory (4)  
MATH 351 Elementary Statistics Theory (3)  
MATH 375 Elementary Numerical Analysis (3)  
MATH 431 Basic Analysis I (4)  
MATH 432 Basic Analysis II (4)  
MATH 464 Introduction to History of Mathematics (3)

**Note:** At least six of the twelve hours of electives must be at the 300-level or above.



## MATHEMATICS/SECONDARY MATHEMATICS TEACHING, GRADES 7-12

### Minor Requirements — 25 Credits

#### Required Credits — 25 hours

EDLS 363 Clinical Experience: Secondary (2)  
MATH 131 Calculus I (4)  
MATH 132 Calculus II (4)  
MATH 221 Elementary Linear Algebra (3)  
MATH 228 Discrete Mathematics (3)  
MATH 321 Introduction to Abstract Algebra I (3)  
MATH 341 Introduction to Modern Geometry I (3)  
MED 441 Methods of Teaching Mathematics (3)

**Note:** Students must meet all requirements for Professional Teacher Education as specified in this Catalog. Does not lead to teacher licensure.



## MEDIA STUDIES

### Minor Requirements — 18 Credits

#### Required Credits — 9 hours

JMC 100 Introduction to Journalism and Mass Communications (3)  
JMC 390 Impact of Mass Communications on Society (3)  
JMC 397 History of Mass Communication (3)

#### Required Elective Credits — 9 hours

Select nine hours of JMC prefix courses, or six hours of JMC prefix courses and HUM 120. Elective credits must be chosen with consent of the student's advisor.

**Note:** Students must complete 50 percent of their coursework at the 300 and 400 level.



## MEXICAN/AMERICAN STUDIES

### Minor Requirements — 18 Credits

#### Required Credits — 12 hours

MAS 100 Introduction to Mexican American Studies (3)  
MAS 110 Contemporary Chicano Literature (3)  
MAS 225 Latina/Latino History (3)

or

HIST 225 Latina/Latino History (3)  
MAS 301 Mexican American Politics and Leadership (3)

#### Required Elective Credits — 6 hours

HISP 395 History and Philosophy of Bilingual Education (3)  
MAS 275 Education of Mexican American Students (3)  
MAS 280 Topics in Chicana/Chicano Art and Culture (3)  
MAS 395 Topics in Gender Issues (3)  
MAS 337 Chicana/o Literature and Theory (3)

or

ENG 337 Chicana/o Literature and Theory (3)  
MAS 346 Chicana/o Theory (3)

or

ENG 346 Chicana/o Theory (3)

## MILITARY SCIENCE (ARMY)

### Minor Requirements - 22 Credits

See "Reserve Officer Training Corps (ROTC)" on page 72

#### General Military Credits — 8 semester hours

MS 111 Introduction to Military Skills I (2)  
MS 121 Introduction to Military Skills II (2)  
MS 211 Contemporary Management Principles (2)

and select one of the following courses:

MS 221 Dynamics of Military Leadership (2)  
MS 287 Army ROTC Basic Camp (2-8)  
MS 387 Practicum in Leadership and Military Operations (8)

#### Required Credits — 14 semester hours

MS 311 Leadership Assessment (3)  
MS 321 Applied Leadership (3)  
MS 401 Staff Functions and Leadership Principles (2)  
MS 421 Role and Ethics of the Officer (3)  
HIST 250 United States Military History, 1775-Present (3)

Students taking the five-week Basic Camp (MS 287) will meet commissioning requirements for MS 111, MS 121, MS 211, and MS 221. The number of MS 100 and MS 200 level courses taken will determine the amount of semester hours awarded for MS 287. MS 287 is normally taken between a student's sophomore and junior years. Attendance at the six-week Army ROTC Advanced Camp (MS 387) is normally between a student's junior and senior years.



## MUSIC/LIBERAL ARTS

### Minor Requirements — 21 Credits

#### Required Credits — 12 hours

MUS 101 Sight-Singing and Theory I (4)  
MUS 102 Sight-Singing and Theory II (4)  
MUS 141 Music Literature and Styles I (2)  
MUS 142 Music Literature and Styles II (2)

#### Required Elective Credits — 9 hours

The student may select courses in music history, theory, literature, performance study or ensemble participation to complete the 21 required hours. A maximum of 4 hours of performance and 2 hours of ensemble participation may apply toward meeting the elective requirements.





## NUTRITION

### Minor Requirements — 20 Credits

#### Required Credits — 14 hours

- FND 250 Principles of Nutrition (3)  
 FND 252 Nutrition in the Life Cycle (3)  
 FND 370 Nutrition Education and Application Strategies (3)  
*and select one of the following two courses:*  
 CHEM 108 Fundamentals of Chemistry I (5)  
 CHEM 111 Principles of Chemistry I (5)

#### Elective Credits — 6 hours

- FND 420 Maternal and Child Nutrition (3)  
 FND 430 Nutrition Assessment and Intervention (3)  
 FND 451 Advanced Nutrition (3)  
 FND 452 Community Nutrition (3)  
 FND 455 Nutrition for Fitness and Athletic Performance (3)



## PHILOSOPHY

### Minor Requirements — 18 Credits

#### Required Credits — 9 hours

- PHIL 260 History of Ancient Philosophy (3)  
 PHIL 261 History of Modern Philosophy (3)  
 PHIL 350 Ethics (3)

#### Required Elective Credits — 9 hours

- PHIL 100 Introduction to Philosophy (3)  
 PHIL 101 Critical Thinking and Writing (3)  
 PHIL 105 Philosophical Perspectives on Current Issues (3)  
 PHIL 110 Figures in Western Philosophy (3)  
 PHIL 220 The Nature of Legal Reasoning (3)  
 PHIL 240 Formal Logic I (3)  
 PHIL 241 Formal Logic II (3)  
 PHIL 300 Topics in Philosophy (3)  
 PHIL 305 Ethics in Theory and Practice (3)  
 PHIL 355 Social and Political Philosophy (3)  
 PHIL 370 Philosophy of Religion (3)  
 PHIL 385 Epistemology (3)  
 PHIL 390 Metaphysics (3)  
 PHIL 422 Directed Study (1-3)  
 PHIL 495 Advanced Seminar (3)  
 PHIL 497 Student Internship (1-3)

**Notes:** No more than 3 credit hours of PHIL 497 may be counted toward the minor.

Elective Credits should be chosen in consultation with minor advisor. At least 50 percent of the coursework must be completed at the 300-400 level.



## PHYSICS

### Minor Requirements — 32-34 Credits

#### Required Credits — 13 hours

- PHYS 240 General Physics I (5)  
 PHYS 241 General Physics II (5)  
 PHYS 321 Elementary Modern Physics (3)

#### Required Supporting Credits — 12 hours

- MATH 131 Calculus I (4)  
 MATH 132 Calculus II (4)  
 MATH 233 Calculus III (4)

**Note:** (PHYS 320 Mathematical Applications (3) may be substituted for MATH 233)

#### Required Elective Credits — 6-8 hours

Select one course from the following:

- PHYS 340 Mechanics I (3)  
 PHYS 341 Electricity and Magnetism I (3)

and select one course from the following:

- PHYS 343 Digital and Analog Electronics (4)  
 PHYS 345 Atomic and Quantum Physics (5)

- PHYS 347 Optics (4)  
 PHYS 420 Thermodynamics and Statistical Physics (3)



## POLITICAL SCIENCE

### Minor Requirements — 18 Credits

#### Required Credits — 6 hours

- PSCI 100 United States National Government (3)  
 PSCI 105 Fundamentals of Politics (3)

#### Required Elective Credits — 12 hours

##### Group A — American Politics

- ENST 205 Environment, Politics and Law (3)  
 PSCI 203 Colorado Politics (3)  
 PSCI 207 Women and Politics (3)  
 PSCI 208 Introduction to Public Administration (3)  
 PSCI 301 Electoral Politics in the United States (3)  
 PSCI 302 Power in America (3)  
 PSCI 305 Politics of Education (3)  
 PSCI 306 Constitutional Law (3)  
 PSCI 392 Internship (3-10)  
 PSCI 303 Public Policy in the United States (3)  
 PSCI 405 Problems in American Politics (3)  
 PSCI 422 Directed Studies (1-3)

##### Group B — International Relations

- PSCI 220 Introduction to International Relations (3)  
 PSCI 320 American Foreign Policy (3)  
 PSCI 321 War and Peace (3)  
 PSCI 325 Conflict in the Middle East (3)  
 PSCI 328 International Law and Organizations (3)  
 PSCI 422 Directed Studies (1-3)  
 PSCI 425 Problems in International Relations (3)

##### Group C — Political Philosophy

- PSCI 331 Political Philosophy I (3)  
 PSCI 332 Political Philosophy II (3)  
 PSCI 335 American Political Philosophy (3)  
 PSCI 422 Directed Studies (1-3)  
 PSCI 435 Problems in Political Philosophy (3)

##### Group D — Comparative Politics

- PSCI 210 Politics in the European Community (3)  
 PSCI 230 The Evolution of the Modern State (3)  
 PSCI 310 Politics of Central and East European States (3)  
 PSCI 315 Comparative Public Policy (3)  
 PSCI 318 The Politics of the Developing States (3)  
 PSCI 319 Pacific Rim Politics (3)  
 PSCI 415 Problems in Comparative Politics (3)  
 PSCI 422 Directed Studies (1-3)

**Notes:** The student must complete a block of Required Elective courses, which totals 12 hours, selected from the above in consultation with their advisor.

Students may take up to 6 hours in the Political Science Internship Program, but only a maximum of 3 hours can apply toward the political science minor. Admission to the Internship Program is limited.

Applications are available in the department office and must be submitted to the director, Internship Program, no later than the time of preregistration for the semester of the proposed internship. Students must have accumulated 12 hours in political science at the time of application.



## PSYCHOLOGY

### Minor Requirements — 18 Credits

#### Required Credits — 10 hours

- PSY 120 Principles of Psychology (4)

#### Psychology Elective Credits — 8 hours

select at least two courses from the following (6):

- PSY 230 Human Growth and Development (3)  
 PSY 265 Social Psychology (3)  
 PSY 341 Principles of Learning (3)  
 PSY 455 Abnormal Psychology (3)

PSY 467 Psychology of Prejudice (3)  
 Select remaining hours from any Psychology courses (2)  
**Note:** A minimum of 6 upper division credits (300-400 level) in the minor must be earned on campus. A maximum of 10 credit hours may be transferred for the minor from other institutions. At least nine hours must be at the 300-400 level.

**COE** **READING**

**Minor Requirements — 18 Credits**

**Required Credits — 15 hours**

- EDRD 340 Developing Language and Literacy in the Content Areas (3)
- EDRD 410 Achieving Effective Instruction in Developmental Reading (3)
- EDRD 411 Elementary Reading Diagnosis and Individualization (3)
- EDRD 414 Literature for Children, Adolescents and Young Adults (3)
- EDRD 419 Language and Literacy Development of Preschool and Elementary School Children (3)

**Elective Credits — 3 hours**

Select 3 additional semester hours in consultation with your advisor.

**HHS** **RECREATION**

**Minor Requirements — 18 Credits**

**Required Credits — 18 hours**

- REC 203 Introduction to Recreation and Leisure (3)
- REC 204 Introduction to Therapeutic Recreation (3)
- REC 206 Commercial Recreation and Tourism (3)
- REC 368 Programs in Recreation (3)
- REC 372 Recreation Leadership (3)
- REC 394 Practicum in Recreation and Therapeutic Recreation (3)

**Note:** The minor in recreation prepares students for secondary careers in recreation settings. Students who are required to have a minor will find this program challenging and a useful supporting area that will integrate with most any other major on campus. Students declaring the Recreation minor must possess an overall GPA of 2.3. Grades of "D" and "F" in Recreation courses must be repeated.

**HHS** **REHABILITATIVE SERVICES**

**Minor Requirements — 18 Credits**

**Required Credits — 18 hours**

- HRS 290 Introduction to Human Rehabilitative Services (3)
  - HRS 385 Working with Families in Rehabilitation (3)
  - HRS 394 Practicum in Human Services (3)
  - HRS 480 Human Service Helping Skills (3)
  - HRS 485 Medical/Psychological Aspects of Disability for Human Service Workers (3)
  - HRS 490 Career Planning and Placement (3)
- The three-hour practicum (HRS 394) should reflect the theme of the student's interest area in the minor.

**HHS** **SCHOOL HEALTH EDUCATION**

**Minor Requirements — 24 Credits**

**Required Credits — 18 hours**

- CH 205 Issues in Health (3)

- CH 209 Foundations of Health Promotion/Health Education (3)
- CH 238 Contemporary Issues in Drug Abuse (3)
- CH 336 Human Sexuality (3)
- CH 342 Modern Concepts of Health and Disease (3)
- CH 405 Health Communications and the Media (3)

**Required Elective Credits — 6 hours**

Elective credits selected with consent of advisor. FND 250, Principles of Nutrition, is strongly recommended.

**A&S** **SOCIOLOGY**

**Minor Requirements — 18 Credits**

**Required Credits — 3 hours**

- SOC 100 Principles of Sociology (3)

**Required Elective Credits — 15 hours**

Select two of the following courses:

- SOC 235 Social Change (3)
- SOC 237 Sociology of Minorities (3)
- SOC 330 Sociology of Organizations (3)
- SOC 332 Social Psychology (3)
- SOC 333 Social Class and Inequality (3)

Select from any remaining sociology courses (9 semester hours). Nine hours of the minor must be at level 300 or above.

**A&S** **SOCIOLOGY/SOCIAL INEQUALITY**

**Minor Requirements — 18 Credits**

**Required Credits — 6 hours**

- SOC 100 Principles of Sociology (3)
- SOC 237 Sociology of Minorities (3)

**Required Elective Credits — 12 hours**

Select two of the following courses (6 hours):

- SOC 221 Sociology of Gender (3)
- SOC 247 Social Deviance (3)
- SOC 322 Women and Aging (3)
- SOC 333 Social Class and Inequality (3)
- SOC 372 Gangs, Schools and Community (3)
- SOC 373 Political Sociology (3)

Select from any remaining sociology courses (6 hours).

**Note:** Nine credit hours of the minor must be at level 300 or above.

**A&S** **SOCIOLOGY/URBAN EDUCATION**

**Minor Requirements — 18 Credits**

**Required Credits — 15 hours**

- SOC 100 Principles of Sociology (3)
- SOC 372 Gangs, Schools and Community (3)
- SOC 376 Revitalizing Urban Education (3)
- SOC 377 Self in Modern Society (3)
- SOC 378 Sociology of Education (3)

**Required Elective Credits — 3 hours**

Select from any remaining sociology courses (6 hours).

**A&S** **SPANISH**

**Minor Requirements — 24 Credits**

**Required Credits — 21 hours**

- SPAN 201 Intermediate Spanish I (3)
- SPAN 202 Intermediate Spanish II (3)
- SPAN 301 Spanish Grammar (3)

- SPAN 302 Spanish Composition (3)
- SPAN 303 Spanish Conversation (3)
- SPAN 304 Introduction to Hispanic Literature (3)

and select one of the following two courses:

- SPAN 321 Spanish Civilization and Culture (3)
- SPAN 331 Latin American Civilization and Culture (3)

**Required Elective Credits — 3 hours**

- SPAN 350 Masterpieces of Spanish Literature (3)
- SPAN 351 Masterpieces of Latin American Literature (3)
- SPAN 405 Spanish Phonetics and Dialects (3)
- SPAN 406 Introduction to Translation (3)
- SPAN 407 Spanish for Oral Proficiency (3)
- SPAN 455 Spanish Readings (3)
- SPAN 456 Spanish and Latin American Short Story (3)
- SPAN 457 Literature of U. S. Hispanics (3)
- SPAN 459 Hispanic Drama (3)

**Notes:** It is recommended that Spanish minors take HIST 118 and either HIST 314 or HIST 315.

All Spanish language courses to be counted for the major and minor must be beyond the first year level.

Courses with the SPAN prefix are taught in Spanish and courses with the HISP prefix are taught in English.



**SPECIAL EDUCATION**

**Minor Requirements — 18 Credits**

This program is designed for undergraduate students who desire a special education minor to accompany any major or teacher licensure program other than a special education program. Additional requirements in other special education programs must be met before students with a minor are eligible for special education licensure.

**Required Credits — 6 hours**

*Special Education Core*

- EDSE 201 Culture of Special Education (3)
- EDSE 202 Communication, Consultation, and Collaboration in Special Education (3)

Contact the Department of Elementary Education or the Department of Educational Foundations and Curriculum Studies in McKee prior to enrollment in EDSE 320, EDSE 323, EDSE 324, EDSE 325, EDSE 326, EDSE 442, or EDSE 443 for clearance to register.

**Required Elective Credits — 12 hours**

- EDSE 254 American Sign Language 1 (3)
- EDSE 320 Assessment in Special Education (3)
- EDSE 323 Methods for Elementary Students with Exceptionalities (3)
- EDSE 324 Special Education Practices in Secondary Schools (4)
- EDSE 325 Behavioral Dimensions of Students with Exceptionalities I (2)
- EDSE 326 Behavioral Dimensions of Students with Exceptionalities II (3)
- EDSE 406 Behavior is Language: Special Education Strategies for Managing Disruptive Behavior (3)
- EDSE 440 Introduction to the Education of the Visually Handicapped (3)
- EDSE 442 Language and Literacy for Students with Severe Delays (3)
- EDSE 443 Support System in Special Education (3)
- EDSE 450 Introduction to Deafness (3)



**SPEECH COMMUNICATION**

**Minor Requirements — 18 Credits**

**Speech Communication Major Requirements**

**Required Credits — 6 hours**

- SPCO 100 Basics of Public Speaking (1)
- SPCO 102 Introduction to Speech Communication (3)

- SPCO 103 Speaking Evaluation (2)

**Required Elective Credits — 12 hours**

Select one course from each category:

*Interpersonal Communication*

- SPCO 321 Interpersonal Theory (3)
- SPCO 323 Intercultural Communication (3)
- SPCO 324 Family Communication (3)

*Small Group and Organizational Communication*

- SPCO 232 Principles of Interviewing (3)
- SPCO 330 Small Group Communication (3)
- SPCO 331 Organizational Communication (3)
- SPCO 431 Communication and Leadership (3)

*Communication and Influence*

- SPCO 341 Courtroom Communication (3)
- SPCO 343 Persuasion (3)

*Speech Communication Elective Credits*

- SPCO 111 Oral Interpretation (3)
- SPCO 201 Inquiry in Speech Communication (3)
- SPCO 211 Argumentation and Debate (3)
- SPCO 212 Professional Speaking (3)
- SPCO 221 Non-Verbal Communication (3)
- SPCO 350 Communication in the Classroom (3)

**Notes:** Students are encouraged to design their program to facilitate enhancement of their communicative skills and broaden their understanding of communication content in preparation for their professional career. A minimum of 9 semester credits in electives must be in 300 or 400 level courses.

The department requires that a Speech Communication advisor be designated when completing the "Change of Major/Minor Form" available in the department office, Candelaria Hall 121. A minor should be declared no later than the junior year to facilitate graduating on schedule.



**SPORT AND EXERCISE SCIENCE/ COACHING**

**Minor Requirements — 19 Credits**

**Required Credits — 19 hours**

- SES 220 Anatomical Kinesiology (3)
- SES 233 Advanced First Aid and Cardiopulmonary Resuscitation (2)
- SES 322 Exercise Physiology I (3)
- SES 335 Sports Pedagogy (2)
- SES 380 Prevention and Care of Sports Injuries (2)
- SES 461 Administration and Law (3)

and select two of the following courses:

- SES 312 Coaching and Officiating of Baseball (2)
- SES 313 Coaching and Officiating of Basketball (2)
- SES 314 Coaching and Officiating of Football (2)
- SES 315 Coaching and Officiating of Gymnastics (2)
- SES 316 Coaching and Officiating of Tennis (2)
- SES 317 Coaching and Officiating of Track and Field (2)
- SES 318 Coaching and Officiating of Soccer (2)
- SES 319 Coaching and Officiating of Softball (2)
- SES 320 Coaching and Officiating of Swimming (2)
- SES 321 Coaching and Officiating of Volleyball (2)
- SES 325 Coaching and Officiating of Wrestling (2)

**Notes:** The coaching minor has been designed to prepare students to assume coaching roles in school and non-school settings. Candidate must have participated in high school interscholastic athletics.



**SPORT AND EXERCISE SCIENCE/ OUTDOOR EDUCATION**

**Minor Requirements — 18-19 Credits**

**Required Credits — 18-19 hours**

- SES 132 Challenge Ropes Course (1)
- SES 232 Leadership in Outdoor Education and Recreation (3)

*Activity Courses (100 level) select four of the following:*

- SES 125 Backpacking and Hiking (1)

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SES 127 Cross-Country Skiing (1)  
 SES 128 Cycling (1)  
 SES 129 Downhill Skiing (1)  
 SES 130 Kayaking (1)  
 SES 131 Orienteering (1)  
 SES 135 Rock Climbing (1)

*Activity Courses (200 level) select four of the following:*

SES 234 Mountain Biking (2)  
 SES 235 Backcountry Skiing (2)  
 SES 236 Technical Rock Climbing (2)  
 SES 237 Paddle Sports (2)  
 SES 238 Winter Wilderness Living (2)

*and select one of the following courses:*

SES 233 Advanced First Aid and Cardiopulmonary Resuscitation (2)  
 SES 400 Wilderness First Responder/CPR (3)

*Optional Elective*

SES 394 Practicum in Outdoor Leadership (2-6)

(This course may be substituted for up to three of the 200-level activity courses listed above.)

**Note:** Students are required to take 100 level activity courses that correspond to 200-level activity courses or show equivalent experience.

## SPORT AND EXERCISE SCIENCE/ PHYSICAL EDUCATION (K-12) TEACHING

### Minor Requirements — 24 Credits

#### Required Credits — 12 hours

SES 210 Developmentally Appropriate Elementary Activities (3)  
 SES 240 Games I (3)  
 SES 241 Games II (3)

*and select one of the following two courses:*

SES 220 Anatomical Kinesiology (3)  
 SES 322 Exercise Physiology I (3)

#### SES PTEP Courses\* — 12 hours

SES 340 Planning and Instructional Design (3)  
 SES 342 Teaching Health-Related Fitness (3)  
 SES 440 Developing Pedagogical Skills in Elementary Physical Education (3)  
 SES 442 Developing Pedagogical Skills in Secondary Physical Education (3)

**Notes:** \*Students must be fully accepted into PTEP before taking SES PTEP courses. The minor in PE K-12 Teaching has been designed primarily for students who would like a second teaching area in physical education.

The strength of this minor is based on the unique integration of courses in skill analysis, movement sciences and teaching methodology.

## SPORT AND EXERCISE SCIENCE/ YOUTH DEVELOPMENT

### Minor Requirements — 24 Credits

#### Required Credits — 15 hours

SES 305 Programming in Youth Development (3)  
 SES 338 Teaching Diverse Populations (3)  
 SES 340 Planning and Instructional Design (3)

*and select one water activities course:*

SES 118, SES 120, SES 126 or SES 130

*and select one outdoor activities course:*

SES 125, SES 127, SES 128, SES 129, SES 131, SES 132, SES 135

*and select one lifetime activities course:*

SES 111, SES 113, SES 114, SES 119, SES 133, SES 174

*and select one fitness activities course:*

SES 146, SES 147, SES 148, SES 149, SES 150, SES 152, SES 153

*and select one traditional sport course:*

SES 100, SES 102, SES 103, SES 104, SES 110

*and select one additional physical activity course (advisor approval required).*

### Elective Credits — 9 hours

*Select three courses from the following (substitutions require advisor consent):*

REC 368 Programs in Recreation (3)  
 REC 372 Recreation Leadership (3)  
 REC 421 Program Design in Therapeutic Recreation (3)  
 SOC 141 Introduction to Criminal Justice (3)  
 SOC 247 Social Deviance (3)  
 SOC 326 Sociology of Childhood and Adolescence (3)  
 SOC 340 Juvenile Delinquency (3)  
 SOC 372 Gangs, Schools and Community (3)  
 SOC 447 Introduction to Grant Proposal Writing (3)

The youth development minor is designed to prepare students to teach and work in community-based youth serving agencies. Students gain knowledge and practical experience in teaching, program design, implementation and evaluation, funds development, community collaboration, and using physical activity to address the needs of youth. Students will find this program challenging and a useful supporting area that will integrate with most any other major on campus.

## TEACHING ENGLISH AS A SECOND LANGUAGE (TESL)

### Minor Requirements — 22 Credits

The minor in TESL provides the student with the study of the structures of English and with the theory and practice related to the teaching of English as a second language.

The minor in TESL also prepares the student to teach English as a second language in the public schools, assuming that the student is licensed to teach in Colorado and in special English language centers in the United States and abroad.

#### Required Credits — 10 hours

HISP 395 History and Philosophy of Bilingual Education (3)  
 TESL 301 TESL Practicum I (2)  
 TESL 302 TESL Practicum II (1-2)  
 TESL 400 Methods and Approaches of ESL/EFL (3)

#### Required Supporting Credits — 12 hours

ANT 210 Field Methods in Cultural Anthropology (3)  
 ENG 318 Traditional and Modern Grammars (3)  
 ENG 419 Language and the History of English (3)  
 SPCO 323 Intercultural Communication (3)

**Notes:** One year of college-level, beginning foreign language study or its equivalent must be taken in addition to the required courses for this minor.

It is preferred that this minor be chosen by students enrolled in a teacher education program.

If any course required is waived, e.g., in the case of English majors who may not count a course toward both a major and minor, additional courses must be approved so that the student can fulfill the 22 credit hours required for this minor.

Students must follow the requirements of their major department and the School of Education for admission to the PTEP program. This minor may lead to teacher licensure. Please see an advisor.

## THEATRE ARTS

### Minor Requirements — 24 Credits

#### Required Credits — 16 hours

THEA 100 Individual Performance in Theatre (4)  
 THEA 135 Playscript Analysis (3)  
 THEA 149 Orientation to Technology (3)  
 THEA 160 Beginning Acting (3)  
 THEA 240 Beginning Stage Directing (3)

#### Required Elective Credits in Theatre Arts — 8 hours



## THEATRE ARTS/TEACHING

### Minor Requirements — 22 Credits

#### Required Credits — 22 hours

THEA 100 Individual Performance in Theatre (4)  
 THEA 135 Playscript Analysis (3)  
 THEA 149 Orientation to Technology (3)  
 THEA 160 Beginning Acting (3)  
 THEA 190 Stage Speech I (2)  
 THEA 210 Drafting and Painting for the Theatre (3)  
 THEA 240 Beginning Stage Directing (3)  
 THEA 250 Stage Make Up I (3)  
 THEA 275 Stage Movement I (2)

**Notes:** THEA 385 (3 hours credit) and STEP 363 (2 hours credit) taken in Theatre Arts.

This program does not meet the current licensure requirements of the North Central Association for teachers of drama.



## VISUAL ARTS

### Minor Requirements — 20 Credits

#### Required Major Credits — 14 hours

*First complete the following Freshman Foundation courses:*

ART 181 History of Art I (4)  
 ART 182 History of Art II (4)  
 ART 183 Art I (3)  
 ART 184 Art II (3)

#### Required Elective Credits — 6 hours

*and select two of the following courses:*

ART 211 Ceramic Design (3)

*or*

ART 212 Wheel Throwing (3)  
 ART 171 Computer Based Technology in Visual Arts (2)  
 ART 221 Fiber Design I (3)  
 ART 223 Weaving (3)  
 ART 231 Painting I (3)  
 ART 234 Drawing I (3)  
 ART 248 Art for the Exceptional Child (2)  
 ART 252 Printmaking I (3)  
 ART 261 Sculpture I (3)  
 ART 265 Jewelry (3)  
 ART 270 Graphic Design I (3)  
 ART 271 Basic Photography (3)  
 ART 354 Relief Printmaking (3)  
 ART 356 Monotypes (3)  
 ART 381 Tribal Art (4)  
 ART 383 Pre-Columbian Art (4)  
 ART 385 Medieval Art (4)  
 ART 386 Renaissance Art (4)  
 ART 388 19th Century Art (4)  
 ART 389 Twentieth Century Art (4)  
 ART 437 Computer Art (3)  
 ART 471 Computer Graphics (3)

**Note:** An art minor advisor is required.

See "Course Level and Portfolio Review" on page 44



## WOMEN'S STUDIES

### Minor Requirements — 18 Credits

Women's Studies is devoted to the critical interrogation of gender's role in structuring individual experience. Women's Studies also examines gender's impact on the global distribution of economic and political opportunity in specific historical and social contexts. Women's Studies' students will be able to engage with a variety of different theoretical and political feminist positions, and demonstrate an awareness of

feminist scholarship in at least two disciplines, as well as the relationship between Women's Studies and feminist scholarship in other disciplines.

Students will learn the theories underlying feminism(s) as well as the skills necessary to effectively communicate them.

#### Required Women's Studies Credits — 12 hours

WS 101 Women in Contemporary Society (3)  
 WS 240 Women, Race and Class (3)  
 WS 300 History of Feminism (3)  
 WS 350 Feminist Theory (3)

#### Required Elective Credits — 6 hours

Courses should be chosen from among the following and other courses subsequently approved by the Women's Studies Committee.

ANT 314 Sex Roles in a Cross-Cultural Perspective (3)  
 ANT 318 Native American Women (3)  
 ART 384 History of the Goddess (3)  
 ART 390 Women Artists (3)  
 AFS 102 The Black Woman in America (3)  
 AFS 230 Black Women in Literature (3)  
 ECON 304 Economics of Gender (3)  
 ENG 239 Topics in Women's Literature (3)  
 ENG 335 World Literature By and About Women (3)  
 HIST 265 Women in Europe to 1700 (3)  
 HIST 266 Women in Europe 1700 to the Present (3)  
 HIST 347 United States Women's History to 1877 (3)  
 HIST 348 United States Women's History Since 1877 (3)  
 HUM 331 Images of Women in Literature and the Arts (3)  
 NURS 200 Women's Health Care (3)  
 PSCI 207 Women and Politics (3)  
 PPSY 468 Psychology of Women (2)  
 SOC 221 Sociology of Gender (3)  
 SOC 322 Women and Aging (3)  
 SOC 423 Violence and the Family (3)  
 WS 308 Women's Studies Workshop (1-3)  
 WS 320 Representations of Women in Popular Culture (3)  
 WS 422 Directed Studies (1-3)  
 WS 460 Feminist Legal Studies (3)  
 WS 492 Internship (2-10)

**Notes:** In all cases, a student's program in Women's Studies will be developed individually with each student by the coordinator or other members of the Women's Studies faculty. Each student's program must include at least 50 percent of coursework at the 300-400 level.

Each student should register with the coordinator to receive bulletins about general meetings, special programs scheduled and new courses approved by the Women's Studies Committee.

Courses in Women's Studies are also designed for general education and/or to fulfill various disciplinary major and minor requirements.



## WRITING

### Minor Requirements — 18 Credits

The Writing Minor is a cross-disciplinary, undergraduate program designed to improve student writing abilities and, thereby, employment opportunities. Students study the writing process as well as the particular requirements of writing in different disciplines, including the arts and sciences, business, education and professional fields.

Students who complete this minor should have competence in more than one kind of writing. Thus, they should have enhanced opportunities for successful careers in a wide variety of fields, including professional writing.

#### Required Credits — 6 hours

ENG 303 The Essay (3)  
 ENG 319 Advanced Expository Techniques (3)

#### Required Elective Credits — 12 hours

*Business Administration Computer Systems*

BA 205 Business Communications (3)

*Educational Technology*

ET 504 Instructional Materials Design (3)

Undergraduates must have advisor and instructor consent.

**English**

ENG 225 Communications on a Theme (3)  
 ENG 227 Technical Writing (3)  
 ENG 240 Introduction to Creative Writing (3) (may be repeated under the different subtitles as listed)  
 ENG 340 Creative Writing - Advanced (3) (may be repeated under the different subtitles as listed)  
 ENG 513 Professional Renewal (3)  
 Undergraduates must have advisor and instructor consent.

**History**

HIST 399 Introduction to Historical Research (3)

**Journalism and Mass Communications**

JMC 210 Newswriting (3)

JMC 410 Advanced News and Feature Writing (3)

**Science**

SCI 291 Scientific Writing (3)

**Notes:** The elective coursework must be designed with and approved by a writing minor advisor. Only one independent study course will be permitted in this program.

ENG 122 and ENG 123 or equivalent are prerequisites of the minor.

For further information and an updated list of offerings, contact the Writing Minor director in the English Department, 970.351.2971.

## PRE-DEGREE PROGRAMS



### ENGINEERING PROGRAM (PRE-ENGINEERING)

The pre-engineering program is designed for students who intend to enter an engineering field. Many of these students take approximately two years of coursework at UNC before transferring to a university that offers a degree in engineering. Alternatively, after their second year, students may elect to complete the Engineering Physics Emphasis B.A. program or other science or math program at UNC.

On successful completion of this program, the student will be eligible to transfer to an engineering school in Colorado or elsewhere, or transfer to another science or mathematics program at UNC.

**Required Credits**

CHEM 111 Principles of Chemistry I (5)  
 ENG 122 College Composition (3)  
 MATH 131 Calculus I (4)  
 MATH 132 Calculus II (4)  
 MATH 233 Calculus III (4)  
 PHYS 240 General Physics I (5)  
 PHYS 241 General Physics II (5)  
 PHYS 321 Elementary Modern Physics (3)

and select one of the following two courses:

CG 120 Pascal Programming (3)  
 CG 130 C++ Programming (3)

**Notes:** Elective courses should be carefully selected in consultation with one's advisor. Consult for optimum transfer of credits to an engineering school. Some engineering fields require a second semester of chemistry.

Students in this program register under a physics major with pre-engineering as a second major and must have an advisor in the physics department.



### HEALTH SCIENCES (PRE-PROFESSIONAL STUDIES)

Students interested in preparing for careers in the Health Sciences (Human Medicine including allopathic, osteopathic and podiatric medicine, dentistry, veterinary medicine, optometry, pharmacy and chiropractic for example) and those interested in various allied health sciences\* (e.g., dental hygiene, physician's assistant, optometry assistant, veterinary assistant, physical therapy) should participate in this program.

Professional studies in the health sciences have traditionally been built on a strong liberal arts foundation. Pre-professional studies that prepare students for professional schools are available at UNC. Advisors with knowledge about careers in the health sciences, requirements for admission to professional schools and UNC courses and degree programs assist students planning to apply for admission to professional schools. Competition for admission to these programs is keen and completion of a pre-professional program does not guarantee admission to the professional

school. Academic performance, scores on selected examinations, results of interviews, personal characteristics and experiences are all taken into consideration. Special national aptitude or admissions tests are required by many of these programs. Special application processes are used by some of the programs. Pre-professional committee recommendations may be required. UNC's Pre-Professional Committee of faculty is dedicated to providing timely and informed advising to students interested in health-related careers.

Careful program planning is essential and students are encouraged to meet regularly with their pre-professional advisor.

Students will be encouraged to select courses that will meet the requirements of a degree that provides maximum flexibility in career choices. Professional schools have requirements that range from a minimum of two years of undergraduate studies to four years and a bachelor's degree. Although common requirements exist within areas, sufficient differences exist that wise students will work closely with their advisor to be certain that all program and degree requirements are being met.

At a minimum, allied health science programs will require a year of general biology, a year of general chemistry and a year of English composition. A second year of chemistry, additional biology, physics and college mathematics, as well as courses in social sciences and humanities are required in the health science areas.

Although no specific undergraduate major is required by professional schools, students in our program will be encouraged to select a major and work towards a degree. Most students elect a major from one of the biological or physical sciences. For information on the requirements for specific programs contact Dr. Tomasi at 970.351.2559.

\* *Nursing and Medical Technology are included in this group of careers, but since professional education in these careers is available at UNC they are not listed in this program. For more information about these programs consult the index of this Catalog.*



### LAW PROGRAM (PRE-LAW)

Contact Paul Hodapp, Department of Philosophy, Weber House, 970.351.2572, for pre-law information and a list of recommended courses.

UNC offers an excellent pre-law program, as well as a number of pre-law activities for undergraduate students interested in pursuing a career in the legal profession. UNC has an active Pre-Law Society as a chartered organization.

It should be noted, however, that like most American universities, UNC does not offer a pre-law major or minor; however, UNC does offer a Minor in Legal Studies.

Law schools do not identify any specific major as most desirable, but they do require a bachelor's degree as a prerequisite for law school admission. Most pre-law programs are built around majors from the College of Arts and Sciences and from the College of Business Administration.

# TEACHER EDUCATION: PROFESSIONAL TEACHER EDUCATION PROGRAMS (PTEPs)

## INTRODUCTION

The University of Northern Colorado offers four Professional Teacher Preparation Programs (PTEP) that are designed to prepare teacher education candidates for Colorado Licensure. The 2000-2001 Professional Teacher Education Programs include: Elementary Education (K-6), Middle Grades Education in specific and support teaching areas (5-9), Secondary Education in specific teaching areas (7-12), and K-12 Education in the areas of Physical Education, Music Education, Visual Arts Education, and Special Education.

A list of program outcomes for students who complete the University's teacher education program are available at [http://www.unco.edu/sstte/int\\_lic/secondary/sec\\_outcome.htm](http://www.unco.edu/sstte/int_lic/secondary/sec_outcome.htm).

A student interested in obtaining a Colorado Provisional Teacher License must apply, be admitted to, and complete one of the Professional Teacher Education Programs. Students who have completed a baccalaureate degree, but do not hold a Colorado teacher license, are encouraged to contact the Department of Elementary Education and the Department of Educational Foundations and Curriculum Studies in McKee 216 to receive information on post-baccalaureate programs for teacher licensure.

Full licensure program descriptions can be found in the section on licensure and endorsement programs at the end of the College of Education section of this catalog.

*Please See "Teacher Education: Professional Teacher Education Programs (PTEPs)" on page 73.*

## Standards of Professional Practice for Continuation

Students admitted to professional teacher education programs are expected to maintain accepted standards of professional behavior in all aspects of their work in their program.

Appropriate program faculty will periodically review the suitability of candidates for continuation in their professional teacher education program. Students who do not attain or uphold such standards are subject to academic sanctions, including denial, suspension or dismissal from the professional teacher education program.

## PTEP COURSE REQUIREMENTS

Each PTEP (Elementary, Middle Grades, Secondary; K-12) requires a set of courses and instructional experiences that all students seeking initial licensure must complete regardless of their major. The program ensures that quality and consistency will be available and required of all who wish to teach. Admission to a PTEP is a selective process based on specific criteria. Additional information can be found within the specific major course or licensure area requirements

## Student Teaching Requirement

All teacher education candidates must pass a State of Colorado mandated test prior to entry into student teaching.

## PROGRAM COMPLETION AND LICENSURE

Candidates for initial Colorado Licensure are required by the Colorado Department of Education to demonstrate competence in content area knowledge (academic major) by successfully passing a state mandated test. Students who wish to take the test must register for the Program of Licensing for Colorado Educators (PLACE) examination directly with National Evaluation Systems. Test catalogs, testing dates and more information are available from the Department of Elementary Education and the Department of Educational Foundations and Curriculum Studies in McKee 216.

Upon satisfactory completion of a teacher education program and any additional requirements imposed by state law, a student is eligible for institutional recommendation to the Colorado Department of Education for licensure in the State of Colorado. Recommendations for licensure are made only when students have successfully completed an approved teacher education program. A recommendation for licensure cannot be made when a student has completed only a teaching minor.

Upon completion of an approved program a student may be recommended for licensure in states other than Colorado. Completion of the UNC program does not assure licensure in other states, as there may be specific requirements not found in the Colorado requirements. Students expecting to seek licensure in other states should check with the Department of Elementary Education and the Department of Educational Foundations and Curriculum Studies in McKee 216 or correspond with the respective State Department of Education early in their program to learn of any additional requirements.

## PTEPs/Licensure/Endorsement Areas

Programs listed under PTEPs, Licensure and Endorsement areas have been approved by the Colorado State Board of Education for licensure/endorsement.

Additional information regarding licensure/endorsement areas is available through the Department of Elementary Education and the Department of Educational Foundations and Curriculum Studies in McKee 216.

- Please See "Elementary Professional Teacher Education Program" on page 219.
- Please See "Middle Grades Professional Teacher Education Program" on page 221.
- Please See "Secondary Professional Teacher Education Program" on page 222.
- Please See "K-12 Professional Teacher Education Program" on page 225.
- Please See "Licensure Programs" on page 118.
- Please See "Endorsement Programs" on page 116.



## EARLY CHILDHOOD PROFESSIONAL TEACHER EDUCATION PROGRAM

### Degree Requirements — 120 Credits (minimum)

The Early Childhood/Primary PTEP is designed to prepare students to teach children birth-8 years. Students will be assigned an early childhood education advisor beginning with their enrollment in EDEC 210.

One of the major features of this program includes affording students in the program opportunities to acquire and demonstrate knowledge of theory and practice necessary to plan and implement curriculum for individual children and groups. In addition, the program is designed to provide opportunities for students to acquire and demonstrate the ability to apply and analyze the core knowledge and to systematically develop curriculum, as well as to develop and conduct assessments of individual children and groups.

Another major feature of this program is the emphasis placed on preparing entry-level early childhood professionals who are able to reflect on their practices so that improved programming for children will result. In addition, the program is designed to help beginning professionals understand the importance of advocating for (and generate the will to advocate) policies designed to improve conditions for all children, families and the profession.

The ultimate goal of the Early Childhood/Primary Teacher Education Program is to help entry-level early childhood professionals acquire the knowledge, skills, and dispositions to teach and perform effectively in the following areas:

- Planning and implementing instruction
- Assessment of learning, development and instruction
- Interpersonal relations with children, colleagues and parents
- Personal and professional behavior

#### Note:

1. A student's program in General Education will be the same requirements as for a student enrolled in the Elementary PTEP.
2. Students in the Early Childhood PTEP must choose the liberal arts interdisciplinary major designed for Early Childhood PTEP students.
3. Prior to admission to the EC/P PTEP, students will have successfully completed PSY 230 or an equivalent course.
4. Beginning with program admission (EDEC 210), the course sequence must be adhered to: Blocks I, II and III must be taken in sequence.

#### Prerequisites for Admission to the application process:

Clearance is obtained in McKee 216 no later than the day before the assigned date for pre-registration. In order to obtain clearance necessary to be admitted to the Application Process, students must:

- Establish a minimum of a 3.0 GPA at UNC by the time the student has completed 60 semester hours. First semester transfer students' GPA's will be reviewed at the end of their first semester on campus.
- Hold sophomore standing or above.
- Have completed a minimum of 25 hours of prior volunteer or paid work experience with children in a group care setting (i.e., teacher aiding, recreation programs, youth group leader, scout leader, child care provider, camp counselor, etc.). If you have questions about meeting this requirement, please talk with your advisor, or the Coordinator of Early Childhood.
- Complete PSY 230 or equivalent

#### Application to the Early Childhood PTEP

This program is being revised; therefore, admission has been suspended for the 2002-2003 Academic Year. Information related to formal application to the Early Childhood PTEP will be provided in EDEC 210. This is the introductory course for

the Early Childhood PTEP. Only students who have passed the clearance process will be admitted to this course. In EDEC 210, students will receive information about:

- Formal Application Process
- Fingerprint and Background Check
- TB Test
- PLACE Assessment
- Documentation of Experience with Children
- Explanation of the Early Childhood PTEP Sequence of Courses and Experiences.
- After completing the Admission Application Process, students may be fully admitted into the Early childhood PTEP, accepted provisionally (\*), or denied admittance
- Early Childhood program faculty will maintain ongoing assessment and counseling of students for purposes of deciding whether students who are admitted may continue in the program.

#### Prerequisites to enroll in Cluster I

- Acceptance into the Early Childhood PTEP
- Documentation of oral proficiency: Completion of SPCO 100 and SPCO 103 with a grade of "A" or "B". Students who would like information about testing out of this requirement should contact the UNC Career Services Testing Center at 970.351.2127.
- Completion of EDEC 210 with a grade of "B" or better.
- Successful completion of the PLACE Basic Skills Test.
- Students with a GPA of less than 3.00 will not be cleared for student teaching.
- \*Students holding "Provisional" status in the Early Childhood PTEP will not be permitted to student teach.

#### Required GenEd Program — 40 hours

#### Required Liberal Arts Interdisciplinary Major — 40 hrs

#### Required Early Childhood PTEP Courses — 40 hours

Note: Students applying to this program during the Sophomore year: The application process is completed in EDEC 210. Block I is completed during the first semester of the Junior year.

##### Block I

EDEC 333 Development and Guidance of Young Children (3)  
 EPSY 347 Educational Psychology for Elementary Teachers (3)  
 ET 347 Educational Technology Applications for Elementary Teaching (1)

##### Block II: Fall

EDSE 430 Exceptional Student in the Elementary Classroom (2)

EDRD 419 Language and Literacy Development of Preschool and Elementary School Children (3)

EDEC 450 Family Diversity and Involvement Early Childhood Education (2)

EDEC 460 Early Childhood Curriculum I (3)

EDEC 470 Early Childhood Student Teaching I (6)

##### Block II: Spring

EDRD 410 Achieving Effective Instruction in Developmental Reading (3)

EDEC 480 Early Childhood Curriculum II (3)

EDEC 490 Early Childhood Student Teaching II (6)





## ELEMENTARY PROFESSIONAL TEACHER EDUCATION PROGRAM

### Degree Requirements — 121 Credits

The Elementary Professional Teacher Education Program (PTEP) is designed to prepare students to teach at the K-6 level. Students selecting this program are required to complete the Interdisciplinary Liberal Arts major. Students will be assigned an elementary education advisor during application to the Elementary PTEP. Students selecting this program will be assigned to cohort groups in Student Teaching Block I and Block II. For additional information: *Please See "Teacher Education: Professional Teacher Education Programs (PTEPs)" on page 73.*

#### Prerequisites for Initial Application into Elementary PTEP

- Make formal application to the Elementary Professional Teacher Education Program prior to enrollment in Student Teaching Block I.
- Initial application into Elementary PTEP will occur concurrently with enrollment in first prerequisite course.
- Students will be assigned to one of the Elementary PTEP faculty for advising when they are provisionally admitted to the PTEP.
- Sophomore status or above at time of application
- 2.75 grade point average at UNC. First semester transfer students may also apply; the GPA will be reviewed at the end of the applicant's first semester.

#### Prerequisites for Student Teaching I and Student Teaching II Application

- Apply for admission into Student Teaching Block I and Student Teaching Block II.
- Students are placed in Partnership Schools in Student Teaching Block I.
- Students will student teach in a different school during Student Teaching Block II.
- Student Teaching Block I and Student Teaching Block II will not be taken sequentially unless approved by the program coordinator and IDLA advisor.
- A semester of academic coursework on campus is required the first semester of the senior year.
- Initial admission into Elementary PTEP
- Completion of all prerequisite education courses except ET 347 (EDF 366, EPSY 347, EDSE 430 and ET 247)
- 3.00 UNC Cumulative GPA (must be maintained)
- Successful completion of Early Service Learning Component (done concurrently with EDF 366)
- pass Colorado Place Test prior to admittance into Block II

#### Application Process for Student Teaching Block I and Student Teaching Block II

Application for Student Teaching Block I and Block II will occur the semester prior to the student teaching blocks. Application meetings are held in the fall and spring. Dates are posted in advance on the bulletin board outside of McKee 216. Contact the Department of Elementary Education for further information.

#### Complete General Education Program — 40 hours

#### \*Complete the Interdisciplinary Studies, B.A. — 40 hrs

"Liberal Arts Emphasis" on page 173

#### Required Elementary PTEP courses — 41 hours

##### \*Prerequisite Courses

EDF 366 Conceptions of Schooling: Context and Process (4)  
 ET 247 Technology in Education for Elementary Teaching (1)  
 EPSY 347 Educational Psychology for Elementary Teachers (3)  
 EDSE 430 Exceptional Student in the Elementary Classroom (2)  
 ET 347 Educational Technology Applications for Elementary Teaching (1)  
 (ET 347 can be taken after Student Teaching Block I but must be completed before Student Teaching Block II).

*Student Teaching Block I - Junior Year (15)*

#### EDEL 460 Integrated Methods I: Reading, Language Arts, Science and Health (9)

*6 weeks of focused content learning in literacy, science and health; followed by 10 weeks of supervised field experiences in an assigned partnership school, Monday-Friday in EDEL 480.*

#### EDEL 480 Student Teaching Block I and Seminars (6)

*Field Experiences in Student Teaching Block I will occur in an assigned Partnership School on or around the Greeley area.*

*Student Teaching Block II - Second Semester of Senior Year (15)*

#### EDEL 470 Integrated Methods II: Math, Social Studies, Art, Music and Physical Education (9)

*Integrated Methods II: Math, Social Studies, Art, Music and Physical Education (9) 5 weeks of focused content instruction in math, social studies, art, music and P.E. followed by 11 weeks of student teaching in EDEL 490.*

#### EDEL 490 Student Teaching Block II and Seminars (6)

*Field experience in Student Teaching Block II will occur in an assigned Partnership or Student Teaching School.*

**Note:** \*Prerequisite courses must be taken before Student Teaching Block I.

#### Urban Education Program

The Urban Education program is an Elementary Education program leading to licensure offered in the Denver area. All course requirements are the same as on-campus although the delivery and sequence of courses may vary from the on-campus program.

#### Prerequisites for Initial Application into Elementary PTEP

Center for Urban Education teacher candidates must make formal application to the elementary Professional Teacher Education Program (PTEP) following the second semester of their freshman year. In order to apply, candidates must have completed 30 semester hours and have a 2.75 GPA.

However, as early as the first semester of college coursework and continuing throughout the four years, Center students take classes and receive credit in PTEP coursework. Even though students will be enrolled in integrated methods courses and seminars, educational foundation courses and the apprenticeship experience, formal application to PTEP still is required.

In addition, at the end of the second semester of first year, candidates must:

- complete a fingerprint/background check;
- submit a copy of the recent TB test;
- complete and sign the Colorado Department of Education Oath and Consent Form.

#### Prerequisites for Student Teaching I and Student Teaching II Application

Center candidates receive full admission status when meeting the following requirements:

- completion of the following prerequisite courses
  - EDF 366, EPSY 347, EDSE 430, ET 247 and ET 347;
- attain and maintain a UNC cumulative GPA of 3.00 or better;
- demonstrated oral and written proficiency;
  - grade of "B" or better in SPCO 100 and SPCO 103 OR satisfactory completion of an oral proficiency exam;
  - grade of "B" or better in a General Education Category I course

#### Application Process for Student Teaching

Application for Student Teaching will occur the semester prior to the student teaching.

Only Urban Education students must enroll in the following eighteen courses offered in the one-hour format through the Elementary Professional Teacher Education Program:

EDEL 461 Integrated Science Methods I (1)  
 EDEL 462 Integrated Science Methods II (1)  
 EDEL 463 Integrated Science Methods III (1)  
 EDEL 464 Integrated Literacy Methods - Writing Process (1)  
 EDEL 465 Integrated Literacy Methods - Literature Response and Classroom Application (1)

EDEL 466 Integrated Literacy Methods - Strategic Literacy and Instruction (1)  
EDEL 467 Integrated Literacy Methods - Diagnosis, Individualism and Assessment (1)  
EDEL 468 Integrated Literacy Methods - Reading and Writing Across the Curriculum (1)  
EDEL 469 Integrated Health Methods (1)  
EDEL 471 Integrated Instruction in Elementary School Social Studies - Geography (1)  
EDEL 472 Integrated Instruction in Elementary Social Studies - History (1)  
EDEL 473 Integrated Instruction in Economics and Citizenship Education (1)  
EDEL 474 Integrated Elementary Math Education I (1)  
EDEL 475 Integrated Elementary Math Education II (1)  
EDEL 476 Integrated Elementary Math Education III (1)  
EDEL 477 Integrated Elementary Art Education (1)  
EDEL 478 Integrated Elementary Music Education (1)  
EDEL 479 Integrated Elementary Physical Education (1)  
These courses are equivalent to the on-campus courses EDEL 460 and EDEL 470. On-campus students cannot opt to enroll in any of the one-hour courses, nor can students who are enrolled through Urban Education opt to enroll in the on-campus courses EDEL 460 and EDEL 470.



## MIDDLE GRADES PROFESSIONAL TEACHER EDUCATION PROGRAM

### Degree Requirements — 120-169 Credits

The Middle Grades Professional Teacher Education Program is designed to prepare students to teach in grades 5-9. The students selecting this program will be assigned an advisor in Middle Grades Education. For additional information: *Please See "Teacher Education: Professional Teacher Education Programs (PTEPs)" on page 73.*

#### Required General Education Program — 40 hours

#### Required liberal arts major — 39-70 hours

#### Required Support Teaching Field — 18 hours

A support teaching field is required for Middle Grades Licensure. The support field consists of 18 hours of courses in one of the four broad fields of math, science, social studies, or language arts, which is other than the academic major. There are three options: Option 1) Build an 18 hour broad field using General Education courses and electives, Option 2) Select a minor, or Option 3) Select two broad fields, other than the major, with nine hours in each field for an interdisciplinary support field. In all options one half of the hours or nine hours must be taken at the 200 level or above. If options 1 and 3 are selected, there will be few additional electives needed for the program of study. A Middle Grades Advisor **MUST** be consulted when selecting a support field and required courses.

Students will complete a formal application while enrolled in EDMG 310. A minimum grade point average of 2.50 is required prior to enrollment. First semester transfer students may enroll their first semester on campus, and the GPA will be evaluated at the end of the semester.

#### Required Middle Grades PTEP — 41 hours

*Cluster and internship courses must be taken concurrently and Clusters are taken in sequence.*

#### Introductory Cluster

EDMG 310 Orientation to Middle Grades Licensure (1)  
EDF 366 Conceptions of Schooling: Context and Process (4)  
EPSY 348 Educational Psychology for Middle School Teachers (3)  
ET 248 Technology in Education for Middle Grades Teaching (1)

#### Intermediate Middle Grades Methods Cluster I

EDMG 320 Introduction to Middle School Grades Education (2)  
EDMG 321 Middle Grades Teaching and Learning (3)  
EDSE 311 Including Exceptional Students in the Middle Grades Classroom (3)

#### Intermediate Middle Grades Methods Cluster II

EDMG 440 Middle Grades Integrated Curriculum and Instruction (5)  
EDRD 340 Developing Language and Literacy in the Content Areas (3)  
ET 348 Educational Technology Applications for Middle Grades Teaching (1)

#### Middle Grades Internship

EDMG 490 Middle Grades Student Teaching (14)  
EDMG 491 Middle Grades Student Teaching Seminar (1)

## MIDDLE GRADES TEACHING PROGRAMS

### ENGLISH, B.A. — PTEP PROGRAM

*"Middle Grades and Secondary Teaching Emphasis" on page 163*

### MATHEMATICS, B.S. — PTEP PROGRAM

*"Middle Grades Teaching Emphasis" on page 179*

Students majoring in mathematics who plan to teach in the middle school must complete the requirements as stated in this Catalog for licensure as a middle grades teacher.

*For admission to PTEP the student must have:*

- completed at UNC at least two content courses that may count toward the MATH major;
- a GPA of at least 2.5 in content courses taken at UNC that count toward the major.

*For admission to student teaching, the student must have:*

- satisfactorily completed at least 30 semester hours of coursework, which may count toward the math major;
- satisfactorily completed the appropriate methods courses and clinical experience;
- a GPA of at least 2.5 in courses taken at UNC, which may count toward the major.

The GPA in content courses will be computed by the Department of Mathematical Sciences according to procedures approved by the departmental faculty that are in place at the time of the student's application for admission to PTEP, or to student teaching, or for graduation.

It is recommended that students take MED 272, Mathematics Tutoring, for two semesters.

It is recommended that students take MATH 341, Introduction to Modern Geometry, before taking MATH 464.

Content courses that may count toward the major are those mathematics, statistics and/or computer courses specified in the Catalog as required courses for the major, or as program electives in the major.

### PHYSICS, B.A. — PTEP PROGRAM

*"Physical Science Middle Grades and Secondary Teaching Emphasis" on page 186*

### SOCIAL SCIENCE, B.A. — PTEP PROGRAM

*"Social Studies Middle Grades and Secondary Grades Teaching Emphasis" on page 191*

### SPANISH, B.A. — PTEP PROGRAM

*"Bilingual Bicultural Middle Grades Teaching Emphasis" on page 193*

Students must have at least a 2.5 GPA for admission to this major and emphasis. All Spanish language courses to be counted for the major must be beyond the first year level.

Students must complete at least 10 credits in this major before applying to PTEP. PTEP is required for this program.

It is recommended that Spanish majors take HIST 118 and either HIST 314 or HIST 315.

In order to gain permission to apply for student teaching, a Spanish major must successfully pass the department's oral proficiency interview.

SPAN prefix course are taught in Spanish; MAS and HISP prefix are taught in English.

- SPAN 411 need not be taken before SPAN 412.



## SECONDARY PROFESSIONAL TEACHER EDUCATION PROGRAM

### Degree Requirements — 120-128 (minimum) Credits

The Secondary Professional Teacher Education Program is designed to meet the licensure requirements for teaching at the secondary levels (grades 7-12). For additional information: *Please See "Teacher Education: Professional Teacher Education Programs (PTEPs)" on page 73.*

#### Required General Education Program — 40 hours

#### Required Content Major — 38-50 hours

#### Required Secondary PTEP Courses — 38-41 hours

*The following three courses are to be taken concurrently during the first semester of your program (7 semester hours):*

STEP 161 Observation and Analysis of Secondary Teaching I (2)

EDF 366 Conceptions of Schooling: Context and Process (4)

ET 249 Technology in Education for Secondary Teaching (1)

*The following three courses are to be taken concurrently (8 hrs):*

STEP 262 Observation and Analysis of Secondary Teaching II (2)

EDSE 360 Adaptation, Modification, and Integration of Curriculum for the Secondary Exceptional Learner (3)

EPSY 349 Educational Psychology for Secondary Teachers (3)

*The following four courses are to be taken concurrently (9-12 hrs)*

STEP 363 Clinical Experience: Secondary (2)

EDRD 340 Developing Language and Literacy in the Content Areas (3)

ET 349 Educational Technology Applications for Secondary Teaching (1)

XXXX Content Area Methods (3-6)

*Students will select their content method courses from the following:*

EED 341 Methods and Materials for Teaching Language and Composition in the Secondary School (3)

or

EED 541 Methods and Materials for Teaching Language and Composition in the Secondary School (3)

EED 402 Methods and Materials for Teaching Young Adult Literature in the Secondary Schools (4)

FL 341 Methods of Teaching in the Secondary School (3)

GEOG 410 Teaching Geography in Secondary Curriculum (1)

HIST 400 Teaching History in the Secondary Curriculum (1)

SOSC 341 Teaching Secondary Social Studies (3)

SCED 441 Methods of Teaching Secondary School Science (3)

MED 441 Methods of Teaching Mathematics (3)

SPCO 352 Methods of Teaching Speech Communication (3)

THEA 385 Methods of Teaching Drama (3)

*and complete the following course:*

STEP 464 Secondary Student Teaching (14)

**Notes:** Students will make formal application and complete admission requirements while enrolled in STEP 161. A minimum grade point average of 2.50 is required prior to enrollment. First semester transfer students may enroll their first semester on campus and the GPA will be evaluated at the end of the semester.

#### Post Baccalaureate or Second B.A.

Students who have completed a Bachelors degree in one of the 14 major's, licensed in the Secondary PTEP, may enroll in the program as a Post Baccalaureate candidate. Post Baccalaureate candidates complete the same PTEP field experiences and coursework as listed above. Eligible students should apply through the Graduate School and meet with the Secondary PTEP coordinator for advisement regarding the program.

Students who have completed a Bachelors degree in an area other than those licensed in the Secondary PTEP may enroll in the program as a teacher candidate seeking a second B.A. Students eligible for this status should make an appointment with the Secondary PTEP coordinator for advisement regarding the program.

## SECONDARY PROGRAMS (PTEPs)

### BIOLOGICAL SCIENCES, B.S. — PTEP PROGRAM

See "Biological Sciences (B.S.) Requirements" on page 3  
"Biology Secondary Teaching Emphasis" on page 151

### CHEMISTRY, B.S. — PTEP PROGRAM

"Secondary Teaching Emphasis (ACS Certified)" on page 156

All students in the program must take an assessment examination before graduation. Students wishing to participate in the Honors Program should consult their advisors about GenEd selections and other requirements.

### COMMUNICATION, B.A. — PTEP PROGRAM

"Secondary Teaching Emphasis" on page 157

Students wishing to be admitted to the Professional Teacher Education Program (PTEP) in Speech Communication must have a minimum of 3.0 GPA for all courses completed in Speech Communication.

A Speech Communication major may apply for admission to the Professional Teacher Education Program (PTEP) when he or she has obtained a "B" or better in a minimum of six (6) semester hours of SPCO prefix courses taken at the University of Northern Colorado. Majors must maintain a 3.0 GPA for SPCO prefix courses.

Before being permitted to apply for student teaching, a Speech Communication major must have successfully completed at least 27 hours in the major, be approved by the faculty of the department, and have at least a 3.0 grade point average in those courses taken at UNC.

To be recommended by the department for teacher licensure, the student must have at least a 3.0 grade point average at the completion of his or her program in courses counting toward the major and that were taken at UNC and be endorsed by the faculty of the Speech Communication department.

### EARTH SCIENCES, B.S. — PTEP PROGRAM

"Secondary Teaching Emphasis" on page 162

"Earth Sciences (B.S.) Requirements" on page 5

As part of their Professional Teacher Education Program students must take SCED 441 Methods of Teaching Secondary School Science (3) and ESCI 450 Strategies in Teaching in Earth Sciences (1).

A grade point average of 2.5 in the major courses is required to receive departmental approval for admission to the Professional Teacher Education Program, for eligibility to student teach, and for graduation.

### ENGLISH, B.A. — PTEP PROGRAM

"Middle Grades and Secondary Teaching Emphasis" on page 163

*Must be completed after PTEP Phase II and before PTEP Phase IV:*  
\*EED 341 Teaching Language and Composition (3)

Step 363 must be taken concurrently with \*EED 402 Methods and Materials for Teaching Young Adult Literature in the Secondary Schools (4)

PTEP provisional admission: completion of at least two courses in the major at UNC with a minimum grade point average of 2.5 in the major.

Admission to Phase III:

1. complete at least 30 hours in the major with a grade point average of 2.75 with no grade lower than a C.
2. retake major courses when a grade of "D" or "F" is received for a grade of "C" or better.

**FOREIGN LANGUAGE, B.A. — PTEP PROGRAM****French Secondary Teaching Emphasis**

“French Secondary Teaching Emphasis” on page 165

**German Secondary Teaching Emphasis**

“German Secondary Teaching Emphasis” on page 165

Additional degree requirements:

See “Foreign Language (B.A.) Requirements” on page 6

A 2.5 grade point average is required before students may seek approval for full admission to the Secondary Professional Teacher Education Program and to be recommended for teacher licensure.

Students must meet all requirements for the Secondary Professional Teacher Education Program as described in this Catalog, including STEP 363, Clinical Experience (3 credit hours) to be taken concurrently with the Methods course, FL 341.

In order to obtain approval for a student teaching assignment, a French teaching major must have obtained a grade of “B” or better in FL 341 and have successfully passed the department oral proficiency exam. (Consult advisor.)

Teaching skills are developed through advising and consultation with Department faculty, through FL 341, and through the courses in the Secondary Professional Teacher Education Program (PTEP).

In order to be recommended for teacher licensure, a 2.5 grade point average is required at the completion of the program in those courses that count toward the major and that were taken at UNC.

**GEOGRAPHY, B.A. — PTEP PROGRAM**

“Secondary Teaching Emphasis” on page 167

\*GEOG 407 and GEOG 440 are also offered for graduate credit under the numbers GEOG 507 and GEOG 540.

No geography teaching major may apply for admission to the Professional Teacher Education (PTEP) program until he or she has passed at least 15 semester hours of courses in the major, at least 6 hours of which must have been taken at the University of Northern Colorado.

To be admitted to PTEP, a student must have a 2.75 grade point average in those courses counting toward his or her major that were taken at UNC and must have taken at least three courses with the GEOG prefix.

\*\*In the Secondary PTEP, students must take both SOSC 341 and GEOG 410.

Before being permitted to apply for student teaching, a student must have successfully completed at least 30 hours in the major and maintained a 2.75 grade point average in major courses taken at UNC.

**HISTORY, B.A. — PTEP PROGRAM**

“Secondary Teaching Emphasis” on page 169

“History (B.A.) Degree Requirements” on page 169

The History Secondary Education major should follow the phase program delineated by the STEP program.

No history major may apply for admission to the PTEP program until completion of at least 15 semester hours in the major. At least 9 of these hours must have been taken at the University of Northern Colorado.

Before being permitted to apply for student teaching, a history major must have completed successfully 27 hours in the major and have at least a 2.8 grade point average in major courses taken at UNC.

PTEP Students majoring in history are required to take:

SOSC 341 Teaching Secondary Social Studies (3) and HIST 400 Teaching History in the Secondary Curriculum (1).

**MATHEMATICS, B.S. — PTEP PROGRAM**

“Secondary Teaching Emphasis” on page 179

\*In the secondary PTEP, students must take MED 341 and MED 441.

For admission to PTEP, the student must have:

- completed MATH 131 and MATH 132 (with a grade of “C” or better);
- completed at UNC at least two content courses that may count toward the Math major;
- a GPA of at least 2.5 in all content courses taken at UNC that may count toward the major.

For admission to Student Teaching, the student must have:

- satisfactorily completed at least 30 semester hours of content courses that may count toward the math major, including: MATH 221, MATH 321 and MATH 341;
- satisfactorily completed Phases One, Two and Three of the Secondary Teacher Education Program;
- a GPA of at least 2.5 in content courses taken at UNC that may count toward the major.

The GPA in the content courses will be computed by the Department of Mathematical Sciences according to procedures approved by the departmental faculty that are in place at the time the student's application for admission to PTEP, or to student teaching, or for graduation.

Content courses that may count toward the major are those mathematics, statistics and/or computer courses specified in the Catalog as required courses for the major, or as program electives in the major.

It is recommended that students take MED 272, Mathematics Tutoring, for two semesters.

It is recommended that students take MATH 341, Introduction to Modern Geometry, before taking MATH 464.

**PHYSICS, B.S. — PTEP PROGRAM**

“Physical Science Middle Grades and Secondary Teaching Emphasis” on page 186

Recommended Related Course: MATH 395 Topics in Mathematics for Teachers (3)

PHYS 343 or PHYS 345 may be substituted for PHYS 347 by petition.

“Secondary Teaching Emphasis” on page 187

PHYS 343 Digital and Analog Electronics (4) (Is strongly recommended)

MATH 233 Calculus III (4) (May be substituted for PHYS 320)

**SOCIAL SCIENCE, B.A. — PTEP PROGRAM**

“Social Studies Middle Grades and Secondary Grades Teaching Emphasis” on page 191

Students must earn a grade of “C” or better in all history and social sciences courses.

A minimum of 18 semester hours of the total 27 hours required in concentrations must be at the 300-400 level.

To be recommended for admission to PTEP's students must complete a minimum of 12 semester hours in the major (at least 9 hours at UNC) encompassing three different social studies major disciplines with a 2.75 grade point average or higher in those courses taken at UNC and counting toward the major. Social science majors must successfully complete at least 30 hours in the major with a 2.75 grade point average or above in courses taken at UNC prior to applying for student teaching and complete SOSC 300 and SOSC 341 with a grade of “C” or better.

**SPANISH, B.A. — PTEP PROGRAM**

“Secondary Teaching Emphasis” on page 194

Students wishing to be licensed must complete FL 341.

It is recommended that Spanish majors take HIST 118 and either HIST 314 or HIST 315.

In order to gain permission to apply for student teaching, a Spanish major must successfully pass the department's oral proficiency interview.

All Spanish language courses to be counted for the major and minor must be beyond the first year level.

Courses with the SPAN prefix are taught in Spanish and courses with the HISP prefix are taught in English.

## **THEATRE ARTS, B.A. — PTEP PROGRAM**

**“Secondary Teaching Emphasis” on page 199**

Admission to the Bachelor of Arts in Theatre Arts, Teaching Emphasis degree program is by interview only.

In addition to fulfilling program procedures and course requirements, a theatre education emphasis student must have and maintain a minimum grade point average of 3.0 in Theatre Arts and a 2.80 GPA for overall University coursework. Failure to do so will result in the student's discontinuance from the Theatre Arts/Education emphasis.

All Theatre Education emphasis majors must demonstrate professional promise as a teacher to the satisfaction of the Theatre Arts Faculty.

The Department of Theatre Arts requires student majors to consult with and be advised by a faculty member teaching in the department.

A teaching minor is highly recommended. Students must remember that in the public schools of the State of Colorado more than half the teaching load must be done in the area of licensure. A student desiring this licensure should be prepared for many additional requirements in content and in methods and observation in the minor field.

This program meets the current licensure requirements for teaching drama in the secondary schools of Colorado.

This program meets the current minimum requirements of the North Central Association for teachers of drama.

Attendance at or involvement with all productions of the Little Theatre of the Rockies is required during residency.

The Colorado Commission on Higher Education and this Department require the completion of a yearly assessment process in this emphasis area. The assessment, which includes an evaluation of your year's progress as well as a yearly audition or interview, may be the basis of your continuance in this emphasis area.

Any student receiving a grade of “D” or lower in a course in the emphasis must retake the course until a grade of “C” or higher is achieved.

\*THEA 385 is a PTEP requirement taken concurrently with STEP 363. Any student receiving a grade of “D” or lower in a course in the emphasis must retake the course until a grade of “C” or higher is achieved.

Students who are in theatre education must apply for admission to the Professional Teacher Education program (PTEP). Students are responsible for familiarizing themselves with the requirements in the PTEP section of the catalog. It is recommended that application for PTEP be made during the sophomore year, or after completing 30 semester hours of University coursework and no later than the first semester of the junior year. Students must complete the College of Education PTEP requirements (see Theatre Education advisor).



## K-12 PROFESSIONAL TEACHER EDUCATION PROGRAM

### Degree Requirements — 120-128 Credits

The University of Northern Colorado prepares K-12 teachers in the areas of art, music, physical education and special education. The focus of the K-12 Professional Teacher Education Program (PTEP) is to prepare new teachers who will be familiar with the process of reflective teaching in such a way that they are able to continue growing and developing towards becoming master teachers. The emphasis of the K-12 program is on content and pedagogy within the context of the major discipline. Within the K-12 program, prospective teachers are involved in a series of structured clinical and field experiences with kindergarten through high school students in order to integrate effective pedagogical strategies with appropriate classroom content.

In addition to their content program, all prospective teachers in the K-12 PTEP take a common pedagogical core that complements their respective programs. For additional information: *Please See "Teacher Education: Professional Teacher Education Programs (PTEPs)" on page 73.*

#### Required General Education Credits — 40 hours

#### Required Program PTEP Requirements — 11-43 hours

#### Required Major Credits — 43-16 hours

#### K-12 Program Area Requirements — 11-43 hours

(Music Education, Physical Education, Visual Arts: Art Education and Special Education)

#### K-12 Required PTEP Core coursework — 26-33 hours

EDFE 270 Field Based Experience (2)

EDF 366 Conceptions of Schooling: Context and Process (4)

and complete one of the following courses, based on preferred teaching level:

EPSY 347 Educational Psychology for Elementary Teachers (3)

EPSY 348 Educational Psychology for Middle School Teachers (3)

EPSY 349 Educational Psychology for Secondary Teachers (3)

and complete the following courses:

EDRD 340 Developing Language and Literacy in the Content Areas (3)

EDSE 433 Exceptional Students in the Regular Classroom (2)

EDFE 444 Supervised Teaching (1-15)

**Note:** (Required for SES majors only: EDFE 170 and SES 266). Students completing a licensure program in Music, Physical Education, Visual Arts and Special Education will make formal application while enrolled in EDFE 270. A minimum grade point average of 2.50 is required prior to enrollment. First semester transfer students may enroll their first semester on campus and the GPA will be evaluated at the end of the semester. In addition to courses required in the major, students will also be required to complete the courses listed under Professional Teacher Education programs located in the beginning of the Catalog. Students wishing to take pedagogical core courses concurrent with EDFE 270 should contact their major department.

## K-12 PROGRAMS (PTEPs)

### MUSIC EDUCATION, B.M.E. — PTEP PROGRAM

"Instrumental Music K-12 Teaching Emphasis" on page 182

"Vocal, Piano and General Music K-12 Teaching Emphasis" on page 182

#### Music Education PTEP Requirements:

A teacher candidate must meet an oral English proficiency requirement. Listed below are two options for meeting this requirement:

- *Option 1:* Complete a university-level public speaking course taken for credit for a grade of "B" or better. At UNC, this course is SPCO 100 and SPCO 103. If a teacher candidate does not receive a grade of "B" or better, the student must repeat SPCO 100 and SPCO 103 or complete *Option II* before being fully

admitted to the Professional Teacher Education Program.

- *Option II:* A teacher candidate may demonstrate oral English proficiency by making an oral presentation before a panel of selected individuals. Information regarding registration dates and evaluation procedures is available from the Career Services Office. The presentation is by appointment only. There is a fee for the oral presentation.

Students must enroll in individual performance, major musical organizations, and MUS 100-Recitals, Concerts and Productions for seven semesters.

Music Education students are encouraged to enroll in non-required music courses to increase their knowledge base and skills toward becoming a music teacher, i.e., accompanying, counterpoint, diction, ensembles, form and analysis, instrumentation, jazz pedagogy, music education methods, perceiving the arts, and upper division music history courses.

Demonstrate proficiency in functional piano. Each entering student must schedule a conference/audition with the piano faculty to determine proficiency level and recommendations for further study, if any. Students must pass a formal piano proficiency exam.

Each entering student must demonstrate knowledge of music literature and styles by examination. Students will receive recommendations for further study dependent upon examination results.

A Senior Recital is required. The senior recital must be performed during a semester other than the student teaching semester.

In addition to requirements for admission to the Professional Teacher Education Program as established by the Professional Education Council, music education students must meet the following departmental requirements:

- Demonstrate an acceptable level of performance on the major instrument. Evaluation will be through jury examinations conducted by music faculty and scheduled performances in the weekly recital series.

- Attain a minimum grade of "C" in the following required music theory courses: MUS 101, MUS 102 and MUS 201 and receive a minimum overall cumulative grade point average of 2.50 in these three courses. A student who is not in compliance with the GPA criterion for music theory courses listed above may petition in writing for further consideration through the Music Education and Music Theory Departments. (As per University policy, a student may repeat MUS 101, MUS 102, or MUS 201 as many times as desired, with the understanding that the grade for each course repeated will be calculated by the Registrar as part of the student's GPA; however, the number of credits per course toward graduation will be used only once. For Departmental purposes, the highest grade for each of the music theory courses listed above will be used to calculate the music theory GPA.)

- Demonstrate professional promise as a teacher to the satisfaction of the music education faculty, including an interview with the faculty at the conclusion of MUS 210 Introduction to Music Education.

- Meet all music performance and recital attendance requirements listed in the respective departmental handbooks.

- Continue to show professional growth in becoming a music teacher.

Failure to meet the criteria listed above will result in either provisional admission or denial of admission to the PTEP Program.

### SPECIAL EDUCATION, B.A. — PTEP PROGRAM

See "Special Education, B.A." on page 195

Students must have a 2.75 GPA at UNC by the time 30 semester hours are completed. First semester transfer students' GPA will be reviewed at the end of the first semester on campus. Students must have a 3.0 GPA to enroll in EDSE 444.

Special Education majors do not take EDRD 340, EDSE 433 and EDFE 444; required major courses will meet these requirements (EDSE 201, EDRD 410 and EDSE 444).

This major allows K-12 special education teachers to learn and apply the roles and responsibilities they must perform on a daily basis:

- assess and identify students with disabilities;

- plan an Individualized Education Program in collaboration with other professionals and parents under the rules and regulations of the Individuals With Disabilities Education Act and the Colorado Exceptional Children Education Act;
- provide direct individualized instruction and interventions in learning and behavior to meet the unique needs of students with disabilities; provide support to students with disabilities in the general education curriculum through consultation and collaboration with general education teachers; and provide adaptations and support systems in collaboration and consultation with general education teachers; thereby providing an advantage to the student attaining this degree over those preparing to teach with a Liberal Arts Degree.

## **SPORT AND EXERCISE SCIENCE, B.S. — PTEP PROGRAM**

**“Physical Education K-12 Teaching Emphasis” on page 197**

**Admission Criteria.** While enrolled in SES 266 formal application and admission requirements for Professional Teacher Education and the Physical Education K-12 Teacher Education Programs will be completed. Prior to enrollment in SES 266 students must have a minimum overall grade point average of 2.5, completed a minimum of 30 credit hours, completed a minimum of 9 credits in the K-12 Physical Education major (“C” or better), and achieved a minimum major GPA of 2.7.

**Transfer Applicants and Change of Major Students.** First semester transfer applicants who have completed a minimum of 30 credit hours may enroll in SES 266 their first semester on campus if their overall GPA at another institution is a 2.5 or higher.

- Transfer and change of major students admitted must attain a minimum 2.7 GPA and a 2.5 overall GPA prior to enrollment in SES 266.
- A maximum of 15 hours may be transferred to the major from other institutions.

**Program requirements.** Must maintain a 2.5 overall and a 2.7 major GPA to retain full admission in both SES, K-12 and the PTEP. Provisional status will prevent the student from enrolling in upper division courses in the SES K-12 major.

- Have a “C” or better in all required courses in SES K-12. Major courses receiving a grade of “D” or lower must be retaken until a grade of “C” or higher is achieved.
- Demonstrate professional promise as a teacher to the satisfaction of the Physical Education Teacher Education Faculty. Means of evaluation may include, but are not limited to, letters of intent and interviews with the SES faculty.
- Prior to student teaching, students must have successfully completed all required Sport and Exercise Science K-12 Licensure Program courses, be fully admitted to the major and PTEP programs and pass the PLACE examination.
- Meet all Physical Education and state standards at a provisional level as listed in the departmental handbook.
- Show continuous growth in becoming a physical education teacher.

Students who wish to be licensed to teach in the State of Colorado must make application upon completion of their program.

Students who plan to apply for K-12 Teacher Licensure in the State of Colorado must student teach at both the elementary and secondary levels. Before student teaching, students must have completed all required Sport and Exercise Science K-12 Licensure Program courses (40 semester hours).

## **VISUAL ARTS, B.A. — PTEP PROGRAM**

**“Art K-12 Teaching Emphasis” on page 200**

Students who are in art education must apply for admission to the Professional Teacher Education program (PTEP). Students are responsible for familiarizing themselves with the requirements in the PTEP section of the catalog. At the time application is made to PTEP, the student must also apply for the Art Education/PTEP.

\*\*Full admission to the art education PTEP requires satisfactory completion of SPCO 100 and SPCO 103, equivalent courses from another school, or demonstrated competency in oral English by approved proficiency examination.

\*\*\*Application to the Art Education/PTEP requires the completion of EDFE 270. Art education students must complete this requirement by taking one semester hour in an elementary art classroom and one semester hour in a secondary art classroom or in an equivalent situation with elementary or secondary age students.

It is recommended that application for PTEP be made during the sophomore year, or after completing 30 semester hours of University coursework and no later than the first semester of the junior year. Application to PTEP must be made at the beginning of the semester. Application to PTEP requires the student to have declared a major in art. A copy of the requirements for departmental admission to PTEP should be obtained from the art education advisor before making application for PTEP.

In addition to fulfilling program procedures and course requirements, an art education student must have and maintain a minimum grade point average of 3.0 in Art and a 2.80 GPA for overall University coursework. Failure to do so may result in the recommendation to discontinue the art education emphasis.

Before receiving approval to student teach, an art education student must complete the Comprehensive Art Education PTEP review. The review is scheduled each semester of the academic year. Students are advised to complete the review at least one semester before the semester they plan to student teach. In order to take the comprehensive review, students must have completed the prerequisites and be currently enrolled in the art education emphasis.

The PTEP review will evaluate students on their knowledge and successful demonstration of: professional portfolio preparation of art work, mastery of media and techniques, the elements and principles of art, content in art work, art history and cultures, and verbal and written critical analysis. The PTE review also assesses knowledge and successful demonstration of art education pedagogy. All students preparing for the review should work closely with their advisor.

The PTE committee will determine whether the student: satisfactorily passes the review and is approved to student teach; passes with stated conditions that must be met before gaining approval to student teach; or fails to pass the review. A student who fails the review will not be approved to student teach, but may apply for a second review the following semester. Failure to pass the review a second time will be considered grounds for terminating the student's art teacher licensure program. The decision of the committee on a second review may be appealed.

Eligibility to student teach is based on the satisfactory completion of the Art Education PTEP review, required and elective art courses, required art education courses, PTEP courses, PLACE examination and exit or competency examinations as they pertain.

Art students who are not in the art education emphasis and are not seeking licensure, may enroll in art education courses to provide background for teaching art in the helping professions and other related areas, such as community art centers. Appropriate advising is recommended to plan a suitable course of study for a non-licensure program.



# COURSE DESCRIPTIONS

## UNC COURSE PREFIXES, 2003-2004

AFS — Africana Studies (228)	EDMG — Elementary Education: Middle Grades (256)	LIB — University Libraries (286)
ANT — Anthropology (228)	EDMS — Elementary Education: Middle School (256)	MAS — Mexican American Studies (280)
ART — Visual Arts (229)	EDRD — Elementary Education: Reading (257)	MATH — Mathematics (287)
AS — Aerospace Studies (233)	EDSE — Special Education (259)	MCS — Multicultural Studies (289)
AST — Astronomy (234)	EED — English Education (263)	MED — Mathematics Education (289)
BA — Business Administration (234)	ELPS — Educational Leadership and Policy Studies (264)	MET — Meteorology (290)
BAAC — Accounting (234)	ENG — English (265)	MIND — Life of the Mind Program (291)
BACS — Computer Information Systems (235)	ENST — Environmental Studies (267)	MS — Military Science (291)
BAFN — Finance (236)	EPSY — Educational Psychology (268)	MT — Musical Theatre (292)
BAMG — Management (237)	ESCI — Earth Sciences (269)	MTEC — Medical Technology (292)
BAMK — Marketing (238)	ESL — English as a Second Language (270)	MUS — Music (293)
BCHM — Biochemistry (238)	ET — Educational Technology (270)	NURS — Nursing (301)
BIO — Biology (238)	FL — Foreign Languages (271)	OCN — Oceanography (303)
CED — Computer Education (241)	FND — Food, Nutrition and Dietetics (272)	PHIL — Philosophy (303)
CG — Computing, General (241)	FR — French (272)	PHYS — Physics (304)
CH — Community Health (242)	GEOG — Geography (273)	PLP — Presidential Leadership Program (305)
CHED — Chemistry Education (243)	GEOL — Geology (274)	PPSY — Professional Psychology (305)
CHEM — Chemistry (243)	GEP — General Education Pilot (275)	PSCI — Political Science (308)
CHIN — Chinese (245)	GER — German (276)	PSY — Psychology (309)
CIE — Center for International Education (245)	GERO — Gerontology (276)	REC — Recreation (311)
CMDS — Communication Disorders (245)	HESA — Higher Education and Student Affairs Leadership (277)	RUS — Russian (312)
CRJ — Criminal Justice (248)	HHS — Health and Human Sciences (279)	SCED — Science Education (312)
CS — Computer Science (248)	HISP — Hispanic Studies (280)	SCI — Science (312)
DNCE — Dance (249)	HIST — History (280)	SES — Sport and Exercise Science (313)
ECON — Economics (250)	HON — Honors Program (284)	SOC — Sociology (318)
EDEC — Elementary Education: Early Childhood (251)	HRS — Human Rehabilitative Services (284)	SOSC — Social Science (320)
EDEL — Elementary Education (252)	HUM — Humanities (285)	SPAN — Spanish (321)
EDF — Foundations of Education (255)	ID — Interdisciplinary Studies (285)	SPCO — Speech Communication (322)
EDFE — Educational Field Experiences (255)	JAPN — Japanese (285)	SRM — Statistics and Research Methods (324)
EDLD — Education of Linguistically Different (255)	JMC — Journalism and Mass Communications (286)	STAT — Statistics (325)
EDLS — Educational Field Experience: Laboratory School (256)		STEP — Secondary Teacher Education Program (326)

**Course Credit.** As indicated elsewhere in this Catalog, The University operates on a semester system. All credit toward graduation is computed in “semester” credit hours. “One credit hour” means a course is taught for one hour one day each week through the academic semester of approximately 15 weeks.

Courses may be repeated for credit only when the Catalog so indicates and only up to the maximum number of credits shown.

Students may register in a course for “no credit,” but must pay the appropriate tuition and fees. No audit or visitor cards are issued.

**Course Numbers.** The University divides its courses into four groups identified by course numbers. These numbers generally indicate the difficulty of a course and its location on a continuum of systematic study that will lead to general mastery of the content and methodology of a discipline.

**Course Prefixes.** In addition to a number that identifies where a course fits within a discipline, each course is assigned a prefix that identifies the appropriate discipline, field or department. For example, the numerical designations for the courses in Communication Disorders are preceded by CMDS; the numerical designations for courses in Mathematics are preceded by MATH; and the numerical designations for courses in Visual Arts are preceded by ART.

**Basic Skills** courses are designed to teach academic skills and general competencies necessary to succeed in college. These courses, numbered 001 through 009, do not count in term, cumulative or total credits and are not calculated into the GPA.

**Lower division** courses include those numbered in the 100 range for freshmen students, and those numbered in the 200 range for sophomores.

**Upper division** courses include those numbered in the 300 range for juniors, and those numbered in the 400 range for seniors.

**Graduate courses** include those numbered in the 500, 600 and 700 ranges. Qualified juniors and seniors may be admitted to 500 level courses by special permission of the instructor, but no undergraduates may be admitted to 600- or 700-level courses.

**New courses** approved between catalogs will end with a “98.” These courses are not listed in the Catalog, but will appear in the *Schedule of Classes*. For example, a new course in Geology might be GEOL 398.

The permanent course number will be implemented in the next Catalog.

## AFS — AFRICANA STUDIES

### AFS 100 Introduction to Africana Studies (3)

Reviews the emergence of Africana Studies as an interdisciplinary field and also presents a rudimentary panorama of African American history. Methodological questions and intellectual debates within the field are introduced. (GenEd)

### AFS 101 Crisis of Identity (3)

Addresses social conditions that lead to formation of black identity in America. Of special interest are Negro-to-Black conversion experience, concept of racism, subordination and role of Afro-American culture. (GenEd)

### AFS 102 The Black Woman in America (3)

Review the contributions of African American women historically in this country in the areas of social and political struggle, education, business, science and sports.

### AFS 104 Survey of Africa (3)

Explores the geography, culture, philosophy, history, art, politics, economics, women and literature of Africa.

### AFS 201 African American History I (3)

A survey of the black experience from the African homeland to initial capture, enslavement and emancipation – 1619 - 1865. (GenEd)

### AFS 202 African American History II (3)

Examines the lives of African Americans from emancipation to the present. (GenEd)

### AFS 230 Black Women in Literature (3)

A study of black women writers in Africa and the African Diaspora.

### AFS 240 Dynamics of Racism (3)

Racism, its social connection to human physical difference (i.e. race) studied. References made to African/European relations, development of racist thought, major sociological models used in United States, re: race relations.

### AFS 305 Survey of African American Literature (3)

Prerequisite: ENG 122. Literature by people of African descent receives selective attention: African, Latin American, Caribbean, African American works are explored. Genres: political tract, novel, essay, autobiography, folk literature considered at various historical junctures. (GenEd)

### AFS 332 Pan-Africanism (3)

Traces the development of Pan-Africanism on the African Continent and its effects in African American, Latin American and Caribbean contexts.

### AFS 340 The Black Family (3)

A social system approach to the study of the African American family, dynamics of family relationships and effects of social, political and economic institutions on black family life.

### AFS 360 Music and the Black Experience (3)

The historical, thematic and stylistic development of black music from ancient Africa to the present.

### AFS 386 Modern African World (3)

Comparison of various nationalist movements of the African Continent that led to liberation and independence and emphasis on African experience since the 16th Century.

### AFS 395 Aspects of the African-American Experience (3)

Topics include Afro-American cultures, black psychology and black media. Repeatable, under different subtitles.

### AFS 396 African and African American World Views (3)

African and African American world views. A study of the philosophy of people of African descent from ancient Africa to the New World.

### AFS 399 Community Study Project (1-4)

Do field work in a community-based project in housing, education or social services. Repeatable, maximum of four credits.

### AFS 420 Black Urban Politics (3)

Examine the concept of Black Power within the context of American government and laws. The case of the black mayor in an urban environment is carefully assessed, presenting obstacles and opportunities. (GenEd)

### AFS 422 Directed Studies (1-4)

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

### AFS 456 Leadership and the Black Church (3)

Investigates the role of the Black Church in the development of the African American family, philosophy and leadership style from slavery to the present.

### AFS 486 Current Issues in Multicultural Education (3)

Explores different pedagogical and methodological strategies for understanding and teaching multicultural and diversity issues in the classroom.

### AFS 490 Seminar in Africana Studies (3)

Prerequisites: AFS 100, AFS 104, AFS 201, AFS 202 or consent of instructor. Preparation for advanced reading and research in Africana Studies. Topics address theories, research methodology and issues of current interest in Africana Studies research. Consultation required on research project chosen by student.

## ANT — ANTHROPOLOGY

### ANT 100 Introduction to Anthropology (3)

An introduction to archaeology, physical and cultural anthropology and linguistics, emphasizing the comparative approach and an evolutionary perspective. (GenEd)

### ANT 110 Introduction to Cultural Anthropology (3)

A course in the concept of culture, how cultural processes work, variation in cultural practices, the method of cross-cultural comparison and culture change. (GenEd)

### ANT 120 World Archaeology (3)

A broad background in prehistoric archaeology reviewing important sites around the world. Emphasis will be on anthropological interpretation of archaeological materials, the evolution of past cultures and cultural processes. (GenEd)

### ANT 121 Archaeology of Colorado (3)

Study of Colorado Native American peoples from ancient mammoth hunters to those encountered by the first Spanish explorers. Environmental and cultural adaptations emphasized.

### ANT 130 Introduction to Physical Anthropology (3)

A course in evolutionary theory, primate biology, human paleontology, and human adaptation; focusing on the evolution of humans and the impact of culture on our evolutionary biology. (GenEd)

### ANT 210 Field Methods in Cultural Anthropology (3)

Prerequisite: ANT 100 or ANT 110 or GEOG 100 or SOC 100 or equivalent. Introduction to fieldwork methods in cultural anthropology. Study ethnographic techniques through first-hand investigation of other cultures.

### ANT 220 Archaeological Research Methods (3)

Prerequisite: ANT 100 or ANT 120 or equivalent. Review field methods and laboratory techniques utilized in prehistoric archeology. Topics include locational analysis, stratigraphy, typological analysis, dating techniques and research publication.

### ANT 230 Anthropometrics (3)

Learn skills of measuring and analyzing information on human biological variability. Topics include the analysis of physique, habitual activity analysis, health screening and statistical techniques for describing samples of data.

### ANT 310 World Cultures (3)

Prerequisite: ANT 100 or ANT 110 or GEOG 100 or SOC 100. In depth study of selected world cultures representing a variety of subsistence technologies and levels of sociocultural integration.

### ANT 311 Latin American Cultures (3)

Prerequisite: ANT 100 or ANT 110 or equivalent. A survey of Latin American cultures with an emphasis on the popular cultures of the region. Students will also do research in the Latin communities of Weld County.

### ANT 312 North American Indians (3)

Survey the culture areas of Native American groups in North America, with a focus on the United States.

**ANT 313 Modernization and Development (3)**

Prerequisite: ANT 100 or ANT 110 or GEOG 100 or SOC 100 or equivalent. Study the processes by which cultures change and modernize, focusing on economic, political, legal and symbolic concerns in developed and developing nations.

**ANT 314 Sex Roles in a Cross-Cultural Perspective (3)**

Study biologically and culturally determined gender role differences by comparing sex-related behavior in a variety of cultures. (GenEd)

**ANT 315 Life History and Culture (3)**

A course in ethnographic writing focusing on methods of life history/life cycle research and analysis. Students will learn cultural interviewing techniques and will complete a written life history. (GenEd)

**ANT 317 Contemporary Native American Issues (3)**

Deals with the cultural, historical, social, political and legal analysis of the status of contemporary American Indians in the United States. (GenEd)

**ANT 318 Native American Women (3)**

Prerequisite: ANT 312. Examine the role and status of Native American women. The traditional roles, the changes that have occurred as a result of contact and the contemporary period are examined.

**ANT 321 Prehistory of the Americas (3)**

Prerequisites: ANT 100 or ANT 120, or equivalent. Study selected prehistoric American Indian cultures with an anthropological focus. This course covers the time from the peopling of the New World to European discovery.

**ANT 323 Ancient Civilizations (3)**

Prerequisite: ANT 100 or ANT 120 or equivalent. A comparative study of the rise of state societies throughout the world with focuses on the Near East, Africa, Asia, South America and Mesoamerica.

**ANT 325 Fieldwork in Archaeology (4)**

Prerequisite: ANT 100 or ANT 120 or equivalent. Required laboratory arranged. Introduction to archaeological field methods through participation in an archaeology field experience for four weeks during the summer. Participation fee.

**ANT 330 Forensic Anthropology (3)**

Prerequisite: ANT 130 or ANT 120 or SOC 141 or equivalent. Required laboratory arranged. A course in human osteology emphasizing skeletal anatomy and the identification of age, sex, stature, pathology and race in skeletal material. Archaeological, paleontological and forensic applications will be presented.

**ANT 408 Workshop in Anthropology (3-12)**

Consent of instructor. Topics in practicing anthropology. Group experiences in working on selected problems in anthropology. Repeatable, under different subtitles.

**ANT 422 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**ANT 430 Human Evolutionary Anatomy (3)**

Prerequisites: ANT 100 or ANT 120 or ANT 130 or consent of instructor. A detailed study of the structure and functions of the human musculoskeletal system in a comparative and evolutionary perspective.

**ANT 470 Seminar in Anthropology (3)**

Prerequisite: ANT 100, or ANT 130, or GEOG 100 or SOC 100 or equivalent. A seminar exploring diverse topics surrounding the question of defining human nature. Repeatable, maximum of nine credits under different subtitles.

**ANT 480 Theory and Practice in Anthropology (3)**

Prerequisite: ANT 100 or equivalent. A seminar on the relations between anthropological theories of culture and social process and the practice of anthropological observation and analysis.

**ANT 492 Internship (3-12)**

Prerequisites: 9 hours of ANT courses. Anthropological field experiences in ethnology, museology, education, government or politics. Repeatable, may be taken 12 credits.

**ANT 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**ANT 525 Fieldwork in Archaeology (4)**

Prerequisite: ANT 100 or ANT 120 or equivalent. Required laboratory arranged. Introduction to archaeological field methods through participation in an archaeology field school experience. Students will participate in an on-going archaeological research project for four weeks during the summer. Participation fee.

**ANT 622 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**ART — VISUAL ARTS****ART 171 Computer Based Technology in Visual Arts (2)**

Principles and practices in applying computer graphics in art. General computer orientation: hardware/software configuration, peripherals. Students will create electronically generated art graphics. No experience in computer science is required.

**ART 181 History of Art I (4)**

A general survey of Western art from Pre-Historic (35000 B.C.E.) through Medieval (1400 A.C.E.). Emphasis on major movements and civilizations, methods of analysis, historical and cultural context. (GenEd)

**ART 182 History of Art II (4)**

A general survey of Western art from Proto-Renaissance (1200 A.C.E.) through Modern art of the 21st century. Emphasis on major movements/civilizations, methods of analysis, historical and cultural context. (GenEd)

**ART 183 Art I (3)**

Corequisite: ART 181. Elements and principles of art. Exploration of the elements of line, shape and color in two-dimensional and three-dimensional design and drawing projects. Experiences in conceptualization and visual problem solving.

**ART 184 Art II (3)**

Corequisite: ART 182. Elements and principles of art. Exploration of the elements of value, space, and texture in two and three-dimensional design and drawing projects. Experiences in conceptualization and visual problem solving.

**ART 190 Art Appreciation (3)**

Non-majors only. Required for Elementary Education certification. Introduction to further enhance an understanding and appreciation of the functional and expressive nature of architecture, painting, sculpture and the applied arts. (GenEd)

**ART 210 Ceramics for Non-Art Majors (3)**

Learn ceramic basic design, hand building techniques of ceramic forms and methods of firing. Overview of historical development of pottery and contemporary work in ceramics. (GenEd)

**ART 211 Ceramic Design (3)**

Prerequisite: ART 183 and ART 184 or instructor consent. Design, construct and fire ceramic forms using several different approaches to hand building and firing. Receive general background in the history of ceramic arts, clays, glazes and methods of firing.

**ART 212 Wheel Throwing (3)**

Prerequisite: ART 183 and ART 184 or instructor consent. Begin throwing on the potter's wheel. Learn techniques of centering, opening and raising clay into basic pottery forms.

**ART 221 Fiber Design I (3)**

Prerequisite: ART 183 and ART 184 or instructor consent. A studio course involving several fiber construction processes and fabric surface treatments in two or three dimensions.

**ART 223 Weaving (3)**

Prerequisite: ART 183 and ART 184 or instructor consent. Introduction to the fundamentals of loom weaving as an art form, emphasizing applied design problems.

**ART 230 Drawing for Non-Art Majors (3)**

Study of the history of the development of drawing and its importance as an expressive medium in the evolution of mankind. Studio experience in drawing fundamentals.

**ART 231 Painting I (3)**

Prerequisites: ART 183, ART 184. Fundamentals of painting. Materials and techniques in basic procedures of studio painting using acrylic paint.

**ART 234 Drawing I (3)**

Prerequisites: ART 183, ART 184. Deal in depth with concepts, techniques and materials. Problem areas include composition, content, technical concerns, use of color and a range of material use from traditional to contemporary alternatives.

**ART 240 Lettering (3)**

Prerequisite: ART 183 and ART 184 or instructor consent. Receive studio practice and study the history of lettering and manuscripts. For the student with little or no experience in art.

**ART 241 Basic Crafts Design (3)**

Prerequisite: ART 183 and ART 184 or instructor consent. Required for Art Education majors. Recommended for Education, Special Education and Recreation majors. Experience on introductory level of at least several school craft areas; clay, fibers, paper, textiles, plaster.

**ART 248 Art for the Exceptional Child (2)**

Overview characteristics, needs and instruction adaptations suitable for teaching Visual Arts to the exceptional learner.

**ART 252 Printmaking I (3)**

Prerequisites: ART 183 and ART 184 or equivalent. Introduction to intaglio printmaking techniques, including drypoint, engraving and etching in black and white. Traditional and experimental approaches are explored.

**ART 261 Sculpture I (3)**

Prerequisite: ART 183 and ART 184 or instructor consent. Introduction to materials, processes and concepts fundamental to making sculpture.

**ART 265 Jewelry (3)**

Prerequisite: ART 183 and ART 184 or instructor consent. Introduction to materials, processes and concepts basic to making jewelry.

**ART 270 Graphic Design I (3)**

Prerequisites: ART 183, ART 184. Introductory graphic design course covering fundamental design principles utilizing text and image. Projects are primarily hand generated and traditional processes are used.

**ART 271 Basic Photography (3)**

Consent of Instructor. Learn fundamentals of photography. Study principles of black and white photography, including exposing, processing, printing and finishing techniques.

**ART 290 Visual Thinking and Visual Images (3)**

Explore concepts of visual thinking, communication and the meaning of visual images as icons, signs and symbols. Analyze images and art objects. Learn and apply strategies for visual problem solving. (GenEd)

**ART 308 Workshop in Art (1-4)**

Arts workshops are for the study of specialized areas in art, art education, art history, graphic arts and related fields. Specific workshop content is determined by subtitle. Repeatable, no limitation.

**ART 312 Wheel Throwing (3)**

Prerequisite: ART 212. Learn to throw more challenging ceramic forms on the potter's wheel. Gain experience in the loading and firing of ceramic kilns. Repeatable, may be taken two times.

**ART 314 Ceramic Equipment and Materials (3)**

Prerequisite: ART 212 or equivalent. An investigation of ceramic materials, kilns and studio equipment that will provide the prospective potter or teacher with essential technical and practical knowledge.

**ART 321 Fiber Design II (3)**

Prerequisite: ART 221. Continue the study and exploration of fiber construction and fabric surface treatments with emphasis on their design applications.

**ART 331 Painting II (3)**

Prerequisite: ART 231 and either ART 234 or ART 333. Development of individual expression in studio painting and development of mastery of the medium in either acrylic or oil paints.

**ART 332 Watermedia Painting (3)**

Prerequisite: ART 231. Exploration of and rendering skills in watercolor and/or acrylic, gouache. Repeatable, may be taken two times.

**ART 333 Life Drawing (3)**

Prerequisite: ART 234. Fundamentals of life drawing emphasizing proportions, anatomy and aesthetic relationships. Repeatable, may be taken two times.

**ART 340 Clinical Experience: K-12 Art (2)**

For Art Education majors. Full admittance to PTEP or certification at the undergraduate level required. Consent of instructor. Gain practical experience in the classroom with a variety of materials, subject matter and with varying age groups. Requires classroom observation and participation with weekly seminar. Repeatable, maximum of four credits.

**ART 353 Intaglio Printmaking (3)**

Prerequisite: ART 183 and ART 184 or instructor consent; and ART 252 or equivalent. Continuing investigations in intaglio printmaking techniques, including aquatint and color printing. Individual imagery and technical development are emphasized. Repeatable, may be taken two times.

**ART 354 Relief Printmaking (3)**

Prerequisite: ART 183 and ART 184 or instructor consent. Investigations in relief printmaking media including linoleum cuts, wood cuts, wood engravings and collographs printed in black and white and in color. Repeatable, may be taken two times.

**ART 355 Silkscreen Printmaking (3)**

Prerequisite: ART 252 or equivalent. Study the silkscreen stencil process of printmaking, including the use of photosensitized screens and color on all levels. Repeatable, may be taken three times.

**ART 356 Monotypes (3)**

Prerequisite: ART 183 and ART 184 or instructor consent. Investigations in techniques of creating monotypes and monoprints (one-of-a-kind printed images). Individual imagery and technical development are emphasized. Repeatable, may be taken two times.

**ART 357 Artist's Books: Structures and Concepts (3)**

Prerequisite: ART 183 and ART 184 or instructor consent. Investigations in traditional and experimental approaches to creating handmade books. Original solutions and craft are emphasized. Repeatable, may be taken two times.

**ART 361 Sculpture II (3)**

Prerequisite: ART 261. Basic instruction in specific sculptural processes including modeling, casting, welding, fabrication, carving, etc. Repeatable, may be taken two times.

**ART 370 Graphic Design II (3)**

Prerequisite: ART 270. The continued study of the conceptual and applied aspects of graphic design. Mastery of computer as a design tool is stressed.

**ART 371 Photographic Design (3)**

Prerequisite: ART 271. Study and apply principles and theories of vision and perception as related to black and white and color photography.

**ART 374 Illustration (3)**

Prerequisites: ART 183, ART 184, ART 231. General survey and laboratory. Exploration of design, color and experimental techniques as applied to two- and three-dimensional illustration. For intermediate students.

**ART 375 Publication Production (3)**

Prerequisite: ART 271. Investigate graphic reproduction processes as related to the printing industry. Study the principles of producing publications including design, layout, copy preparation, photo conversion, image carriers, image transfer and finishing methods.

**ART 376 Typography (3)**

Prerequisite: ART 270, ART 370. Survey and exploration of type and letterforms. Origins and applications of type and the aesthetics of type. For the intermediate student.

**ART 380 Graphic Design III (3)**

Prerequisite: ART 270, ART 370 or equivalent. Intermediate problem solving in graphic design with an emphasis on studio techniques and procedures.

**ART 381 Tribal Art (4)**

Study the arts, concepts and culture of tribal societies, particularly African, Oceanic/South Seas and American Indian.

**ART 383 Pre-Columbian Art (4)**

Study the history and arts of Central America, emphasizing the Olmec, Maya, Mixtec, Zapotec, Aztec and Toltec civilizations and related subgroups.

**ART 384 History of the Goddess (3)**

Explore inherited images and ideas of the Goddess through a multimedia approach: slides, videos, texts, guest speakers, journaling, group sharing and a personal creative hands-on project.

**ART 385 Medieval Art (4)**

A detailed study of 12th, 13th and 14th century European art as it relates to medieval philosophy and its cultural context.

**ART 386 Renaissance Art (4)**

Study in detail the humanistic aspects of Renaissance art 1265-1600, including the evolutionary developments of Mannerism and the beginnings of Baroque art.

**ART 387 Artists of Color (3)**

Detailed survey of the work of artists of color from the 19th Century through the 20th Century in the United States. Exploration of racial discrimination and stereotyping and the history canon.

**ART 388 19th Century Art (4)**

Follow the development of European art through the 19th century from the Revivalist styles to the brink of Modern Art.

**ART 389 Twentieth Century Art (4)**

An in-depth study of the major art movements of the 20th century from the development of cubism to the present.

**ART 390 Women Artists (3)**

Detailed survey of the work of women artists from the Middle Ages to the 20th Century. Exploration of gender issues, feminism, discrimination, and the art history canon included.

**ART 395 Special Topics in Art (1-4)**

Study special topics in the visual arts. Specific course content is determined by subtitle. Repeatable, under different subtitles.

**ART 411 Ceramic Design (3)**

Prerequisite: ART 211. Intermediate level design of hand built ceramic forms. An exploration of stoneware, raku and sodium vapor firing processes. Repeatable, may be taken two times.

**ART 415 Ceramic Studio (1-3)**

Consent of instructor. Individualized or specialized study on specific topics in ceramics. Repeatable, may be taken two times.

**ART 421 Fiber Design (3)**

Prerequisite: ART 321. Concentration on an advanced level in a selected process involving fibers. To provide more time for personal design development and expertise. Repeatable, may be taken two times.

**ART 422 Directed Studies in Art (1-4)**

Art Majors only. Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**ART 423 Weaving (3)**

Prerequisite: ART 223. Continue the study of loom weaving, particularly loom-controlled techniques. Repeatable, may be taken two times.

**ART 425 Fibers Studio (1-3)**

Consent of instructor. Individualized or specialized study on specific topics in fibers. Repeatable, may be taken two times.

**ART 431 Painting III (3)**

Prerequisite: ART 331. Continued development of individual expression and mastery of the medium in either acrylic or oil paints. Emphasis on appropriate use of medium toward creative ends. Repeatable, may be taken two times.

**ART 434 Drawing II (3)**

Prerequisite: ART 234. Designed to encourage exploration of a broad variety of sources for drawing images, drawing concepts and thematic interpretation and expression. Designed for advanced drawing students. Repeatable, may be taken two times.

**ART 435 Drawing Studio (1-3)**

Consent of instructor required. Individualized or specialized study on specific topics in drawing. Repeatable, may be taken two times.

**ART 436 Painting Studio (1-3)**

Consent of instructor required. Individualized or specialized study on specific topics in painting. Repeatable, may be taken two times.

**ART 437 Computer Art (3)**

Principles and practices for computer application in the visual arts. Create art projects and gain knowledge of trends in computer graphics, digital technology and hardware/software configuration.

**ART 438 History of Computer Graphics (4)**

Prerequisite: Select one course: ART 171, ART 437, ART 443 or ART 471. Facts and aspects related to computer applications in arts, graphics, animation, interactivity and www. Analysis of concepts and approaches related to artistic quality and technological solutions in computer graphics.

**ART 439 Computer Graphics Studio (1-3)**

Consent of Instructor. Individualized or specialized study on specific topics related to computer graphics. Repeatable, may be taken two times.

**ART 440 Foundations of Art Education (2)**

Prerequisite: Full admittance to PTEP or certification at the undergraduate level. An in-depth study of the field of art education and pre-professional related areas including: learning theory, aesthetics and psychology.

**ART 441 Cultural Studies in the K-12 Curriculum (2)**

Prerequisites: ART 181 and ART 182. Full admittance to PTEP or certification at the undergraduate level. Teaching art based on cultural and historical context. Integrates cultural study integrated with art history, aesthetics and processes of critical inquiry as a basis for determining meaning in art.

**ART 442 Curriculum and Instruction in Art: Studio Strategies (2)**

Full admittance to PTEP or certification at the undergraduate level. Study curriculum development and art learning activities appropriate for instruction in elementary and secondary art education.

**ART 443 Computer Technology in Art Education (2)**

Full admittance to PTEP or certification at the undergraduate level. This course is designed to provide prospective teachers with principles and practices in applying computer graphics for educational purposes in the visual arts; integrating art production with general knowledge.

**ART 455 Printmaking Studio (1-3)**

Consent of instructor required. Individualized or specialized study on specific topic in printmaking. Repeatable, may be taken two times.

**ART 460 Sculpture Studio (1-3)**

Prerequisites: ART 261, ART 361. Self-directed studies in selected sculptural modes or processes. Repeatable, may be taken two times.

**ART 461 Sculpture III (3)**

Use of increasingly skilled or sophisticated techniques/processes with greater emphasis on idea, form and content. Repeatable, may be taken three times.

**ART 464 Jewelry Studio (1-3)**

Prerequisite: ART 265. Consent of instructor required. Individualized or specialized study on specific topic in jewelry. Repeatable, may be taken three times.

**ART 465 Advanced Jewelry (3)**

Prerequisite: ART 265. Extension of increasingly skilled and sophisticated techniques/processes in jewelry and metalwork. Repeatable, may be taken two times.

**ART 466 Visual Arts Student Teaching Seminar (1)**

Corequisite: EDFE 444. Full admittance to PTEP or certification at the undergraduate level. This seminar provides persons actively involved in the student teaching program in Visual Arts with a support system and pertinent information to assist them during their field experience.

**ART 469 Web Style Design (3)**

Prerequisites: One of the following courses: ART 171, ART 437, ART 443, ART 471, ART 537 or ART 571. Principles and practices in Website design: arts applications, designing quality pages, publishing, updating, securing web space. Internet concepts: HTTP, web server configuration, computer networks, search engines, file compression, Internet protocols.

**ART 470 Publication Design (3)**

Prerequisite: ART 270, ART 370, ART 376, ART 380. Advanced level graphic design course with an emphasis in publication and sequential design. Projects are aimed at building student's portfolios.

**ART 471 Computer Graphics (3)**

The course is designed to introduce principles and practices in computer graphics and to develop knowledge related to design and page layout.

**ART 472 Photography Studio (1-3)**

Instructor consent. Individualized or specialized study in photography. Repeatable, may be taken two times.

**ART 473 Corporate Identity (3)**

Prerequisite: ART 376. A studio and workshop approach to concept, layout and finished art/design for applied graphics in the advertising profession. Repeatable, may be taken three times.

**ART 474 Graphic Studio (1-3)**

Consent of instructor. Individualized or specialized study on specific topics in graphics. Repeatable, may be taken two times.

**ART 475 Color Photography – Transparencies (3)**

Prerequisite: ART 271. Learn color theory as related to reversal films. Plan, expose, process and finish transparency films for multi-projector visual presentations.

**ART 476 Advanced Black and White Photography (3)**

Prerequisite: ART 271. Improve black and white photographic skills. Learn experimental, interpretive and advanced camera and printing techniques.

**ART 477 Photographic Illustration and Lighting Techniques (3)**

Prerequisite: ART 271. Study studio lighting principles for black and white and color photography. Learn studio techniques for advertising, architectural, industrial-technical, portrait and commercial applications.

**ART 480 Art History Seminar (4)**

Discuss advanced and specialized art historical topic. Take concurrently with 300 level art history course. Subject area determined by subtitle. Repeatable, under different subtitles.

**ART 492 Internship in Art (1-5)**

Art majors only. Supervised professional activity in major field of study. Must spend a minimum of 30 clock hours per credit hour. Maximum of five credits per semester. Repeatable, under different subtitles.

**ART 500 Contemporary Issues in Art (1-3)**

In-depth inquiry into contemporary issues in the visual arts. Analytical and interpretive research on selected topics, including their antecedents and their implications. Repeatable, no limitations.

**ART 508 Workshop (1-4)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**ART 512 Wheel Throwing (3)**

Prerequisite: ART 312 or equivalent. Develop an individual approach to wheel thrown ceramic forms at an advanced level. Exploration of various methods of ceramic decoration and firing. Repeatable, may be taken two times.

**ART 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**ART 514 Ceramic Equipment and Materials (3)**

Prerequisite: ART 512 or equivalent. An investigation of ceramic materials, kilns and studio equipment that will provide the prospective potter or teacher with essential advanced level technical and practical knowledge.

**ART 521 Fiber Design (3)**

Advanced design techniques in fibers. Repeatable, may be taken two times.

**ART 523 Weaving (3)**

Concentrate in a selected area of weaving on an advanced design concept. Repeatable, may be taken two times.

**ART 532 Watermedia Painting (3)**

Advanced work in specific watermedia. Development of thematic imagery and personal technical skills. Repeatable, may be taken two times.

**ART 533 Life Drawing (3)**

Prerequisite: ART 333 or equivalent. Advanced life drawing emphasizing development of personal interpretations of the human form. Repeatable, may be taken two times.

**ART 537 Computer Art (3)**

Further exploration in applying computer graphics to the visual arts and integrating computer-based technologies related to design, desktop publishing and page layout. Some experience in computer graphics is recommended.

**ART 538 History of Computer Graphics (4)**

Prerequisite: Select one of the following courses: ART 171, ART 437, ART 537, ART 443, ART 471, ART 571. Facts and aspects related to computer applications in art, graphics animation, interactive art, www. Analyze and contrast images, concepts and approaches to artistic quality and technological solutions in electronic art.

**ART 541 Craft Design (3)**

Relate basic art and crafts to the field of art education, education and recreation, emphasizing materials, instructional techniques, tools and facilities. Read literature appropriate to area of study. Repeatable, may be taken two times.

**ART 553 Advanced Intaglio Printmaking (3)**

Prerequisite: ART 353 or consent of instructor. Advanced investigations in intaglio printmaking techniques, including color printing. Individual imagery and technical mastery will be emphasized. Repeatable, may be taken three times.

**ART 554 Advanced Relief Printmaking (3)**

Prerequisite: ART 354 or consent of instructor. Advanced investigations in relief printmaking techniques. Individual imagery and technical mastery are emphasized. Repeatable, may be taken three times.

**ART 556 Advanced Monotypes (3)**

Prerequisite: ART 356 or consent of instructor. Advanced investigations in monotype and monoprint techniques. Individual imagery and technical mastery are emphasized. Repeatable, may be taken three times.

**ART 557 Advanced Artist's Books: Structures and Concepts (3)**

Prerequisite: ART 357 or consent of instructor. Advanced investigations in traditional and experimental approaches to creating artists' books. Emphasis is on development of original solutions and mastery of traditional and innovative techniques. Repeatable, may be taken three times.

**ART 561 Graduate Sculpture (3)**

Self-directed or assigned work in specific areas of sculpture. Advanced technical skills emphasized. Repeatable, may be taken two times.

**ART 571 Computer Graphics (3)**

Designed to introduce principles and practices in computer graphics and to develop knowledge related to design and page layout.

**ART 575 Color Photography – Transparencies (3)**

Prerequisite: ART 271 or equivalent. Improve and develop individual creative skills in color photography using transparency materials. Learn to plan and produce multi-projector presentations using current materials, tools and processes.

**ART 576 Advanced Black and White Photography (3)**

Prerequisite: ART 271 or equivalent. Refine and improve individual skills in black and white photography. Study film and print manipulation with silver and non-silver materials.

**ART 577 Photographic Illustration and Lighting Techniques (3)**

Prerequisite: ART 271 or equivalent. Learn creative lighting techniques for illustration and portraiture. Study available light and studio lighting for black and white and color photography.

**ART 595 Special Topics in Art (1-4)**

Study special topics in the Visual Arts. Specific course content is determined by subtitle. Repeatable, under different subtitles.

**ART 600 Graduate Research in Art (3)**

Prerequisite: ART 500. Learn appropriate art, art historical and art education research methodology and procedures for inquiry. Present research according to approved style guidelines. Review Art program and Graduate School requirements.

**ART 611 Ceramic Design (3)**

Design and assembly of hand-built ceramic forms at an advanced level. An exploration of stoneware, raku and sodium vapor firing processes. Repeatable, may be taken two times.

**ART 615 Ceramic Studio (1-3)**

Consent of instructor required. Individualized or specialized study on specific topics in ceramics. Repeatable, may be taken two times.

**ART 621 Fiber Design (3)**

Prerequisite: ART 521. Continue advanced study of techniques and design concepts in fibers. Repeatable, may be taken two times.

**ART 622 Directed Studies in Art (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**ART 623 Weaving (3)**

Prerequisite: ART 523. Continue advanced study of techniques and design concept in a concentrated area of weaving. Repeatable, may be taken two times.

**ART 625 Fibers Studio (1-3)**

Consent of instructor. Individualized or specialized study on specific topic in fibers. Repeatable, may be taken two times.

**ART 631 Painting (3)**

Prerequisite: ART 431 or equivalent. Advanced problems in painting in either acrylic, oils or watercolor. Emphasis is on development of personal imagery and working in a series, thematic development. Repeatable, may be taken two times.

**ART 634 Drawing (3)**

Advanced work in development on thematic imagery, inventive media, unique and personal solutions to visual problems. Repeatable, may be taken two times.

**ART 635 Drawing Studio (1-3)**

Consent of instructor required. Individualized or specialized study on specific topics in drawing. Repeatable, may be taken two times.

**ART 636 Painting Studio (1-3)**

Consent of instructor required. Individualized or specialized study on specific topic in painting. Repeatable, may be taken two times.

**ART 639 Computer Graphics Studio (1-3)**

Consent of instructor. Advanced, individualized or specialized study on specific topics related to computer graphics. Repeatable, may be taken two times.

**ART 640 Literature of Art Education (3)**

Survey historical and contemporary literature on theory, research and practice in art education and related areas.

**ART 641 Art Curriculum and Instruction: Cultural Studies (3)**

Study methods for teaching art history. Research art analysis, art criticism and art theory for developing procedures for instruction.

**ART 642 Art Curriculum and Instruction: Studio Methods (3)**

Research and develop studio art content, processes and sequencing appropriate for the elementary and secondary art curriculum.

**ART 643 Computer Based Technology in Art Education (2)**

Consent of Instructor. Working knowledge and application of computer graphics for educational purposes. Develop art instruction program and strategies for a classroom including integrative issues through lectures, written assignments and activities.

**ART 648 Art and the Exceptional Student (2)**

Study art for the exceptional in depth. Involvement in the review of literature and research field in the development of an art curriculum specific to individual interest area.

**ART 655 Advanced Printmaking Studio (1-3)**

Consent of instructor. This class provides a working environment for large scale printmaking by utilizing all facets of printmaking techniques, serious edition printing and special projects. Repeatable, may be taken two times.

**ART 660 Graduate Sculpture Studio (1-3)**

Self-directed studies in selected sculptural modes or processes. Repeatable, may be taken two times.

**ART 661 Advanced Graduate Sculpture (3)**

Select problems in the creation of sculpture with emphasis on critical and technical competencies. Repeatable, may be taken two times.

**ART 669 Web Style Design (3)**

Prerequisite: ART 171, ART 443, ART 437, ART 537, ART 471, ART 571. Provide working knowledge about principles and practices in Website design in terms of art applications. Design knowledge related aesthetically to content for Web Page Layout.

**ART 672 Photography Studio (1-3)**

Instructor consent required. Advanced individualized or specialized study in photography for graduate students. Repeatable, may be taken two times.

**ART 680 Seminar in Art History (1-4)**

Discuss advanced and specialized art historical topics. Take concurrently with 300 level art history course. Subject area determined by subtitle. Repeatable, under different subtitles.

**ART 692 Internship in Art (1-5)**

Graduate art majors only. Supervised professional activity in major field of study. Must spend a minimum of 30 clock hours per credit hour. Maximum of five credits per semester. Repeatable, under different subtitles.

**ART 699 Thesis (1-6)**

Prerequisite: ART 600. A written thesis is required of all master's degree candidates in visual arts. The thesis must be approved by the supervising committee and meet all requirements of the Graduate School. S/U graded. Repeatable, no limitations.

**AS — AEROSPACE STUDIES****AS 101 The Foundations of the United States Air Force I (1)**

This course is designed to introduce students to the United States Air Force and Air Force Reserve Officer Training Corps.

**AS 102 The foundations of the United States Air Force II (1)**

This course is continuation of AS 101. See AS 101 for the course description.

**AS 103 General Military Course Leadership Laboratory I (1)**

This is a mandatory laboratory designed to compliment AS 101 by providing cadets with leadership, management and followership experiences. S/U graded.

**AS 104 General Military Course Leadership Laboratory II (1)**

This is a mandatory laboratory designed to compliment AS 102 by providing cadets with leadership, management and followership experiences. S/U graded.

**AS 201 The Evolution of USAF Air and Space Power I (1)**

This course examines air and space power through a historical perspective, covering a time period from the first balloons to space-age global positioning systems used in the Persian Gulf conflict.

**AS 202 The Evolution of USAF Air and Space Power II (1)**

This course is a continuation of AS 201. See AS 201 for the course description.

**AS 203 General Military Course Leadership Laboratory III (1)**

This is a mandatory laboratory designed to compliment AS 201 by providing cadets with leadership, management and followership experiences. S/U graded.

**AS 204 General Military Course Leadership Laboratory IV (1)**

This is a mandatory laboratory designed to compliment AS 202 by providing cadets with leadership, management and followership experiences. S/U graded.

**AS 301 Air Force Leadership Studies I (3)**

Laboratory required. This course is a study of leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, leadership ethics and communication skills.

**AS 302 Air Force Leadership Studies II (3)**

This course is a continuation of AS 301. See AS 301 for the course description.

**AS 401 National Security Affairs/Preparation for Active Duty I (3)**

Laboratory required. This course examines the national security process, regional studies, advanced leadership ethics and Air Force doctrine.

**AS 402 National Security Affairs/Preparation for Active Duty II (3)**

This course is a continuation of AS 401. See AS 401 for the course description.

**AST — ASTRONOMY****AST 100 General Astronomy (4)**

(3 lecture, 2 laboratory) The universe and our place in it. No mathematics background required. (GenEd)

**AST 301 Classical Astronomy (3)**

(2 lecture, 2 laboratory) Our picture of the universe based on optical observations from prehistory to 1950.

**AST 302 Modern Astronomy (3)**

(2 lecture, 2 laboratory) The complex and violent universe revealed by radio astronomy, planetary exploration and satellite observatories.

**AST 422 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**AST 622 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**BA — BUSINESS****ADMINISTRATION****BA 100 American Business System (3)**

For non-business majors. Understand how the American business system works and compare it with business systems in other nations. Discuss how business functions and the impact of current events. (F,S)

**BA 101 Business Computing (3)**

(Laboratory arranged) An activity course to develop students' knowledge and skills in computer literacy. Focus is on developing competencies in spreadsheets, graphics, word processing and operating systems. S/U graded. (F,S)

**BA 205 Business Communications (3)**

(Laboratory arranged) Prerequisite: ENG 122. Composition courses emphasizing planning, organizing, and presenting written business communications for decision making. Use of computer software programs integrated in the writing of business correspondence and reports. (GenEd) (F,S)

**BA 251 International Business (3)**

Non-technical introduction to global business operations and planning, including investment issues, comparative management, technology impact, competition, cultural diversity and legal issues. (GenEd) (F,S)

**BA 295 Executive Professor Special Topics I (1-3)**

Consent of Instructor. A seminar for freshman and sophomore majors and minors, taught by business executives, integrating practical experience into the theoretical curriculum. Topic varies per expertise of Executive Professor. S/U or letter graded. Repeatable, under different subtitles.

**BA 492 Internship in General Business (1-3)**

Consent of faculty coordinator. Majors and minors only. Seniors only. Obtain practical experience and opportunities to utilize theory of business core courses. Internship proposal, progress report, and final report required. S/U graded. Repeatable, maximum of three credits.

**BA 495 Executive Professor Special Topics II (1-3)**

Consent of instructor. A seminar for junior and senior majors and minors, taught by business executives, integrating practical experience into the theoretical curriculum. Topic varies per expertise of Executive Professor. S/U or letter graded. Repeatable, under different subtitles.

**BAAC — ACCOUNTING****BAAC 220 Principles of Accounting I (3)**

Prerequisite: Successful completion of the computer proficiency exam or BA 101 or concurrent enrollment in BA 101. Sophomores or above. An introduction to basic principles of accounting. The accounting cycle is examined in relation to recording, classifying, reporting and interpreting financial information for business. Manual and computer systems are investigated. (F,S)

**BAAC 221 Principles of Accounting II (3)**

Prerequisites: Successful completion of the computer proficiency exam or BA 101; BAAC 220. Sophomores or above. A continuation of BAAC 220 to study basic accounting principles as they apply to the preparation and interpretation of accounting information for business organizations and managerial use of information. (F,S)

**BAAC 320 Intermediate Accounting I (3)**

Prerequisite: BAAC 221 with a minimum grade of "C." Business majors only. Juniors or above. An activity course stressing the conceptual framework of accounting, a review of the accounting process, statement presentation of current assets, property, plant, equipment and intangible assets. (F,S)

**BAAC 321 Intermediate Accounting II (3)**

Prerequisite: BAAC 320 with a minimum grade of "C." Business majors only. Juniors or above. An activity course with emphasis on current and long-term liabilities, investments, stockholders' equity, pensions, leases, income taxes and cash flows. (F,S)

**BAAC 323 Cost and Managerial Accounting I (3)**

Prerequisite: BAAC 221 with a minimum grade of "C." Business majors only. Juniors or above. Accumulating and analyzing information for management purposes. Topics include product costing, cost-volume-profit relationships, budgeting and performance evaluation. (F,S)

**BAAC 324 Cost and Managerial Accounting II (3)**

Prerequisite: BAAC 323 with a minimum grade of "C." Business majors only. Juniors or above. Continuation of BAAC 323 - an activity course; includes capital budgeting decision models; planning and control systems; and advanced topics in cost behavior, cost allocation and product costing. (S)

**BAAC 326 Governmental and Institutional Accounting (3)**

Prerequisite: BAAC 221 with a minimum grade of "C." Business majors only. Juniors or above. This is an activity course involving the study of accounting processes and procedures used by state and local governmental units and other selected not-for-profit entities. (F)



**BAAC 327 Managerial Accounting (3)**

Prerequisite: BAAC 221. Open to general business emphasis students only. Juniors or above. No graduation credit for accounting majors. This is a theory course studying the use of information derived from an accounting system for effective management decision making, cost analysis and budgeting management control and evaluation. (F)

**BAAC 328 Accounting Systems (3)**

Prerequisites: BAAC 321 or take concurrently; and BACS 300. Business majors only. Juniors or above. An activity course designed to study the processes and procedures by which an organization's financial information is recorded, processed, reported and distributed in an efficient and orderly manner. (F,S)

**BAAC 420 Accounting Theory and Research (3)**

Prerequisite: BAAC 321 with a minimum grade of "C." Business majors only. Juniors or above. An activity course that reviews and analyzes accounting theory related to various financial topics. Emphasis is on applied accounting research, authoritative sources of information, critical thinking and problem solving areas. (F,S)

**BAAC 421 Advanced Accounting (3)**

Prerequisite: BAAC 321 with a minimum grade of "C." Open to accounting emphasis students only. Juniors or above. An activity course covering business combinations, consolidated financial statements, branch operations, segmental reporting and foreign operations. (F,S)

**BAAC 422 Accounting Directed Studies (1-3)**

Business majors only. Juniors or above. Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**BAAC 425 Auditing I (3)**

Prerequisite: BAAC 321 with a minimum grade of "C." Business majors only. Juniors or above. This is an activity course covering an overview of procedures and techniques of auditing including auditor's report, internal control, evidence gathering, legal liability, statistical sampling and computer auditing. (F,S)

**BAAC 426 Auditing II (3)**

Prerequisite: BAAC 425 with a minimum grade of "C." Business majors only. Juniors or above. A seminar course for the study of audit procedures for specific transaction cycles. Complete a simulated audit case. (S)

**BAAC 428 Income Tax I (3)**

Prerequisite: BAAC 320 with a minimum grade of "C." Business majors only. Juniors or above. A comprehensive introduction to federal income taxation with emphasis on tax implications of business transactions. Basic tax concepts are applied to a broad range of taxpayer activities and related entities. (F,S)

**BAAC 429 Income Tax II (3)**

Prerequisite: BAAC 428 with a minimum grade of "C." Business majors only. Juniors or above. An activity course that promotes understanding beyond a foundation course. Emphasis is on advanced topics in individual and entities taxation with a focus on tax policy issues and planning implications. (F)

**BAAC 492 Internship in Accounting (1-3)**

Prerequisite: Faculty coordinator's consent. Business majors only. Juniors or above. Practical work experience allowing the intern the opportunity to utilize the material learned in accounting courses. Credit for the internship is determined by the coordinator. S/U graded. Repeatable, maximum of nine credits.

**BAAC 495 Special Topics in Accounting (1-3)**

Consent of instructor. Business majors only. Juniors or above. This seminar course explores advanced topics in accounting. Special topics will be specified by the instructor. S/U or letter graded. Repeatable, under different subtitles.

## BACS — COMPUTER INFORMATION SYSTEMS

**BACS 200 Web Design and Development for Small Business (3)**

Prerequisite: BA 101 or equivalent. Required laboratory arranged. Study web site design concepts for e-business applications. Designing, developing, publishing, and managing web sites will be emphasized. Projects focus on web presence requirements for small and mid-sized companies.

**BACS 285 Application Programming Languages (3)**

Prerequisite: Successful completion of the computer proficiency exam or BA 101. Required laboratory arranged. Business majors only. An activity course exploring business programming applications using modern computer languages. Topics include inputting, outputting, processing logic, character processing, file processing and subroutines.

**BACS 287 Graphical Interface Programming (3)**

Prerequisite: Successful completion of the computer proficiency exam or BA 101. Required laboratory arranged. Majors and minors only. Covers modern programming languages geared for graphical user interfaces and interactive processing. This course introduces students to end-user computing, human factors, graphical programming environments and event-driven programming.

**BACS 288 Object Oriented Systems I (3)**

Prerequisite: Successful completion of the computer proficiency exam or BA 101. Required laboratory arranged. Majors/minors only. Study of programming languages as a systematic discipline based upon fundamental concepts, logic, algorithms, and design. Languages used will be those currently utilized in business and industry.

**BACS 291 Business Statistics I (3)**

Prerequisites: Successful completion of the computer proficiency exam or BA 101; or concurrent enrollment in BA 101, and MATH 124. Learn the use of statistics in business activities through techniques of descriptive statistics, sampling distributions, statistical estimation, tests of hypotheses and introduction to bivariate linear regression. (F,S)

**BACS 300 Information Systems (3)**

Prerequisite: Successful completion of the computer proficiency exam or BA 101. Majors and minors only. Juniors or above. Topics include information systems technology, strategic uses of information, software, hardware concepts, networking and internet and e-commerce. (F,S)

**BACS 305 Intermediate Business Statistics (3)**

Prerequisites: Successful completion of the computer proficiency exam or BA 101. BACS 291 or STAT 251 and MATH 131 or MATH 176. Majors and minors only. Juniors and above. This course may be taken after completion of all prerequisites and 45 hours of University coursework. Topics include a review of statistical estimation and Hypothesis testing, ANOVA, Simple and Multiple Regression, Forecasting and Decision Theory. Students will use Excel and a number of web-based databases.

**BACS 380 Networking and Data Communications Systems (3)**

Prerequisite: BACS 288 with a minimum grade of "C." Required laboratory arranged. Majors and minors only. Juniors or above. This is an activity course involving the study of data communications and networks. Topics include history, media, hardware, software, standards, networks, analysis and design, distributed processing and network management.

**BACS 381 Object Oriented Systems II (3)**

Prerequisite: BACS 288 with a minimum grade of "C." Required laboratory arranged. Majors and minors only. Juniors or above. An activity course addressing object-oriented design and programming, systems development environments, emerging technologies and resulting business applications.

**BACS 382 TCP/IP Network Security (3)**

Prerequisite: BACS 380 or Permission of Instructor. First course in networking security techniques: study of hacking techniques, implementation of security plans, hands-on analysis of real-time networks using common tools such as NMAP, and defensive techniques.

**BACS 392 Systems Platforms and Network Development (3)**

Prerequisite: BACS 380 with a minimum grade of "C" or consent of instructor. Majors/Minors only. Juniors or above. An activity course providing students with the opportunity to work with and manage network server. The course focuses on implementation of UNIX and Microsoft networking platforms, security, and management. May not be taken with BACS 380.

**BACS 422 Directed Studies (1-3)**

Consent of instructor required. Business majors only. Juniors or above. Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**BACS 482 Management Support Systems (3)**

Prerequisite: BACS 287 and BACS 288. Required laboratory arranged. Majors and minors only. Juniors or above. An activity course for designing and implementing decision support, knowledge-based support and executive support systems. Covers mathematical and descriptive modeling, knowledge acquisition, knowledge representation and relevant computer based tools.

**BACS 484 Distributed Enterprise Systems (3)**

Prerequisites: BACS 381. Majors and minors only. Juniors or above. A focus on computer-based techniques that enable businesses to manage across distributed value chains. Students are provided design and enterprise tools for developing distributed business systems.

**BACS 485 Database Management Systems (3)**

Prerequisite: BACS 287 and BACS 288 with a minimum grade of "C." Required laboratory arranged. Majors and minors only. Seniors or above. An activity course covering design, implementation and operation of database systems/applications. Topics include database processing, models, organizational planning, logical and physical design, implementation, data organization and data structures. (F)

**BACS 486 Advanced Database Management (3)**

Prerequisite: BACS 485 with a minimum grade of "C." Required laboratory arranged. Business majors only. Seniors or above. An activity course covering database systems/applications. Topics include advanced relational and network database processing, data dictionaries, database integrity issues, distributed databases, emerging technologies and database administration.

**BACS 487 Systems Analysis and Design (3)**

Prerequisite: BACS 287, BACS 288 and BACS 300 with a minimum grade of "C." Majors and minors only. Required laboratory arranged. This course is open to computer information systems emphasis students only. Seniors or above. An activity course that covers systems analysis and design; emphasizes techniques, tools, skills, procedures and end products. Covers investigation, analysis/design.

**BACS 488 Senior CIS Project (3)**

Prerequisite: BACS 487 with a minimum grade of "C." Required laboratory arranged. Majors and minors only. Seniors or above. This is an activity course in which students perform an actual systems analysis and design. An information system will be developed by the student and time permitting, will be implemented. (S)

**BACS 490 Advanced E-Business Technology (3)**

Prerequisites: BACS 287 and BACS 288. Business majors or minors only. Juniors or above. BACS 485 may be taken concurrently. An activity-based course in which the student will develop e-business sites utilizing techniques, tools and technology.

**BACS 492 Internship in Computer Information Systems (1-3)**

Consent of faculty coordinator. Majors and minors only. Juniors or above. Obtain practical experience in one or more of the following CIS areas: programming, systems design, DBMS, quantitative research, data communications, DSS. S/U graded. Repeatable, maximum of three credits.

**BACS 495 Special Topics in CIS (1-3)**

Prerequisite: BACS 287 or BACS 288 with a minimum grade of "C." Majors and minors only. Juniors or above. This seminar course explores advanced topics in computer information systems and/or quantitative methods. S/U or letter graded. Repeatable, under different subtitles.

**BAFN — FINANCE****BAFN 231 Legal Environment of Business (3)**

Emphasizes public law, regulation of business and various relationships that exist within society, government and business such as: economic regulation, social regulation, laws impacting labor-management issues and environmental concern. (F,S)

**BAFN 240 Introduction to Personal Financial Planning (3)**

Finance majors will not receive credit towards their major. Discuss concepts and principles of personal financial planning including personal financial assessment, goal setting, planning and management of personal assets, credit, insurance, investments, estates and taxes.

**BAFN 332 Business Administration and the Law (3)**

Prerequisite: BAFN 231. Business majors only. Juniors or above. Provides an understanding of the law of business transactions as part of the decision-making process. Topics will include the law of contracts, sales, bailments and negotiable instruments. (F,S)

**BAFN 340 Principles of Risk and Insurance (3)**

Business majors only. Juniors or above. Theory of risk and risk bearing; arrangements; insurance industry, types of insurers, functions of insurers and government regulation of insurance; social insurance; and basic features of selected insurance contracts. (F,S)

**BAFN 370 Business Finance (3)**

Prerequisites: BAAC 221, STAT 251 or BACS 291; ECON 103 and ECON 105. Juniors or above. Examines the basic principles and concepts of financial management. Topics include valuation, risk, financial analysis and planning, working capital management, cost of capital, capital structure and capital budgeting. (F,S)

**BAFN 371 Financial Markets and Institutions (3)**

Prerequisite: ECON 103. Business majors only. Juniors or above. Analyze characteristics and interrelations between money and capital markets and flow of funds. Stress financial institutions' role as intermediaries and effect on economic activity. (F,S)

**BAFN 372 Introduction to Real Estate (3)**

Juniors or above. Business majors only. Discover important concepts and principles of real estate, especially procedures for evaluating and appraising real estate investments, legal marketing and financing aspects of real estate. (F,S)

**BAFN 379 Investments (3)**

Prerequisite: BAFN 370. Business majors only. Juniors or above. The study of financial securities, their valuation and the markets where they are traded. Analyze economic and market factors affecting risk, returns, and timing of investment decisions.

**BAFN 422 Directed Studies (1-3)**

Juniors or above. Business majors only. Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**BAFN 441 Estate Planning and Life Insurance (3)**

Prerequisite: BAFN 340, BAAC 428. Business majors only. Juniors or above. Discuss property disposition and estates and trusts, administration of estates, federal estate unified tax, planning through trusts and wills, life insurance and estate planning.

**BAFN 442 Topics in Financial Planning (3)**

Prerequisites: BAFN 340, BAFN 379. Business majors only. Juniors or above. Provide a comprehensive examination of financial planning concepts and techniques through both class discussion and case analysis.

**BAFN 470 Financial Management (3)**

Prerequisite: BAFN 370. Business majors only. Juniors or above. Covers advanced concepts and techniques of financial management, especially emphasizing the overall environment and decision making by financial managers. Topics include modern portfolio theory and capital structure theory.

**BAFN 473 Commercial Bank Management (3)**

Prerequisite: BAFN 370, BAFN 371. Business majors only. Juniors or above. Investigate the management of banks and other financial institutions. Evaluate decision strategies used to enhance performance in a changing economic and regulatory environment. Review banking principles, current practices problems. (S)

**BAFN 474 Case Problems in Financial Management (3)**

Prerequisite: BAFN 470. Business majors only. This course is open to finance emphasis students only. Juniors or above. This seminar class involves the comprehensive study of applied financial management, finance, other business skills and financial decision making processes for the firm. Use case study problem solving method. (F,S)

**BAFN 475 Multinational Financial Management (3)**

Prerequisite: BAFN 370. Business majors only. Juniors or above. Addresses the financial characteristics and environment of the multinational corporation. Special attention is focused on how international risk factors and foreign securities markets affect financial decisions. (F)

**BAFN 478 Student and Foundation Fund (3)**

Consent of instructor. Business majors only. Juniors or above. Involves students managing a portfolio of funds provided by the UNC Foundation while studying and applying the principles of security analysis and portfolio management. S/U graded. Repeatable, maximum of six credits.

**BAFN 479 Security Analysis (3)**

Prerequisite: BAFN 379. Business majors only. Juniors or above. Complete an in-depth research project of an industry and selected firms within the industry, considering near term expected economic climate. Emphasize portfolio theory and recent changes in financial statement presentation. (S)

**BAFN 492 Internship in Finance (1-3)**

Consent of faculty coordinator. Business majors only. Juniors or above. Get practical experience and opportunities to utilize theory of academic finance courses. S/U graded. Repeatable, maximum of three credits.

**BAFN 495 Special Topics in Finance (1-3)**

Consent of instructor. Business majors only. Juniors or above. This seminar course explores advanced topics in finance. S/U or letter graded. Repeatable, maximum of six credits.

**BAMG — MANAGEMENT****BAMG 350 Management of Organizations (3)**

Juniors or above. An introduction to management of organizations covering organizational behavior, individual behavior and management topics such as motivation, leadership, organization design, organizational theory, diversity, international management and ethics. (F,S)

**BAMG 353 Human Resources Management (3)**

Prerequisite: BAMG 350. Business majors only. Junior or above. A survey of human resource management topics such as recruitment, selection, training, development, performance appraisal, compensation, career development.

**BAMG 354 Organizational Behavior (3)**

Prerequisite: BAMG 350. Presidential Leadership Program (PLP) students may satisfy the prerequisite by taking PLP 100, PLP 200 and PSY 265. Business majors and PLP students only. Juniors or above. A study of behavioral science theories and concepts applicable to individuals, teams, and organizations. Topics include motivation, leadership, group dynamics, perception, decision-making, power, culture, change and communication.

**BAMG 355 Fundamentals of Entrepreneurship (3)**

Business majors only. Juniors or above. The objective of this course is to provide significant exposure to the entrepreneurial process. Exposure to real-world entrepreneurs will enhance the entrepreneurial decision-making abilities of the class participants.

**BAMG 357 Managing New Business Ventures (3)**

Prerequisites: BAAC 220, BAAC 221, BAMG 350, BAMK 360, BAFN 370 or take concurrently. Business majors only. Juniors or above. An activity course emphasizing the problems and opportunities of starting new businesses including new enterprise creation, planning, management, control and growth.

**BAMG 407 Small Business Counseling (3)**

Consent of instructor. Business majors only. Juniors or above. A seminar course which applies theories learned in all business majors to actual small businesses.

**BAMG 422 Directed Studies (1-3)**

Prerequisite: BAMG 350 and consent of instructor. Business majors only. Juniors or above. Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**BAMG 452 Business, Government and Society (3)**

Prerequisite: BAMG 350. Business majors only. Juniors or above. A study of the role of business organizations in society and the relationships between business and economic policy, social responsibility and political influence in multiple environments.

**BAMG 453 Advanced Topics in Human Resources Management (3)**

Prerequisites: BAMG 350, BAMG 353 and senior standing. Business majors only. Provides an expanded examination of human resources management topics such as performance appraisal, training, compensation and labor relations. Current topics are emphasized.

**BAMG 455 Labor Relations (3)**

Prerequisite: BAMG 350. Business majors only. Juniors or above. Traces the labor movement, philosophies of labor unions, legislation, and court decisions and labor boards affecting management-employee relations. Covers current labor topics, contracts and administration, grievances and disputes.

**BAMG 456 Strategic Management (3)**

Prerequisites: BACS 305 or take concurrently, BAFN 370, BAMG 350, BAMK 360 and senior standing. Consent of instructor. Business majors only. Examines organizational strategic issues and problems related to internal and external environments. Case analysis framework and strategic management concepts emphasized. (F,S)

**BAMG 457 Managing Complex Organizations (3)**

Prerequisite: BAMG 350. Business majors only. This course is open to management emphasis students only. Juniors or above. A seminar course which concentrates on the analysis and understanding of effective organizations through the study of organizational theory.

**BAMG 458 Managing in a Global Environment (3)**

Business majors only. Juniors or above. A seminar that examines the field of international management. Examines the implications of managing organizations involved in global operations.

**BAMG 492 Internship in Management (1-3)**

Faculty coordinator's consent. Business majors only. Juniors or above. An internship working in a middle management position to obtain practical organizational experience. Internship proposal, progress report and final report required. S/U graded. Repeatable, maximum of three credits.

**BAMG 494 Not-For-Profit Management (3)**

Prerequisites: BAMG 350, BAMK 360, BAFN 370, BACS 300 and BAFN 231. Juniors and above. This course provides integration of management, marketing, finance and accounting principles for the management of nonprofit organizations. Topics include board development, risk management and ethical issues in nonprofit organizations.

**BAMG 495 Special Topics in Management (3)**

Prerequisite: BAMG 350 or consent of instructor. Business majors only. Juniors or above. A seminar in various management content areas as need and opportunity arise. Primarily for management majors, this course attempts to integrate management concepts within applied settings. S/U or letter graded. Repeatable, under different subtitles.

**BAMK — MARKETING****BAMK 260 Introduction to Marketing (3)**

This course provides introduction to basic concepts of marketing and how these marketing concepts are applied by both business and non-business organizations. Non-business majors only.

**BAMK 360 Marketing (3)**

Prerequisite: ECON 105 or take concurrently. Juniors or above. This theory course provides understanding of the basic concepts/terminologies in marketing, as well as an understanding of how these concepts are applied in international and domestic business settings. (F,S)

**BAMK 361 Consumer Behavior (3)**

Prerequisite: BAMK 360. Business majors only. Juniors or above. This theory course examines various theories of consumer behavior and the decision making process from a global perspective. The implications of cultural, ethical and legal variables will also be discussed. (F,S)

**BAMK 363 Promotional Strategy (3)**

Prerequisite: BAMK 360. Business majors only. Juniors or above. This is an activity course involving the study of advertising, personal selling, public relations and sales promotion. Case discussions concentrate on integrating promotion tools into an overall marketing communications strategy.

**BAMK 364 Selling and Sales Management (3)**

Prerequisite: BAMK 360. Business majors only. Juniors or above. This is an activity course emphasizing both theoretical and practical skills in the personal selling process and the management of a sales force.

**BAMK 365 Advertising (3)**

Prerequisite: BAMK 360. Business majors only. Juniors or above. This is an activity course of advertising principles including advertising terminology, communication process, advertising agencies, media, copy and layout elements.

**BAMK 366 Retailing (3)**

Prerequisite: BAMK 360. Business majors only. Juniors or above. An introductory survey course of retail institutions; how they operate and their impact on the marketplace. This course covers both theory and practice.

**BAMK 368 Marketing Analysis and Research (3)**

Prerequisites: BACS 291, BACS 305 or take concurrently, and BAMK 360. Business majors only. Juniors or above. An activity course involving practical experience in planning a research investigation, designing questionnaires, sampling, interpreting results and preparing a research report. Emphasis on product, advertising, sales and motivational research. (F,S)

**BAMK 407 Small Business Counseling (3)**

Consent of instructor. Business majors only. Juniors or above. A seminar course which applies theories learned in all business majors to actual small businesses.

**BAMK 422 Directed Studies (1-3)**

Prerequisites: BAMK 360. Consent of instructor. Business majors only. Seniors or above. Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**BAMK 461 Advertising Campaigns (3)**

Prerequisite: BAMK 365. Business majors only. Juniors or above. An activity course where students receive realistic experience in campaign planning. Assume the identity of an advertising agency responsible for the preparation of a complete marketing communications program.

**BAMK 462 Marketing Problems (3)**

Prerequisites: BAFN 370, BAMK 361 and BAMK 368. Business majors only. This course is open to marketing emphasis students only. Seniors or above. This capstone marketing seminar course emphasizes application, analysis, planning and control of the various marketing mix variables, the target market, and the marketing environment. (F,S)

**BAMK 464 Global Marketing Strategies (3)**

Prerequisite: BAMK 360. Business majors only. Juniors or above. A seminar of institutions, functions, policies and practices in international markets. Global multinational aspects of business enterprises and their effects on marketing problems and management are analyzed. (F,S)

**BAMK 468 Business-to-Business Marketing (3)**

Prerequisite: BAMK 360. Business majors only. Juniors or above. A course in theoretical and practical aspects of marketing goods and services to business. Emphasizes analysis and segmentation of business markets and development of marketing mixes to serve those markets.

**BAMK 469 Supply Chain Management (3)**

Prerequisite: BAMK 360. Business majors only. Juniors or above. An activity seminar course designed to explore the techniques utilized by marketing-oriented distribution managers within the worldwide logistics process. Computer simulation and/or case analysis may be used.

**BAMK 470 Direct Marketing (3)**

Prerequisite: BAMK 360. Business majors only. Juniors or above. An examination of the concepts, strategies and applications involved in direct marketing, including mail order and direct response advertising.

**BAMK 492 Internship in Marketing (1-3)**

Consent of faculty coordinator. Business majors only. Juniors or above. This course gives the student practical experience and opportunities to apply theory from academic marketing courses. S/U graded. Repeatable, maximum of three credits.

**BAMK 495 Special Topics in Marketing (3)**

Business majors only. Juniors or above. This seminar course explores various advanced marketing topics. The course is offered as needed. S/U or letter graded. Repeatable, under different subtitles.

**BCHM — BIOCHEMISTRY****BCHM 381 Immunology (2)**

Prerequisites: BIO 110, CHEM 332 or CHEM 131. An introduction to the components and basic mechanisms of the immune system.

**BIO — BIOLOGY****BIO 100 Exploring Biology (3)**

No credit for biological science majors and minors. An exploration of biological principles of concern to the educated layperson. Topics include ecology, evolution, the cell, organs and systems, inheritance and disease. (GenEd)

**BIO 101 Biological Perspectives (4)**

(3 lecture, 3 laboratory) Non-majors only. Biological concepts within a human context covering cell biology, physiology, genetics, evolution, ecology and interactions of humankind and the environment. No credit for biology majors or minors. (GenEd)

**BIO 110 Principles of Biology (4)**

(3 lecture, 3 laboratory) Biological principles from cells to the communities, especially structure and function. Study of genetics, metabolism, development and homeostasis. Not recommended for non-science majors. (GenEd)

**BIO 111 Survey of Organismal Biology (4)**

(3 lecture, 3 laboratory) Survey of all living organisms focusing on diversity, life cycles and classification, structure and function, ecology and evolutionary relationships. Not recommended for non-science majors.

**BIO 210 Cell Biology (3)**

(3 lecture) Prerequisite: BIO 110, CHEM 111. Pre- or Corequisite: CHEM 131 or CHEM 331. Study cellular basis of life, with emphasis on biological macromolecules, cell organelles, cell membranes, cellular respiration and photosynthesis, and evolution of cells.

**BIO 220 Genetics (4)**

(3 lecture, 3 laboratory) Prerequisites: BIO 110, BIO 210 or consent of instructor. Study fundamental laws of heredity, the molecular structure and function of genes, and emerging genetic technologies.

**BIO 245 Introduction to Human Anatomy and Physiology (4)**

(3 lecture, 3 laboratory) Stress regulatory mechanisms that maintain normal body function and broad general biological principles as they apply to structure and function. Credit not given for both BIO 245 and BIO 350.

**BIO 251 Allied Health Microbiology (4)**

(3 lecture, 3 laboratory) Prerequisites: BIO 101 and CHEM 108. No credit counted toward meeting the requirements of major or minor in biological science. Basic microbiology with emphasis for allied health professions such as nursing and dietetics. Emphasis is on micro-organisms involved in human health, disease, food safety, and food technology.

**BIO 265 Life Science Concepts (3)**

(2 lecture, 2 laboratory) An investigation of basic biological concepts in biological science through lecture, discussion and laboratory investigation. Ideal for students seeking elementary certification. (GenEd)

**BIO 330 Plant Taxonomy (4)**

(2 lecture, 6 laboratory) Prerequisite: BIO 111. History of plant taxonomy, phylogenetic systematics, family recognition, and identification of local flora using keys. Native plant collection and field trips required. Fee required.

**BIO 331 General Entomology (4)**

(3 lecture, 3 laboratory) Prerequisite: BIO 111. Learn the biology of the principal orders of insects by collecting and classifying specimens. Agents and vectors of disease are stressed. Insect collection is required, see instructor.

**BIO 332 Invertebrate Zoology (3)**

(2 lecture, 3 laboratory) Prerequisite: BIO 111. Investigate invertebrate phyla through a phylogenetic approach, stressing form, function and evolutionary relationships. Study examples of available groups in the laboratory. Insects and parasites not stressed.

**BIO 333 General Parasitology (4)**

(3 lecture, 3 laboratory) Prerequisite: BIO 111. Study the symbiotic relationships of parasitism as exemplified by typical parasites of humans, domesticated and wild animals, stressing life cycles, pathogenesis, systematics and host-parasite relationships.

**BIO 334 Mammalogy (4)**

(3 lecture, 3 laboratory) Prerequisite: BIO 111. Study the functional biology, ecology and behavior of mammals. Laboratory stresses the identification and ecology of Colorado species. Field work required.

**BIO 335 Survey of Fishes, Amphibians and Reptiles (4)**

(3 lecture, 3 laboratory) Prerequisite: BIO 111. Investigate the biology of the cold-blooded vertebrates including their evolution, ecology and behavior. Laboratory stresses the identification and biology of Colorado species.

**BIO 336 Ornithology (3)**

(2 lecture, 3 laboratory) Prerequisite: BIO 111. Study the general biology and behaviors of birds. Laboratory emphasis will be on field identification of birds. Field trip required.

**BIO 337 Morphogenesis of Algae and Fungi (4)**

(3 lecture, 3 laboratory) Prerequisite: BIO 111. Study structure, morphogenesis and phylogenetic relationships of organisms grouped with algae, fungi. Comparative study to explore multiple kingdom concepts. Ecological, medical and economic aspects of mycology and phycology explored.

**BIO 341 Human Anatomy (3)**

(2 lecture 3 laboratory) Prerequisites: BIO 110 and BIO 111. Study the organ systems of the human body, their structure and integration. Laboratory includes examination of mammalian organs.

**BIO 345 Comparative Vertebrate Morphogenesis (4)**

(3 lecture 3 laboratory) Prerequisites: BIO 110 and BIO 111. Study comparative developmental processes of vertebrates as they relate to the structure of the adult organ systems. Developmental anatomy and adult morphology of sharks through mammals are studied and dissected.

**BIO 350 Human Physiology (4)**

(3 lecture, 3 laboratory) Prerequisites: BIO 101 or BIO 110; BIO 341 or BIO 345; and CHEM 131 or CHEM 331. Study the organ systems of the human body, their structure and integration. Laboratory includes examination of mammalian organs.

**BIO 351 Microbiology (4)**

(3 lecture, 3 laboratory) Prerequisites: BIO 101 or BIO 110 or BIO 111; CHEM 131 or CHEM 331. Examine microorganisms and their interactions with living and non-living components of the biosphere. Study the structural and metabolic diversity within Eubacteria and Archaea, some fungi and viruses.

**BIO 354 General Plant Physiology (4)**

(3 lecture, 3 laboratory) Prerequisites: BIO 111, CHEM 131. Study physiological factors influencing the chemical and structural composition of plant absorption and utilization of water and minerals; photosynthesis, translocation, respiration, nitrogen metabolism; and growth and development.

**BIO 355 Medical Pharmacology (3)**

(2 lecture, 3 laboratory) Prerequisite: BIO 350. Make a detailed study of the principles underlying absorption, distribution, metabolism, excretion and interaction of drugs in humans. Calculation of drug dosages required.

**BIO 360 Ecology (4)**

(3 lecture, 3 laboratory) Prerequisite: BIO 111. Identify/describe plant and animal communities. Study ecosystem structure and energy flow. Examine topics such as biogeochemical cycles, soils, population structure, species' interactions and succession. Field trip may be required.

**BIO 362 Principles of Animal Behavior (3)**

(2 lecture, 3 laboratory) Prerequisite: BIO 111. Study behaviors of animals with emphasis on non-human forms. The ethology and ecological significance of behaviors will be stressed. Field work is required.

**BIO 370 Plants and Humanity (3)**

(2 lecture 3 laboratory) Prerequisites: BIO 110 and BIO 111. Study the profound influence plants have made on human civilization. Special emphasis will be placed on plants affecting human health either historically or currently: source of food, beverages, or medicines.

**BIO 371 Teaching Strategies for Biology Teachers (1)**

(2 laboratory) Full admittance to PTEP required or consent of instructor. Demonstrations and strategies appropriate for lecture and laboratory instruction, including computer usage and controversial issues, will be presented.

**BIO 380 Aquatic Biology (4)**

(3 lecture, 3 laboratory) Prerequisites: BIO 110, BIO 111. This course examines aquatic communities, determines species present, nature of the physical and chemical aquatic environment, species and population distribution, productivity and eutrophication.

**BIO 391 Career Development (1)**

(1 lecture) Majors only. Juniors (preferred) or seniors. Professional development activities: preparation of resumes, interviewing and explore facets of becoming a biologist through library, internet and Career Services Center. Attend and critique departmental seminars and other professional presentations - required. S/U graded.

**BIO 408 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles, maximum of six credits. S/U graded.

**BIO 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**BIO 425 Molecular Genetics (3)**

(2 lecture, 3 laboratory) Prerequisites: BIO 220, CHEM 481. Examination of protein synthesis, DNA replication, gene structure, and regulation of gene expression with particular emphasis on molecular techniques.

**BIO 440 Anatomy and Morphogenesis of Plants (4)**

(3 lecture, 3 laboratory) Prerequisite: BIO 111. A study of the evolution of the plant kingdom as revealed by the anatomy and morphogenesis of both non-vascular and vascular plant divisions.

**BIO 450 Cell Physiology (4)**

(3 lecture, 3 laboratory) Prerequisites: BIO 110, BIO 220, CHEM 131 or CHEM 331; recommend CHEM 481. The study of the structural and functional relationships among biological macromolecules, cell organelles, and cell processes.

**BIO 458 Diagnostic Microbiology (4)**

(2 lecture, 4 laboratory) Prerequisite: BIO 351. Learn about microorganisms of medical significance: isolation, identification, immunology and disease etiology.

**BIO 465 Evolution (3)**

Prerequisite: BIO 220. History of evolutionary thought, evolution as a population genetics process, and reconstruction of evolutionary history using phylogenetic methodology.

**BIO 485 Topics in Field Biology (1-10)**

After preparatory work, study biology in the field on a state, national or international basis.

**BIO 492 Internship in Biological Sciences (1-3)**

Consent of instructor required. On-the-job experience in professional areas under the supervision of an area specialist. S/U graded. Repeatable, maximum of nine credits.

**BIO 494 Practicum in College Biological Science Instruction (1-2)**

Prerequisites: BIO 110, BIO 111. Consent of instructor required. Gain experience assisting in teaching an introductory biological science laboratory. Repeatable, may be taken 3 times.

**BIO 495 Special Topics in Biology (1-3)**

Prerequisites: BIO 110, BIO 111. Advanced study for qualified undergraduates in an area of the biological sciences. Repeatable, under different subtitles, maximum of six credits.

**BIO 497 Special Laboratory Topics in Biology (1-3)**

(3 laboratory) Prerequisites: BIO 110, BIO 111. Advanced study in the laboratory for qualified undergraduates in an area of the biological sciences. Repeatable, under different subtitles, maximum of six credits.

**BIO 499 Undergraduate Research (1-6)**

Consent of instructor. Conduct original research in the biological sciences. Submit two copies of a final report. S/U graded. Repeatable, maximum of six credits.

**BIO 501 Current Issues in Biology (1)**

Course varies in content, reviewing current issues of biology, botany or zoology. S/U graded. Repeatable, under different subtitles, maximum of six credits.

**BIO 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**BIO 509 Advanced Placement Biology (1-3)**

Consent of instructor. Topics in biological sciences and pedagogy related to establishment and maintenance of a biology advanced placement program. S/U graded. Repeatable, no limitations.

**BIO 512 TA Development Seminar (1)**

Explores instructional strategies related to effective teaching of undergraduate laboratory learning environments. Intended to help develop teaching skills of graduate teaching assistants in Biology program. S/U graded.

**BIO 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**BIO 521 Advanced Genetics (3)**

Prerequisites: BIO 220 or equivalent and CHEM 131; recommend CHEM 481. Survey experimental advances in gene regulation of growth, maintenance and protection of all organisms including the human species with special emphasis on recent developments in the field.

**BIO 525 Molecular Genetics (3)**

(2 lecture, 3 laboratory) Prerequisites: BIO 220 and CHEM 481. Examination of protein synthesis, DNA replication, gene structure, and regulation of gene expression with particular emphasis on molecular techniques.

**BIO 530 Plant Taxonomy (4)**

(2 lecture, 6 laboratory) Prerequisite: BIO 111. History of plant taxonomy, phylogenetic systematics, family recognition, and identification of local flora using keys. Native plant collection and field trips required. Fee required.

**BIO 533 General Parasitology (4)**

(3 lecture, 3 laboratory) Prerequisite: BIO 101 or BIO 111. Study the symbiotic relationships of parasitism as exemplified by typical parasites of humans, domesticated and wild animals, stressing life cycles, pathogenesis, systematics and host-parasite relationships.

**BIO 534 Mammalogy (4)**

(3 lecture, 3 laboratory) Prerequisite: BIO 111. Study the functional biology, ecology and behaviors of mammals. Laboratory stresses the identification and ecology of Colorado species. Field work required.

**BIO 535 Survey of Fishes, Amphibians and Reptiles (4)**

(3 lecture, 3 laboratory) Prerequisite: BIO 111. Investigation of the biology of the cold-blooded vertebrates including their evolution, ecology and behavior. Laboratory stresses the identification and biology of Colorado species.

**BIO 537 Morphogenesis of Algae and Fungi (4)**

(3 lecture, 3 laboratory) Prerequisite: BIO 111 or equivalent. Study structure, morphogenesis and phylogenesis relationships of organisms grouped with algae and fungi. Comparative study of prokaryotic and eukaryotic algae and fungi used to explore multiple kingdom concepts.

**BIO 540 Anatomy and Morphogenesis of Plants (4)**

(3 lecture 3 laboratory) Prerequisite: BIO 111. A study of the evolution of the plant kingdom as revealed by the anatomy and morphogenesis of both non-vascular and vascular plant divisions.

**BIO 545 Cytology (3)**

(3 Lecture) Prerequisite: BIO 210. Study the structure and function of the various components and organelles of both prokaryotic and eukaryotic cells.

**BIO 547 Immunology and Disease (4)**

(4 lecture) Prerequisites: (4 lecture) Prerequisites: BIO 210 and BIO 350. Study the disease process and immunological resistance to disease with major emphasis on initiation and regulation of adaptive immunity.

**BIO 550 Cell Physiology (4)**

(3 lecture, 3 laboratory) Prerequisites: BIO 110, BIO 220, CHEM 131 or CHEM 331, recommend CHEM 481. The study of the structural and functional relationships among biological macromolecules, cell organelles, and cell processes.

**BIO 552 Mammalian Physiology I (3)**

(3 lecture) Prerequisites: BIO 341 or BIO 345, CHEM 481. Examine the muscular, cardiovascular, and pulmonary systems in depth, integrating the functions of the nervous and endocrine systems.

**BIO 553 Mammalian Physiology II (3)**

(3 lecture) Prerequisite: BIO 552. Examine the digestive, renal, endocrine and immune systems, particularly the integrative functions of these systems in maintenance of homeostasis.

**BIO 554 General Plant Physiology (4)**  
(3 lecture, 3 laboratory) Prerequisites: BIO 111, CHEM 131. Study physiological factors influencing the chemical and structural composition of plant absorption and utilization of water and minerals; photosynthesis, translocation, respiration, nitrogen metabolism and growth and development.

**BIO 555 Reproductive and Developmental Biology (3)**  
Prerequisites: BIO 110, CHEM 131 or CHEM 331, recommend CHEM 481. Examination of the anatomy, physiology and mechanisms of reproduction and development with an emphasis on mammals.

**BIO 556 Current Topics in Biomedical Research (2).**  
Prerequisites: BIO 110, CHEM 131 or CHEM 331; recommend BIO 450. Examine current biomedical research, molecular, cellular, and physiological studies of the human and model systems. Mechanisms regulating normal function, effects of toxicants and drugs, and the role of genetic mutations.

**BIO 557 Mammalian Physiology I Laboratory (1)**  
(3 laboratory) Co-requisite: BIO 552. Laboratory experimentation, small group discussion and active learning exercises to complement BIO 552.

**BIO 558 Mammalian Physiology II Laboratory (1)**  
(3 laboratory) Co-requisite: BIO 553. Laboratory experimentation, small group discussion and active learning exercises to compliment BIO 553.

**BIO 560 Animal Ecology (4)**  
(3 lecture, 3 laboratory) Prerequisite: BIO 360. Gain a comprehensive understanding of animal ecology. Animal population dynamics, behavioral ecology and zoogeography. Review of current literature an integral part of course.

**BIO 561 Plant Ecology (4)**  
(3 lecture, 3 laboratory) Prerequisite: BIO 360. Study plant communities by examining the effects of environmental factors on plants, as well as community measurement and evaluation, modeling techniques, energy flow through ecosystems and community dynamics.

**BIO 569 Conceptual Issues in Evolution (2)**  
Prerequisite: BIO 465 or consent of instructor. Study of the guiding principles in modern evolutionary biology. Focus on concepts of fitness, selection, adaptation, form and function, concerted evolution and the nature of biological variation.

**BIO 571 Teaching Strategies for Biology Teachers (1)**  
(2 laboratory) Full admittance to PTEP required or consent of instructor. Demonstrations and strategies appropriate for lecture and laboratory instruction, including computer usage and controversial issues, will be presented.

**BIO 585 Topics in Field Biology (1-10)**  
After preparatory work, study biology in the field on a state, national or international basis.

**BIO 592 Internship in Biological Sciences (1-6)**  
Consent of instructor required. On-the-job experience in professional areas under the supervision of an area specialist. Repeatable, under different subtitles, maximum of six credits. S/U graded.

**BIO 595 Special Topics in Biology (1-6)**  
Study of any biological topic at an advanced level. Repeatable, maximum of six credits.

**BIO 622 Directed Studies (1-6)**  
Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**BIO 636 Advanced Invertebrate Zoology (4)**  
(3 lecture, 3 laboratory) Prerequisite: BIO 332. Compare the classification, anatomy, physiology, morphogenesis and natural history of the invertebrates, exclusive of insects and most parasitic forms.

**BIO 645 Comparative Vertebrate Adaptations (4)**  
(3 lecture, 3 laboratory) Prerequisites: BIO 345 and BIO 350. Make a detailed study of selected aspects of vertebrate anatomy, stressing function and adaptive significance of organ systems. Deliver one seminar on specialized topic.

**BIO 654 Plant Reproductive Growth and Development (3)**  
Prerequisite: BIO 354. Advanced study of the genetic, physiological and environmental factors that influence reproductive development in flowering plants.

**BIO 682 Problems in Teaching College Biology (3)**  
(3 Lecture) Teaching biology strategies for increasing teaching effectiveness. Explore learning theory and application, presenting difficult material, curriculum development; research and the laboratory as teaching tools, management and maintenance of biological materials.

**BIO 691 Seminar in Biological Sciences (1)**  
(1 lecture) Invited speakers will present research topics in content biology and biology education. Graduate students will also present their research proposals and final defenses of their theses or dissertations. Repeatable.

**BIO 694 Foundations of Biological Research (2)**  
Required of all first year graduate students in biological sciences. Delineate philosophy, methods of research and oral and written presentations of scientific findings.

**BIO 697 Graduate Research (1-6)**  
Prerequisite: BIO 694. Consent of instructor. Qualified graduate students spend a minimum of 38 clock hours per semester hour on a research problem. Before credit is given, a well-written report must be submitted to the instructor.

**BIO 699 Thesis (1-6)**  
Prerequisite: BIO 694. S/U graded. Repeatable, no limitations.

**BIO 792 Doctoral Supervised Teaching (1-6)**  
Experience supervised college level biological sciences teaching. Develop course outlines and effective teaching techniques. Students must have completed oral and written comprehensive exams prior to being eligible for this course.

**BIO 797 Doctoral Proposal Research (1-4)**  
Four hours required of all doctoral students before admission to candidacy. S/U graded.

**BIO 799 Doctoral Dissertation (1-12)**  
Required of all doctoral candidates. S/U graded.

## CED — COMPUTER EDUCATION

**CED 509 Advanced Placement Programs in Computer Science (1-3)**  
Consent of instructor. Graduate students only. Topics in computer science and pedagogical information related to establishing and maintaining a computer science advanced placement program. S/ U graded. Repeatable, no limitations.

**CED 513 Professional Renewal (1-3)**  
Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

## CG — COMPUTING, GENERAL

**CG 105 Personal Computer Applications (3)**  
No college credit will be given for this course if BA 101 is taken concurrently or has been taken previously. Designed to develop essential knowledge and skills in Windows or another operating system, a work processor, a spreadsheet, presentation software, and Internet search techniques.

**CG 110 BASIC Programming (3)**  
Become familiar with fundamentals of designing and writing structured programs in BASIC language. Programs will involve nontechnical applications and are general enough to familiarize non-math majors with fundamentals.

**CG 120 Pascal Programming (3)**

Prerequisite: MATH 124 with grade of "C" or better. Become familiar with designing and writing structured programs in the Pascal language. Programs will involve some technical applications in science and mathematics.

**CG 130 C++ Programming (3)**

Prerequisite: MATH 124 with grade of "C" or better. Students solve problems from a science and mathematics approach using the C++ language. It will focus on algorithm development, problem solving techniques, debugging, and testing of programs.

**CG 195 Special Topics in General Computing (1-3)**

Consent of instructor. Topics that reflect the specific interests of available professors and the specific needs of interested undergraduates. Repeatable, under different subtitles.

**CH — COMMUNITY HEALTH****CH 205 Issues in Health (3)**

Analyze the variety of forces that currently affect the well-being of human population groups on a national level. (GenEd)

**CH 209 Foundations of Health Promotion/Health Education (3)**

Overview of the field of health promotion/education including: evolution of the profession, health theories and models, functions/skills of health educators, current programs and settings for practice.

**CH 236 Health and Life-styles Among the Elderly (3)**

A survey of the psychosocial and biomedical dimensions that affect the health of the elderly. Current theories and scientific research on the aging process will also be discussed. (GenEd)

**CH 238 Contemporary Issues in Drug Abuse (3)**

Examines current drug abuse problems and issues confronting modern society, including sociological and psychological factors influencing drug-taking behavior and social and health consequences that accompany drug abuse.

**CH 293 Sophomore Practicum in Community Health (3)**

Consent of instructor. Assignment to a community health agency. Assisting professional staff, the student will be given the opportunity to apply basic skills and observe the health education program of the facility.

**CH 299 Community Health Systems (3)**

Investigation and discussion of community organization, major community health problems and the role and function of various community agencies, programs and services related to problem resolution.

**CH 303 Health Education in the Elementary School (1)**

Prerequisite: Admission to PTEP or licensure at the undergraduate level is required. Examines the foundations in coordinated school health programs and teaches skills in integrating health into elementary schools.

**CH 320 Introductory Epidemiology and Biostatistics (3)**

Introductory course in epidemiology and biostatistics. Focuses on practical applications of epidemiological and biostatistical principles to diseases and health conditions in the community.

**CH 330 Health Promotion/Health Education Techniques (3)**

Prerequisites: CH 209, CH 293. Course provides opportunity to learn and apply specific health promotion/education techniques such as risk assessment, individual educational plans, small group techniques, mass media, lectures and community organization campaigns.

**CH 336 Human Sexuality (3)**

The general purpose of this course is to survey the psychosocial and biophysical dimensions of human sexuality. (GenEd)

**CH 342 Modern Concepts of Health and Disease (3)**

This course is designed to discuss the etiology, treatment and control of the most significant diseases that affect the population of the United States today.

**CH 350 Introduction to Environmental Health (3)**

Discussion of the relationships of environmental pollution to the ecosystem and health of humans. Analyze major areas of environmental pollution: water, air, solid wastes, pesticides, radioactive wastes and population.

**CH 405 Health Communications and the Media (3)**

Focuses on the design, production, evaluation and acquisition of appropriate media and materials for health education/promotion programs.

**CH 408 Workshop in Health Education (1-3)**

Investigate individual's problem areas, varying according to experts conducting workshops. Repeatable, under different subtitles.

**CH 410 Introduction to Program Planning and Evaluation (3)**

Prerequisite: CH 330. Focuses on major components of health education/health service planning and evaluation, including: needs assessment, goals and objectives, selection of strategies, evaluation design and implementation.

**CH 422 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**CH 440 Foundations of Health Program Management (3)**

Provides students with skills in major areas of health program management including: program planning, decision making, budgeting, marketing, staff selection/motivation, evaluation.

**CH 492 Internship in Health (6-12)**

Prerequisite: CH 410. Supervised experience at a health agency that allows the student to put into practice knowledge and skills learned in the classroom. Repeatable, maximum of 12 credits.

**CH 500 Stress Management (2)**

A holistic approach to stress management, with regard to both cognitive knowledge and stress reduction techniques with the intention to prevent or alleviate the physical symptoms of stress.

**CH 505 Health Communications and the Media (3)**

Focuses on the design, production, evaluation and acquisition of appropriate media and materials for health education/promotion programs.

**CH 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**CH 509 Seminar in Health Behavior (3)**

Review theories of behavior and behavior change as they relate to current health issues. Health behavior change models will be examined and applied.

**CH 510 International Health: Cross Cultural Comparisons (3)**

This class explores the multi-cultural aspects of health and international comparisons of various health indicators. Students will examine specific health problems, and the nature of health care delivery worldwide.

**CH 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**CH 530 Seminar in Health Promotion Strategies (3)**

Prerequisites: CH 509, CH 560 or consent of instructor. Examines the effectiveness of a wide range of strategies used in health promotion/disease prevention programs. Current literature/programs are presented and reviewed.

**CH 540 Principles of Health Program Management (3)**

Prepares students to assume a supervisory role in the management of health and human services programs. Course covers planning, decision-making, organization, budgeting, marketing, human resource management, leadership.



**CH 550 Environmental Health (3)**

Investigate and discuss the relationships of environmental health problems to human health and welfare. Include sources of these problems, their recognition and control and current research studies.

**CH 560 Scientific Foundations of Health Promotion/Disease Prevention (3)**

Examine epidemiological, physiological and intervention studies from the USA and other countries to develop a scientific basis for health promotion and disease prevention.

**CH 610 Program Planning and Evaluation (3)**

Prerequisite: CH 530 or consent of instructor. Theories and practices of program planning and evaluation including needs assessment, planning approaches, selection of strategies, data collection and analysis, evaluation design, program implementation and utilization of evaluation data.

**CH 620 Epidemiology (3)**

Prerequisite: SRM 617. Epidemiological principles analyzed with an emphasis on selected topical issues, infectious and chronic/degenerative diseases, research design and analysis. Practical applications of statistical and epidemiological methods.

**CH 622 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**CH 625 Public Health Administration and Policy (3)**

Analyze the organization and administration of public health agencies at national, state and local levels. Major public health problems, including administrative and policy decisions regarding their resolution, will be included.

**CH 692 Graduate Internship (3-6)**

Prerequisites: CH 610 and consent of advisor. Supervised experience at a health agency that allows the student to put into practice knowledge and skills learned in the classroom. S/U graded. Repeatable, maximum of six credits.

**CH 699 Thesis (1-6)**

Optional for Master of Public Health candidates in Health Education. Repeatable, no limitations.

**CHED — CHEMISTRY EDUCATION****CHED 495 Seminar in Teaching Chemistry (2)**

Full admittance to PTEP required, certification at the undergraduate level or consent of instructor. Students are prepared to set up, organize and run a chemistry laboratory and classroom. S/U graded.

**CHED 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**CHED 509 Advanced Placement Institute in Chemistry (2)**

Consent of instructor. Topics in chemistry content and pedagogy appropriate to the establishment, development and maintenance of an advanced placement program in chemistry. S/U graded.

**CHED 682 Problems in Teaching Chemistry (3)**

Problems encountered in teaching chemistry and approaches to their resolutions will be considered. The formal nature of concepts, management of laboratories, safety, demonstrations are illustrative of areas of discussion.

**CHED 693 Chemical Education Research (1-10)**

Develop, complete, and defend master's level research project in chemical education. S/U graded. Repeatable, maximum of ten credits.

**CHED 755 Supervised Practicum in College Teaching (1-6)**

Supervised practice in college teaching for doctoral candidates with observation used as a basis for analysis of learning experiences. Repeatable, maximum of six credits.

**CHED 793 Doctoral Research Practicum-Chemical Education (1-4)**

Consent of advisor. Provides experience in the development and implementation of research techniques, the development of experimental design and the analysis of research data. S/U graded. Repeatable, maximum of 16 credits.

**CHED 797 Doctoral Research Proposal-Chemical Education (1-4)**

Required of all doctoral students. Students may register for this course (1-4 hours) in any semester, but must earn 4 hours of credit in partial fulfillment of requirements before admission to candidacy. S/U graded. Repeatable, maximum of four credits.

**CHED 799 Doctoral Dissertation-Chemical Education (1-12)**

Required of all doctoral candidates. See Ph.D. in Chemical Education - Minimum requirements for the major in the Graduate School section of this Catalog. S/U graded. Repeatable, maximum of 12 credits.

**CHEM — CHEMISTRY****CHEM 101 Chemistry for Citizens (3)**

No previous chemistry required. Physical and chemical principles, illustrated by demonstrations and contemporary readings, understand current topics in chemistry; such as, polymers, farm chemistry, food additives, chemotherapy and drugs. (GenEd)

**CHEM 102 Chemistry for Citizens Laboratory (1)**

(2 laboratory) Prerequisite: CHEM 101 or take concurrently. Investigation of the chemical world through hands-on activities in the laboratory. For non-science majors. Credit given only upon successful completion of CHEM 101. (GenEd)

**CHEM 103 Introductory Chemistry (3)**

No credit for chemistry major or minor. Basic chemistry concepts to prepare those with no chemistry background for CHEM 108 or CHEM 111.

**CHEM 108 Fundamentals of Chemistry I (5)**

(4 lecture, 3 laboratory) High school chemistry is strongly recommended. Fundamentals of general chemistry and an introduction to organic chemistry, with emphasis to the allied health professions. (GenEd)

**CHEM 109 Fundamentals of Chemistry II (5)**

(4 lecture, 3 laboratory) Prerequisite: CHEM 108. Chemistry of biologically important organic compounds and physiological biochemistry of the human organism, including the chemistry of cellular processes.

**CHEM 111 Principles of Chemistry I (5)**

(4 lecture, 3 laboratory) Atomic theory, mole concept, stoichiometry, states of matter, formulas, nomenclature, periodicity, bonding and solutions. (GenEd)

**CHEM 112 Principles of Chemistry II (5)**

(4 lecture, 3 laboratory) Prerequisite: CHEM 111 or CHEM 114. A continuation of CHEM 111. Thermochemistry, chemical kinetics, equilibrium, qualitative analysis, electrochemistry and descriptive inorganic chemistry.

**CHEM 114 General Chemistry I (4)**

(3 lecture, 3 laboratory) High school chemistry, algebra or equivalent required. Enrichment course for the well-prepared student. Atomic theory, stoichiometry, bonding, states of matter and solutions.

**CHEM 115 General Chemistry II (4)**

(3 lecture, 3 laboratory) Prerequisite: CHEM 111 or CHEM 114. Continuation of CHEM 114. Enrichment course for the well-prepared student. Topics include electrochemistry, acid-base chemistry, descriptive inorganic chemistry.

**CHEM 131 Introductory Organic Chemistry (4)**

(3 lecture, 3 laboratory) Prerequisite: CHEM 111. Will not substitute for CHEM 331. A brief introduction to modern organic chemistry. Structure, nomenclature, reactions and uses of organic compounds.

**CHEM 320 Theory and Use of Analytical Instruments (1)**

(3 laboratory) Prerequisite: CHEM 131 or CHEM 331. Techniques of sample preparation and data collection for IR, NMR, UV-visible and AA spectrophotometers and gas chromatograph.

**CHEM 321 Chemical Analysis (4)**  
(2.5 lecture, 4.5 laboratory) Prerequisite: CHEM 112 or CHEM 115. Chemical methods of analysis including gravimetry, acid-base, redox methods, statistics in analytical chemistry and an introduction to instrument operations.

**CHEM 331 Organic Chemistry I (5)**  
(4 lecture, 3 laboratory) Prerequisite: CHEM 112 or CHEM 115. Credit not allowed for both CHEM 131 and CHEM 331. Nomenclature, reactions and synthesis of organic compounds.

**CHEM 332 Organic Chemistry II (5)**  
(4 lecture, 3 laboratory) Prerequisite: CHEM 331. Continuation of CHEM 331. Advanced concepts in synthesis, theories of reactions, biological molecules and spectroscopy.

**CHEM 360 Environmental Chemistry (2)**  
(1.5 lecture, .5 laboratory) Prerequisite: CHEM 131 or CHEM 331. The effect of chemicals in the environment.

**CHEM 421 Instrumental Analysis (4)**  
(3 lecture, 3 laboratory) Prerequisites: CHEM 321 and CHEM 450 or CHEM 451. Theory, practice and application of modern analytical instrumentation.

**CHEM 422 Directed Studies (1-3)**  
Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**CHEM 441 Inorganic Chemistry I (2)**  
Prerequisite: CHEM 321 or CHEM 331. First of two related courses. Each utilizes the journal literature and integrates applications of appropriate physical methods with theory and practice. This course emphasizes structure and bonding in inorganic substances.

**CHEM 442 Inorganic Chemistry II (2)**  
Prerequisite: CHEM 441. A continuation of CHEM 441. Topics include descriptive main-group, coordination and organometallic chemistry with emphasis on industrial applications and interrelationships among reactions, energetics and dynamics.

**CHEM 443 Inorganic Chemistry Laboratory (1)**  
(3 laboratory) Prerequisite: CHEM 441 or take concurrently. Experimentation including structures, bonding, syntheses and properties of inorganic substances.

**CHEM 450 Survey of Physical Chemistry (4)**  
(3 lecture, 3 laboratory) Prerequisites: CHEM 332, MATH 131, PHYS 221. Corequisite: CHEM 321. One semester survey of physical chemistry (thermodynamics, chemical kinetics and quantum mechanics). Not applicable to the "professional" and "biochemistry" emphasis areas in chemistry.

**CHEM 451 Physical Chemistry I (4)**  
Prerequisites: CHEM 332, MATH 233, PHYS 241 or consent of instructor. Corequisites: CHEM 321 and CHEM 453. The properties of matter, thermodynamics, thermochemistry and kinetic molecular theory.

**CHEM 452 Physical Chemistry II (4)**  
Prerequisite: CHEM 451. Corequisite: CHEM 454. Chemical kinetics, quantum theory of atoms and molecules and statistical thermodynamics.

**CHEM 453 Physical Chemistry I Laboratory (1)**  
(3 laboratory) Corequisite: CHEM 451. Hands-on collection and treatment of experimental data by manual and computer methods.

**CHEM 454 Physical Chemistry II Laboratory (1)**  
(3 laboratory) Prerequisite: CHEM 453. Corequisite: CHEM 452. Continuation of CHEM 453.

**CHEM 481 General Biochemistry I (3)**  
Prerequisite: CHEM 331. Chemistry of biologically important compounds (proteins, nucleic acids, carbohydrates and lipids), emphasizing structure and function, methods of isolation, identification and characterization, kinetics and mechanisms of enzyme catalysis.

**CHEM 482 General Biochemistry II (3)**  
Prerequisites: CHEM 332 and CHEM 481 or equivalent. A continuation of CHEM 481. Bioenergetics, electron transport systems, metabolism of carbohydrates, lipids, nucleotides and amino acids.

**CHEM 483 Experimental Biochemistry I (1)**  
(3 laboratory) Prerequisites: CHEM 331, CHEM 481 or take concurrently, CHEM 321 or take concurrently. Techniques involved in the isolation and characterization of amino acids, peptides and proteins. Isolation and kinetics of enzymes.

**CHEM 484 Experimental Biochemistry II (1)**  
(3 laboratory) Prerequisite: CHEM 482 or take concurrently, CHEM 483. Continuation of CHEM 483. Techniques involved in the isolation and characterization of lipids and metabolism.

**CHEM 499 Seminar and Research in Chemistry (1-3)**  
Introduction to chemical research and current chemical literature; initiate and pursue investigation of a specific topic in chemistry or chemical education. Oral and written reports are required. Repeatable, no limitations.

**CHEM 520 Theory and Use of Analytical Instruments (1)**  
(3 laboratory) Prerequisite: CHEM 131 or CHEM 331. Techniques of sample preparation and data collection for IR, NMR, UV-visible and AA spectrophotometers and gas chromatograph.

**CHEM 522 Advanced Analytical Chemistry (3)**  
(2 lecture, 3 laboratory) Prerequisite: CHEM 321. Advanced topics in analytical chemistry, including sampling, statistics, multiple equilibria and current literature.

**CHEM 523 Chemical Spectroscopy (3)**  
Prerequisites: CHEM 321 and CHEM 331. Theory and application of IR, NMR, UV-visible and mass spectroscopy.

**CHEM 533 Organic Synthesis and Stereochemistry (3)**  
Prerequisite: CHEM 332. An advanced treatment of synthesis and stereochemistry in organic chemistry.

**CHEM 534 Theory and Mechanisms of Organic Reactions (3)**  
Prerequisites: CHEM 332, CHEM 451. An advanced treatment of organic reaction mechanisms and molecular orbital chemistry.

**CHEM 543 Organometallic Chemistry (3)**  
Prerequisite: CHEM 441. An introduction to organometallic systems will be presented. Included will be a comprehensive study of the preparation, properties and practical utility of both main-group and transition metal organometallic compounds.

**CHEM 551 Physical Chemistry I (4)**  
Prerequisites: CHEM 332, MATH 233, PHYS 241. Corequisites, CHEM 321. The properties of matter, thermodynamics, thermochemistry and kinetic molecular theory.

**CHEM 552 Physical Chemistry II (4)**  
Prerequisite: CHEM 551. Chemical kinetics, quantum theory of atoms and molecules and statistical thermodynamics.

**CHEM 556 Physical Chemistry of Atomic and Microscopic Systems (3)**  
Prerequisites: CHEM 451 and CHEM 452 or equivalent. This course will examine the details of atomic and molecular structure, energetics, and dynamics.

**CHEM 557 Physical Chemistry of Macroscopic Systems (3)**  
Prerequisites: CHEM 451 and CHEM 452 or the equivalent. An examination of the thermodynamics and kinetics of bulk systems, including the energetics, equilibrium, and kinetics of such systems.

**CHEM 560 Environmental Chemistry (2)**  
(1.5 lecture, .5 laboratory) Prerequisite: CHEM 131 or CHEM 331. The effect of chemicals on the environment.

**CHEM 581 General Biochemistry I (4)**  
Prerequisite: CHEM 331 or equivalent. Chemistry of biologically important compounds (proteins, nucleic acids, carbohydrates and lipids), emphasizing structure and function, methods of isolation, identification and characterization, kinetics and mechanisms of enzyme catalysis.

**CHEM 582 General Biochemistry II (4)**  
Prerequisites: CHEM 332, CHEM 581 or equivalent. A continuation of CHEM 581. Bioenergetics, electron transport systems, metabolism of carbohydrates, lipids, nucleotides and amino acids.

**CHEM 586 Biochemical Techniques (3)**  
(1 lecture, 6 laboratory) Prerequisites: CHEM 321, CHEM 481. Theory and application of techniques for the purification and characterization of biological molecules. Various techniques utilizing centrifugation, spectroscopy, chromatography, electrophoresis and radioisotopes are examined.

**CHEM 587 Toxicology (3)**  
Prerequisites: CHEM 481 or equivalent with consent of instructor. A descriptive examination of the toxic effects of environmental substances on living systems.

**CHEM 590 Advanced Topics in Chemistry (3)**  
Discussion of a topic in chemistry at the graduate level; e.g. polymers, drug metabolism and molecular reaction dynamics. Repeatable, maximum of 12 credits, under different subtitles.

**CHEM 600 Seminar in Chemistry (1)**  
Oral report and discussion on some topic of interest from current literature. Repeatable, may be taken three times.

**CHEM 622 Directed Studies (1-3)**  
Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**CHEM 693 Chemical Research (1-10)**  
Develop, complete, and defend master's level research project in chemistry. S/U graded. Repeatable, maximum of ten credits.

**CHEM 695 Thesis Proposal (1)**  
The student will develop a research proposal based on current literature.

**CHEM 699 Thesis (1-10)**  
Required of Master of Arts candidates in the Arts and Sciences chemistry program. Repeatable, no limitations.

**CHEM 793 Doctoral Research Practicum-Chemistry (1-4)**  
Consent of advisor. Provides experience in the development and implementation of research techniques, the development of experimental design and the analysis of research data. S/U graded. Repeatable, maximum of 16 credits.

**CHEM 797 Doctoral Research Proposal-Chemistry (1-4)**  
Required of all doctoral students. Students may register for this course (1-4 hours) in any semester, but must earn 4 hours of credit in partial fulfillment of requirements before admission to candidacy. S/U graded. Repeatable, maximum of four credits.

**CHEM 799 Doctoral Dissertation-Chemistry (1-12)**  
Required of all doctoral candidates. See Ph.D. in Chemical Education - Minimum requirements for the major in the Graduate School section of this Catalog. Repeatable, maximum of 12 credits.

## CHIN — CHINESE

Note: All Chinese courses are not offered on a regular basis. Consult the Department of Foreign Languages for current offerings.

**CHIN 101 Beginning Chinese (5)**  
For students with no previous Chinese. Conversational Chinese using oral techniques with reading and writing skills. Stresses comprehension, structure, pronunciation, fluency and cultural awareness. (GenEd)

**CHIN 102 Elementary Chinese II (5)**  
Continuation of CHIN 101. Conversational Chinese using oral techniques with reading and writing skills. Stresses comprehension, structure, pronunciation, fluency and cultural awareness. (GenEd)

## CIE — CENTER FOR INTERNATIONAL EDUCATION

**CIE 050 English for International Students I (12)**  
Prepare international students for academic courses at an American University. Emphasis on pronunciation, written and spoken grammar, building academic vocabulary, reading skills, listening comprehension and note-taking skills.

**CIE 051 Writing for Foreign Students I (6)**  
Intermediate. Assist international students with language skills in the areas of reading, writing, listening and speaking. Continuing Education course; no credit. Repeatable.

**CIE 052 Writing for Foreign Students II (3-6)**  
Advanced. Assist international students with language skills in the areas of reading, writing, listening and speaking. Continuing Education course; no credit. Repeatable.

## CMDS — COMMUNICATION DISORDERS

**CMDS 160 Introduction to Human Communication and Its Disorders (3)**  
Survey identifying characteristics, causes, diagnosis and treatment of speech, language, and hearing disorders. Includes disorders in hearing, stuttering, voice, articulation, child language, adult aphasia, head injury and dementia. (GenEd)

**CMDS 260 Introduction to Phonetics (2)**  
Characteristics of American English speech sounds and the International Phonetic Alphabet symbols used to represent them. Normal phonological development.

**CMDS 265 Fundamentals of Physiological and Biological Acoustics (2)**  
The physics of sound as it relates to speech and hearing. Should be taken after general education mathematics requirement is completed.

**CMDS 266 Normal Speech and Language Development (3)**  
Normal speech and language development and their relationship to other aspects of child development. Should be taken after general education English composition requirement is completed.

**CMDS 267 Anatomy and Physiology of the Speech and Hearing Mechanism (3)**  
Prerequisite: BIO 101. Sophomores or above. Structure and function of the speech and auditory/vestibular mechanisms.

**CMDS 360 Articulation and Voice Disorders (3)**  
Prerequisite: CMDS 267. Current information regarding identification, causation, diagnosis and treatment of disorders of articulation and voice disorders.

**CMDS 365 Language Disorders in Children (3)**  
Prerequisite: CMDS 266. Analysis of aspects of language as they relate to treatment of language disorders in children.

**CMDS 366 Language Sampling Processes (1)**  
Prerequisite: CMDS 266. Consent of instructor. Methods of eliciting language samples from children and manual and computerized language sampling analyses.

**CMDS 370 Basic Audiology (3)**  
Clinical observation required. Prerequisites: CMDS 265, CMDS 267 or take concurrently. Pure-tone testing, methods of speech audiometry, interpretation of audiometric data in terms of physical, social and educational effects. An introduction to principles of aural rehabilitation.

**CMDS 386 Basic Clinical Strategies in Speech-Language Pathology/Audiology (2)**  
Prerequisite: CMDS 360 or CMDS 365. Clinical observation required. Treatment models for communicatively-disordered clients; development and implementation of individual treatment programs; report writing; the client-clinician relationship; assessment of treatment outcomes.

**CMDS 390 Observation in Communication Disorders (1-2)**  
This course will provide supervised observations of diagnostic and therapeutic activities in speech-language pathology, aural rehabilitation and/or audiology practice. Repeatable, maximum of 2 credits.

**CMDS 422 Directed Studies (1-4)**  
Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**CMDS 431 Organically-Based Communication Disorders (3)**

Prerequisites: CMDS 160 and CMDS 267. Seniors or above. Current information regarding identification, causation, diagnosis and treatment of organically-based communication disorders, including cleft palate, cerebral palsy and aphasia.

**CMDS 465 Psychometrics (1)**

The measurement of psychological and behavioral traits. Includes issues related to design and construction of assessment tools and evaluation of the adequacy of these tools for various purposes and populations.

**CMDS 466 Language Sampling Procedures for School-Age Children (1)**

Introduction to language sampling procedures that can be used in analyzing the conversational abilities of school-aged children and adolescents.

**CMDS 467 Diagnostic Methods and Observation (3)**

Clinical observation required. Prerequisites: CMDS 360, CMDS 365. Philosophy and implementation of diagnosis and appraisal of communication disorders. Emphasis upon the administration, scoring and interpretation of data obtained from observation and from tests/inventories.

**CMDS 470 Communication Disorders of the Aging (2)**

Disorders of communication among older people: recognition of disorders, assessment and treatment, psychosocial and communicative impact. Procedures for dealing with these persons in health care facilities and the community.

**CMDS 474 Clinical Practicum in Audiology (1)**

Prerequisite: CMDS 370 and 3.0 GPA in major courses or consent of clinical coordinator. Perform basic audiometric testing; audiometric screening, routine hearing evaluation and impedance audiometry. S/U graded.

**CMDS 478 Aural Rehabilitation and Amplification (3)**

Prerequisite: CMDS 370. A study of basic principles of aural rehabilitation and the use of amplification systems for hearing impaired individuals including personal hearing aids and other specialized assistive listening/alerting devices.

**CMDS 483 Entry/Primary Speech-Language Pathology Practicum (2)**

Prerequisites: CMDS 360, CMDS 365, CMDS 386 and 3.0 GPA in major courses or consent of clinical coordinator. Learn general principles of the clinical process. Provide supervised individual therapy to clients with communication disorders. S/U graded.

**CMDS 487 Advanced Audiology (3)**

Prerequisite: CMDS 370. Theory and practice of advanced techniques of audiometric assessment.

**CMDS 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**CMDS 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**CMDS 515 Foundations of Research and Writing (1)**

Introduction to graduate-level writing and research strategies. Content includes identification of problems/research topics, use of library databases and web sources, organization of content, and use of current APA style.

**CMDS 516 Professional Issues in SLP (1)**

Professional issues in speech-language pathology as they relate to the public schools, medical settings and private practice. Topics include the law, ethics, risk management and third party reimbursement.

**CMDS 555 Neuroanatomy and Neurophysiology of Communication (3)**

Neuroanatomy-physiology related to speech, language and hearing; neuropathologies of the central nervous system and results of neurological insult.

**CMDS 563 Voice and Resonance Disorders (2)**

Etiologies and symptoms of dysphonia, assessment and intervention strategies. Resonance disorders associated with cleft lip and palate and causes, including assessment and intervention in a team approach.

**CMDS 569 Advanced Diagnostic Procedures (1-2)**

Must be taken for a minimum of six credits. Perform speech-language screenings and diagnostic evaluations. Repeatable, maximum of eight credits.

**CMDS 570 Rehabilitative Audiology (3)**

Prerequisite: CMDS 370. Theory and procedures for rehabilitation of children and adults with hearing handicap.

**CMDS 571 Speech and Hearing Science (4)**

(3 lecture, 1 lab) Laboratory required. Models of speech production and perception, measurement techniques for simple and complex signals. Lab addresses application of models of speech production and perception to experimental and clinical situations.

**CMDS 572 Industrial Audiology (2)**

The study of noise as it pertains to the auditory system. Physical aspects of noise, instrumentation, measurement and reduction principles, hearing conversation management.

**CMDS 573 Auditory Physiology and Pathology (3)**

Undergraduate anatomy and physiology required. Advanced physiology of the human auditory system, emphasizing electrical potentials; processes of pathophysiology.

**CMDS 574 Clinical Practicum in Audiology (1)**

Prerequisites: CMDS 370, 3.0 GPA in major courses or consent of clinical coordinator. Perform basic audiometric testing; audiometric screening, routine hearing evaluation and impedance audiometry. S/U graded.

**CMDS 580 Practicum in Rehabilitative Audiology (1-2)**

Prerequisite: CMDS 483. Habilitation/rehabilitation of acoustically-handicapped persons. Repeatable, maximum of six credits.

**CMDS 582 Educational Audiology (3)**

Prerequisite: CMDS 370. Explore services for hearing impaired children in the schools. Educational implications of auditory processing disorders are also covered.

**CMDS 583 Clinical Practicum: Introduction (1-2)**

Introduces students to issues related to treating individuals with speech and/or language disorders. Topics include writing treatment plans, evaluating clinical performance, working with supervisors, measuring outcomes, and risk management. S/U graded.

**CMDS 584 Screening Procedures in Speech-Language Pathology (1)**

Presents theory and procedures related to screening speech and language abilities in children and adults. Provides practice in implementing procedures in a variety of settings. S/U graded.

**CMDS 585 Clinical Practicum in Speech-Language Pathology: Intermediate (1-2)**

Prerequisite: CMDS 583. Students improve clinical skills and learn about issues related to clinical practice, including ethics, counseling, self-evaluation, treatment notes, efficacy, counseling techniques, sharing information verbally and relating to diverse populations. Repeatable, maximum of four credits.

**CMDS 586 Clinical Practicum in Speech-Language Pathology: Intermediate/Advanced (2)**

Prerequisites: CMDS 583, CMDS 585. Students improve their clinical skills and learn about issues related to clinical practice, including continuing education, conflict resolution, data keeping methods, technology, and clinical research. Repeatable, maximum of four credits.

**CMDS 588 Clinical Practicum in Speech-Language Pathology: Advanced (2)**

Prerequisites: CMDS 583, CMDS 585, CMDS 586. Students improve their clinical skills and learn about issues related to clinical practice in medical settings, including interviewing, legislation, professional liability, marketing, clinical fellowship year, leadership, inservices.

**CMDS 587 Advanced Audiology (3)**

Prerequisite: CMDS 370. Theory and practice of advanced techniques of audiometric assessment.

**CMDS 588 Clinical Practicum in Speech-Language Pathology: Advanced (2)**

Prerequisites: CMDS 583, CMDS 585, CMDS 586. Students improve their clinical skills and learn about issues related to clinical practice in medical settings, including interviewing, legislation, professional liability, marketing, clinical fellowship year, leadership, inservices.

**CMDS 592 Internship in Public Schools (2-15)**

Prerequisites: Minimum of 100 clock hours of previous supervised clinical experience and/or consent of advisor. Supervised full-time experience working with school children. S/U graded. Repeatable, maximum of 15 credits.

**CMDS 594 Practicum and Advanced Topics in Audiology (1-2)**

Prerequisite: CMDS 474 or CMDS 574. Perform the full range of clinical audiological services, including special testing, hearing aid evaluations and dispensing of hearing aids. Repeatable, maximum of six credits.

**CMDS 615 Research in Communication Sciences and Disorders (1)**

Engage students in systematic inquiry in communication disorders. Evaluate current research, pose research questions, formulate research designs, and develop formal research proposals. Advanced students conduct research and plan dissemination. Repeatable, maximum of 5 credits.

**CMDS 622 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**CMDS 655 Acquired Disorders of Language and Cognition (3)**

Prerequisite: CMDS 555. This course describes signs and symptoms, evaluation approaches, differential diagnostic criteria, prevention, and management approaches to speech and language disorders resulting from acquired neurological dysfunction across the lifespan.

**CMDS 656 Feeding and Swallowing Disorders: Lifespan (2)**

Prerequisite: CMDS 555. In-depth study of normal and disordered deglutition in adult and pediatric populations and dysphagia diagnosis and management.

**CMDS 657 Motor Speech Disorders: Lifespan (2)**

Prerequisite: CMDS 555. Etiologies and characteristics of motor speech disorders. Differential diagnosis and treatment of the disorders will be explored with pediatric and adult populations.

**CMDS 658 Assistive Technology for Communication Disorder (3)**

Describes assistive technology (AT) applications for individuals with limited/restricted verbal communication. Emphasis on multidisciplinary assessment and selection and use of low and high assistive technologies for communication and learning.

**CMDS 661 Speech Production Disorders: Lifespan (3)**

Disorders of speech production in pediatric and adult populations. Biological, cognitive, linguistic, and ethnocultural systems influencing speech production, contributing/causal factors, theories of acquisition, assessment and treatment issues.

**CMDS 664 Fluency Disorders (2)**

Characteristics of fluency and fluency disorders; biological, developmental, and environmental factors contributing to fluency disorders; models of and research in fluency disorders; assessment of fluency; and, treatment of fluency disorders.

**CMDS 668 Cochlear Implants (3)**

Prerequisites: CMDS 487. Advances in cochlear implant device circuitry, electrode design, speech processing strategies, candidacy, and rehabilitation are explored. The history and technological progression of cochlear implants are also reviewed.

**CMDS 671 Psychoacoustics (2)**

Prerequisite: CMDS 573. Concepts of loudness, adaptation, auditory fatigue, masking and the critical band, pitch perception, localization, temporal order and perceptual organization.

**CMDS 673 Practicum in School Audiology (1-6)**

Prerequisite: CMDS 582. Perform audiological services in schools (grades K-12) under supervision of a certified Audiologist. S/U graded. Repeatable, maximum of six credits.

**CMDS 675 Differential Diagnosis of Auditory Problems (3)**

Prerequisite: CMDS 573. Theory and process of differential diagnosis of hearing and auditory processing disorders. Focus on behavioral testing, advanced immittance concepts and assessment. Some exposure to other objective measures.

**CMDS 677 Medical Aspects of Audiology (3)**

Prerequisite: CMDS 573. Study of the medical correlates of hearing impairment including pathogenesis of auditory pathologies, medical/surgical intervention, pharmacology and ototoxicity, radiology and imaging techniques and effects of sedation on electrophysiologic tests.

**CMDS 678 Hearing Aids and Uses of Amplification (3)**

Advanced study of the theory and use of hearing aids, other amplification devices and assistive listening devices.

**CMDS 681 Advanced Speech Physiology (3)**

Undergraduate anatomy and physiology required. Advanced physiology of the speech production system, emphasizing normal aspects and select pathophysiological conditions.

**CMDS 682 Language Disorders in Early Childhood and Preschool (3)**

Language disorders from infancy through preschool. Application of contemporary theory and legislative mandates to assessment and treatment for infants and children demonstrating or at-risk for social-communicative-linguistic impairments.

**CMDS 684 Disorders of Language & Literacy: School-Age and Adolescent (3)**

In-depth study of impairments of oral language, reading, and written expression in school-age children and adolescents. Explores typical development, models of impairment, assessment and treatment.

**CMDS 685 Advanced Differential Diagnosis of Auditory Problems (4)**

Advanced study of auditory and vestibular physiology, otoacoustic emissions, multi-frequency tympanometry, auditory evoked potentials, and electronystagmography.

**CMDS 686 Capstone in Speech-Language Pathology (2)**

This course is designed as a seminar to provide students multiple avenues for the professional presentation of scholarly projects relative to the study of communication disorders.

**CMDS 688 Hearing Aids II (3)**

Prerequisite: CMDS 678. A continuation of the advanced study of the theory, instrumentation, and use of hearing aids and assistive listening devices with emphasis on applied theory and clinical use.

**CMDS 689 Advanced Research Practicum in Health and Human Sciences (1)**

Prerequisite: HRS 610 or SRM 600. Structured to give students broadened experiences in research and thesis design in the disciplines in Health and Human Sciences. S/U graded.

**CMDS 692 Internship in Medical Settings (2-16)**

Prerequisites: Minimum of 100 clock hours of previous supervised clinical experience and/or consent of advisor. Supervised full-time clinical experience in diagnosis/treatment of persons with speech, language and/or hearing disorders in medical settings. S/U graded. Repeatable, maximum of 16 credits.

**CMDS 699 Thesis: Communication Disorders (1-6)**

Individual original research under the direction of faculty, aimed at acquisition of research skills, appreciation of the scientific inquiry process, knowledge of scientific writing style and dissemination. S/U graded. Repeatable, no limitations.

**CMDS 715 Applied Research in Audiology (1-2)**

Prerequisite: CMDS 615. Seminar to engage students in a capstone research project. Students will also explore multiple avenues for the presentation of professional quality scholarly projects in audiology. S/U graded. Repeatable, maximum of four credits.

**CMDS 720 Supervised Teaching in Communication Disorders (2)**

Emphasis on teaching techniques and methods for college and university instruction. Repeatable, maximum of six credits. S/U graded.

**CMDS 771 Speech Perception and Advanced Signal Processing (2)**

Prerequisite: CMDS 671. Advanced study of psychoacoustics with special reference to disordered auditory systems. Current theories of speech perception will also be addressed.

**CMDS 774 Professional Issues in Audiology (3)**

Overview of professional responsibilities and intra-professional relationships in the hearing health care delivery system. Medical-legal issues, business aspects, infection control, counseling, intra-personal skills and ethics are addressed.

**CMDS 775 Advanced Electro-diagnosis (3)**

Prerequisites: CMDS 573 and CMDS 685. Advanced testing methods of the auditory and vestibular system.

**CMDS 782 Pediatric Audiology (3)**

Prerequisite: CMDS 487. Philosophy, diagnosis, and management of hearing loss in children. Includes auditory development, appropriate hearing assessment techniques for infants and children, interpretation of results, administering follow-up, and effective caregiver counseling.

**CMDS 792 Clinical Residency in Audiology (9-14)**

Prerequisites: 16 credits of internship in any combination of CMDS 592, CMDS 692, CMDS 673, and consent of clinical coordinator. Full-time, broad-based clinical experience in the diagnosis, treatment, management and prevention of hearing loss in a supervised off-campus site. S/U graded. Repeatable, maximum of 27 credits.

**CRJ — CRIMINAL JUSTICE****CRJ 110 Introduction to Criminal Justice (3)**

Survey of the three components of the criminal justice system: police, courts, and corrections. Emphasis on the structural and situational factors influencing the way these agencies of social control operate. (GenEd)

**CRJ 220 Policing Systems (3)**

Introduces the philosophy and techniques of policing including the history, traditions, and social developments resulting in present systems. Focus on the nature of police work, police discretion, and community relations.

**CRJ 230 Judicial Process (3)**

A study of the American judicial system with emphasis on its structure, function, and process. Focus on the role, function, and behavior of prosecutors, defense attorneys, judges and jurors.

**CRJ 370 Justice Professionalism and Ethics (3)**

Prerequisite: CRJ 110. Examine ethical theory, controversies, and rules of moral judgment as they relate to criminal justice practitioners. Discuss and evaluate ethical dilemmas faced by those working in the criminal justice system.

**CRJ 380 Justice Research and Statistics (3)**

Prerequisites: STAT 150 and CRJ 110. Study research methods and statistical techniques for conducting research and analyzing data encountered in criminal justice research. Emphasis on questions inherent to the study of contemporary issues in criminal justice.

**CRJ 390 The Criminal Justice Profession (1)**

Prerequisites: CRJ 110. Prerequisite or Corequisite: CRJ 370. Sophomores or above. Using guest speakers, field trips, class discussions, etc., students become familiar with internship and career opportunities in justice agencies and learn skills for successful placement in the criminal justice profession. S/U graded.

**CRJ 395 Topics in Criminal Justice (1-3)**

Prerequisite: CRJ 110. Offerings under this heading focus on criminal justice topics not regularly offered in the department. Topics could include capital punishment, community policing, minorities in the justice system, etc. Repeatable, under different subtitles.

**CRJ 410 Comparative Justice Systems (3)**

Prerequisite: CRJ 110. Seniors or above. Examine criminal justice in countries around the world. Compare those systems with the justice system in the United States. Attention on agencies and procedures for law enforcement, adjudication, and correction.

**CRJ 492 Internship (3-6)**

Prerequisite: CRJ 390. Sophomores or above. Supervised experience in a justice agency. Fifty work hours required for each credit hour earned. Credit only for work completed during the semester enrolled. Arrange placement prior to course enrollment. S/U graded. Repeatable, maximum of 6 credits.

**CS — COMPUTER SCIENCE****CS 101 Introduction to Computer Science (3)**

Breadth-first study of computer science concepts. Topics include machine architecture, programming, problem-solving techniques, algorithms, operating systems, networking, security, computations, graphics, GUIs, AI, databases, software engineering, and social issues. (GenEd)

**CS 102 Structured Programming (3)**

Prerequisite: CS 101. Study the structured programming development methods; the data types, operators, expressions, control flow, and input and output of a specific structured programming language; and some elementary data structures and algorithms.

**CS 195 Special Topics in Computer Science (1-3)**

Consent of instructor. Topics that reflect the specific interests of available professors and the specific needs of interested undergraduates. Repeatable, under different subtitles.

**CS 200 Object-Oriented Analysis, Design, and Programming (3)**

Prerequisite: CS 102. Study the software development life cycle; elements of the object model; object-oriented data types and functions; object-oriented enhancements to structured programming; and additional data structures and algorithms.

**CS 222 Computer Architecture/Organization (3)**

Prerequisite: CS 101. A study of the organization and structure of the major hardware components of computers and the basics of assembly language programming.

**CS 301 Algorithms and Data Structures (3)**

Prerequisite: CS 200. Internal representation and applications of lists, trees, graphs, sorting, searching, and hashing. Focus on the interactions among algorithm, data structures, and storage structures for the processing of data.

**CS 302 Programming Languages (3)**

Prerequisite: CS 301. Basic components of programming languages. Specification of syntax and semantics. Description of programming languages features. Examine a wide variety of languages with an emphasis on their structure, design, and use.

**CS 350 Software Engineering I (3)**

Prerequisite: CS 301. Study concepts of engineering software systems. Design and implement a software system project using the team approach.

**CS 395 Special Topics in Computer Science (1-3)**

Consent of instructor. Topics in computer science that reflect the specific interests of available instructors and the specific needs of the students. Repeatable, under different subtitles.

**CS 422 Directed Studies (1-4)**

A plan should be submitted and approved by all computer science faculty. Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**CS 440 Operating Systems (3)**

Prerequisites: CS 222 and CS 301. Study operating systems history, concepts/structure and design; process, processor, memory, file system and input/output management; and representative operating systems.

**CS 442 Networking (3)**

Prerequisite: CS 440. Study data communications; network structure, design and architectures; network services and standardization; and respective networks all in the framework of the OSI model.

**CS 450 Software Engineering II (3)**

Prerequisite: CS 350. A continued emphasis on the implementation, testing and operation of large software systems. Software testing, configuration management, software quality assurance, inter/intra language communication, and verification/validating.

**CS 480 Graphics (3)**

Prerequisite: CS 301. Study graphics theory and applications including the description and transformation of world, viewpoint, eye and screen coordinates, two and three dimensional graphics and hidden line algorithms.

**CS 490 Seminar (1)**

Junior or above in Computer Science. Each student will research a current topic of interest and present it as a seminar. A term paper on the topic will also be required. Repeatable, maximum of two credits.

**CS 492 Internship (1-8)**

Senior or consent of instructor. Obtain practical experience and have opportunities to utilize computer science theory. A job description should be submitted and approved by all computer science faculty. S/U graded. Repeatable, maximum of eight credits.

**CS 497 Senior Project (1-8)**

Senior or above. A significant computer project will be developed and implemented under the guidance of a computer science professor. A project proposal should be submitted and approved by all computer science faculty. Repeatable, maximum of eight credits.

**DNCE — DANCE****DNCE 166 Ballet I (2)**

Gain knowledge and skill in the activity of ballet. Repeatable, maximum of six credits. (GenEd)

**DNCE 167 Ballroom Dance I (2)**

Gain knowledge and skill in the activity of ballroom dancing. Repeatable, maximum of six credits. (GenEd)

**DNCE 169 Partnering (1)**

Prerequisites: DNCE 166, DNCE 167. Learning techniques of dancing with another for purposes of dance stage performance. Repeatable, maximum of three credits.

**DNCE 170 Jazz Dance I (2)**

Gain knowledge and skill in the activity of jazz dance. Repeatable, maximum of six credits. (GenEd)

**DNCE 171 Modern Dance I (2)**

Gain knowledge and skill in the activity of modern dance. Repeatable, maximum of six credits. (GenEd)

**DNCE 174 Dance Conditioning (2)**

Gain knowledge and skill in body, strength, stability, flexibility, endurance, coordination, and awareness specific to dance movement. Repeatable, may be taken three times.

**DNCE 175 Tap Dance I (2)**

Gain knowledge and skill in the activity of tap dance. Repeatable, maximum of six credits. (GenEd)

**DNCE 180 Ballet II (3)**

Prerequisite: DNCE 166 or equivalent. Gain intermediate knowledge and skill in the activity of ballet. Repeatable, may be taken four times.

**DNCE 181 Jazz Dance II (3)**

Prerequisite: DNCE 170 or equivalent. Gain intermediate knowledge and skill in the activity of jazz dance. Repeatable, may be taken four times.

**DNCE 182 Modern Dance II (3)**

Prerequisite: DNCE 171 or equivalent. Gain intermediate knowledge and skill in the activity of modern dance. Repeatable, may be taken four times.

**DNCE 183 Tap Dance II (2)**

Prerequisite: DNCE 175 or equivalent. Gain intermediate knowledge and skill in the activity of tap dance. Repeatable, may be taken four times.

**DNCE 184 Ballroom Dance II (2)**

Prerequisite: DNCE 167 or equivalent. Gain knowledge and skill in the art of advanced ballroom dance.

**DNCE 290 Ballet Partnering (1)**

Prerequisite: Advanced Ballet for women, Intermediate Ballet for men or consent of instructor. Two years experience on pointe. Take concurrent with ballet. A series of partnering turns, lifts, and promenades which culminates in a classical pas de deux. Repeatable, may be taken three times.

**DNCE 292 Ballet III (3)**

Prerequisite: DNCE 180 or consent of instructor. Gain knowledge and skill at advanced level in activity of ballet. Repeatable, no limitations.

**DNCE 293 Jazz Dance III (3)**

Prerequisite: DNCE 181. Gain knowledge and skill at advanced level in the activity of jazz dance. Repeatable, no limitations.

**DNCE 294 Modern Dance III (3)**

Prerequisite: DNCE 182. Gain knowledge and skill at advanced level in the activity of modern dance. Repeatable, no limitations.

**DNCE 295 Dance Theory (1)**

Discussion and study of the body's structure and movement potential. Analysis of movement principles and elements as related to dance technique.

**DNCE 296 Choreography and Improvisation I (3)**

Prerequisite: DNCE 295 or consent of instructor. Investigate and explore principles of modern dance composition such as movement manipulation, phrasing, spatial design and choreographic form. Experiences in spontaneous movement exploration.

**DNCE 308 Workshop in Dance (1-2)**

Study in the problem areas of participants. Problems will vary with experts conducting workshops. S/U graded.

**DNCE 354 Dance Performance I (3)**

Study and practice basic theories of performing and/or choreography. Repeatable, no limitations.

**DNCE 355 Dance Performance II (3)**

Prerequisite: DNCE 354 or consent of instructor. Study and practice of basic theories of dance performance, either in student informal or formal concert setting. Repeatable, no limitations.

**DNCE 356 Dance Performance III (3)**

Prerequisites: DNCE 354, DNCE 355 or consent of instructor. Basic theories of dance composition are put into practice by choreographing for an informal or formal dance concert. Repeatable, no limitations.

**DNCE 357 Dance Performance IV (3)**

Prerequisites: DNCE 354, DNCE 355, DNCE 356 or consent of instructor. Gain performance and/or choreographic experience in a small professional dance company. Repeatable, no limitations.

**DNCE 397 Choreography and Improvisation II (3)**

Prerequisites: DNCE 295, DNCE 296. Learn intermediate level dance technique; movement analysis and composition as an intermediate dance student.

**DNCE 440 Labanotation (2)**

Prerequisites: DNCE 180, DNCE 181, DNCE 182 and DNCE 295. Consent of instructor. Study of analyzing and notating dance movement.

**DNCE 453 Teaching Methods, Rhythmic Analysis and Accompaniment (3)**

Prerequisites: DNCE 295, DNCE 296, DNCE 170, DNCE 171 or consent of instructor. Practice and study of rhythm, dance accompaniment and teaching methods used in dance classrooms.

**DNCE 454 Dance History and Philosophy (2)**

Consider the history and development of dance as it is culturally determined and the philosophy influencing dance. (GenEd)

**DNCE 455 Dance Philosophy/Trends (3)**

Prerequisites: DNCE 166, DNCE 170, DNCE 171, DNCE 296. Consider trends in dance/art form. Familiarity with dance criticism.

**DNCE 456 Choreography and Improvisation III (2)**

Prerequisites: DNCE 295, DNCE 296, DNCE 397 or consent of instructor. Investigate advanced dance technique, theory, composition and problems connected with staging a dance performance.

**DNCE 459 Dance Production in High School and College (2)**

Prerequisites: DNCE 295, DNCE 296, DNCE 456 or consent of instructor. Make practical application of principles that serve the presentation of dance. Deal with the choreographic problems, its direction and production involving theatre application of set, costume and light design.

**DNCE 460 Dance Kinesiology (3)**

Prerequisite: SES 220 or SES 211. Study of body's potential for movement. Knowledge about stretching, strengthening, injuries, correctives, good nutrition, weight control and biomechanical applications in dance.

**DNCE 480 Junior/Senior Seminar (1)**

Prerequisites: DNCE 292, DNCE 293, DNCE 295 and DNCE 296. Juniors or above. Learning about job opportunities and job preparation procedures. A chance to dialogue and ask questions about dance fields.

**DNCE 490 Dance Apprenticeship (3)**

Completion of Dance Emphasis required. On-site experience with professional dance company either as performer or in another approved capacity.

**DNCE 492 Internship in Dance Leadership (3)**

Completion of Dance Emphasis required or consent of instructor. Practice in leading dance classes. Experience chosen according to student's interest area. S/U graded.

**DNCE 493 Practicum in Dance Teaching (3)**

Completion of Dance Emphasis. On-site experience in teaching dance in an approved agency.

**DNCE 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**ECON — ECONOMICS****ECON 101 Understanding the Contemporary Economy (3)**

Non-majors only. A variety of learning experiences will be utilized to provide the knowledge and skills necessary to understand individual economic roles in society as well as to analyze current economic issues. (GenEd)

**ECON 103 Introduction to Economics: Macroeconomics (3)**

Discuss and study macroeconomic issues and models of aggregate economic analysis with emphasis on income, expenditures, fiscal and monetary policy, employment, inflation and growth. (GenEd)

**ECON 105 Introduction to Economics: Microeconomics (3)**

Supply and demand, consumer utility, production and costs, perfect competition, pure monopoly, resource allocation, public goods, income distribution and economic regulation. (GenEd)

**ECON 245 Urban Planning Economics (3)**

Prerequisites: ECON 103 and ECON 105. Students study economic problems relevant to urban areas including land use, housing and poverty, and the role of the private and public sector in resolving these problems.

**ECON 277 Industrial Organization (3)**

Prerequisite: ECON 105. Theoretical and empirical study of the structure, organization and conduct of firms on economic performance and welfare.

**ECON 301 Money and Banking (3)**

Prerequisites: ECON 103 and ECON 105. The study of monetary theory, monetary policy, money, banking and the Federal Reserve System.

**ECON 303 Intermediate**

**Macroeconomics (3)**  
Prerequisites: ECON 103 and ECON 105. Study the determinants of aggregate demand, aggregate supply, employment, macroeconomic objectives and policies.

**ECON 304 Economics of Gender (3)**

Prerequisite: ECON 105. Explore the economic status of women and men, the institutions that have affected their economic decisions and impact on the performance of the economy.

**ECON 305 Intermediate**

**Microeconomics (3)**  
Prerequisites: ECON 103, ECON 105 or MATH 124. The theory of consumer choice, of the business firm and resource allocation.

**ECON 310 Economics of Entrepreneurship (3)**

Prerequisites: ECON 103 and ECON 105. This course will give an in-depth understanding of how to apply economics to decisions faced by today's growing number of business enterprises. Focus is on Colorado's new enterprises.

**ECON 315 Labor/Management Economics (3)**

Prerequisites: ECON 103 and ECON 105. Examine American labor movement, development of labor laws and policy, economics of labor markets, employment, collective bargaining practice and union impact on contemporary industrial organization.

**ECON 320 Comparative Economic Systems (3)**

Prerequisites: ECON 103 and ECON 105. Analysis of capitalism, socialism and communism as types of economic systems; origins, historical development, major characteristics, successes and failures and future development of prominent world economies.

**ECON 341 Public Finance (3)**

Prerequisites: ECON 103 and ECON 105. Government financing at federal, state and local levels as reflected in expenditures, revenues and debt.

**ECON 344 International Economics (3)**

Prerequisites: ECON 103, ECON 105, ECON 303, ECON 305. Examine theories of international trade and the impact of trade policies on income and employment. Explores the international financial system, including exchange rates and capital flows.

**ECON 350 Application of Mathematics to Economics (3)**

Prerequisite: ECON 303, ECON 305, MATH 124 and MATH 176. Introduces students to the application of mathematics to the analysis of economic problems. Numerous examples and exercises are used to integrate mathematically formulated models with economic analysis.

**ECON 356 Water Resource Economics (3)**

Prerequisite: ECON 105, at least one upper division ECON course. Examination of economic principles governing water planning, development and law. Discussion of supply and demand, quality and political issues. Relationship to Colorado and local situation.

**ECON 360 Economics of Growth and Development (3)**

Prerequisites: ECON 103 and ECON 105. Analyze the theory, processes and history of economic growth and development, emphasizing resource use and productivity in less developed areas.

**ECON 362 Economic History of the United States (3)**

Prerequisites: ECON 103 and ECON 105. Review the historical changes in United States economic institutions. Assess United States history based on macroeconomic and microeconomic pressures. Emphasis is on post-Civil War period.

**ECON 400 Managerial Economics (3)**

Prerequisites: ECON 105, ECON 305, MATH 131 or MATH 176. Economic principles in managerial decision-making including cost, price, demand, market structure and related analysis emphasizing case studies and microcomputers.



**ECON 402 Contemporary Economic Problems (3)**

Prerequisites: ECON 103, ECON 105, ECON 303, ECON 305. Majors only. Senior status required. Learn the contribution of economic models and techniques in understanding current issues facing society. Analyze the efficiency and equity impact of alternative solutions.

**ECON 422 Directed Study (1-4)**

Consent of major advisor. Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**ECON 423 Economic Service Learning (3)**

Prerequisites: ECON 103 and ECON 105. Students will use economic principles to help others understand economics. Students will be required to perform projects and provide economic service assistance to individuals and groups.

**ECON 452 Econometrics (3)**

Prerequisites: ECON 303, ECON 305, STAT 150 or STAT 251 or BACS 291. Estimating statistical regression models of economic relationships; treatment of special problems that may arise in analysis of economic data. Micro-computers will be used.

**ECON 470 History of Economic Thought (3)**

Prerequisites: ECON 103 and ECON 105. Trace the evolution of economic thinking from 17th century to modern day. See roles played by certain "schools" of economic thinkers, the genesis of their ideas and their contributions.

**ECON 480 Research in Economics (2-5)**

Prerequisites: ECON 303 and ECON 305 or consent of instructor. Learn the basic skills involved in economic research including principles of the scientific method and model application. Prepare a research proposal and final report on a timely economic problem. Repeatable, maximum of eight credits.

**ECON 492 Internship in Economics (2-5)**

Prerequisites: ECON 303 and ECON 305 or consent of instructor. A cumulative gpa of 2.5 or better is required. Internships in the public and private sectors to allow the students to have practical experience in the market place. Repeatable, maximum of eight credits.

**ECON 552 Econometrics (3)**

Prerequisites: ECON 303, ECON 305, STAT 150 or STAT 251 or BACS 291 or equivalent. Estimating statistical regression models of economic relationships; treatment of special problems that may arise in analysis of economic data. Microcomputers will be used.

**ECON 570 History of Economic Thought (3)**

Prerequisites: ECON 103 and ECON 105. Trace the evolution of economic thinking from the 17th century to modern day. See roles played by certain "schools" of economic thinkers, the genesis of their ideas and their contributions.

**EDEC — ELEMENTARY EDUCATION: EARLY CHILDHOOD****EDEC 210 Introduction to Early Childhood (2)**

Prerequisite: Open to students who are applying to the Early Childhood PTEP. Examines early childhood education in historical, political, sociological, legal and philosophical contexts. Issues surrounding safety, wellness and professionalism are discussed.

**EDEC 231 Development of Infants and Toddlers (3)**

Required laboratory arranged. Investigate growth patterns from conception through infancy and the third year. Include influences on early development, guidance, care provision and adults' responsibilities for providing favorable environment. Observe infants and toddlers.

**EDEC 308 Early Childhood Workshop (1-10)**

Study problems in early childhood education. Area covered in any one workshop determined by subtitle. S/U graded. Repeatable, under different subtitles.

**EDEC 333 Development and Guidance of Young Children (3)**

(2 lecture, 2 laboratory) Required laboratory arranged. Approach the physical, intellectual, social and emotional growth of young children from developmental point of view. Discuss theory, observation and appropriate guidance as approaches to primary child study. Observe children.

**EDEC 334 Preschool/Kindergarten Curriculum and Methods (3)**

Prerequisites: EDEC 333, provisional or Full admittance to PTEP. Juniors/ seniors only. Study curriculum development, including selecting art, literature, music and science for preschool and kindergarten children. Plan lessons and study specific methods and techniques of teaching.

**EDEC 336 Child Within the Family (3)**

Cover topics concerning individuals within the family as it develops role behavior, personality, self-identity and stability. Discover how interaction focuses one's defenses against change in family crises.

**EDEC 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**EDEC 437 Administration of Programs for Young Children (3)**

Juniors/seniors only. Learn the organization and management of various types of child care centers, emphasizing program planning, selecting and organizing equipment and learning administrative procedures.

**EDEC 439 Parent/Child/Teacher Relationships (3)**

Deal with relationships between parents, children and teachers, particularly stressing resources for meeting problems through cooperative interaction.

**EDEC 450 Family Diversity and Involvement Early Childhood Education (2)**

Provides theoretical foundation and practical application of family diversity and parent involvement in early childhood programs. Advocacy, rights and responsibilities of parents and professionals will be addressed.

**EDEC 460 Early Childhood Curriculum I (3)**

Developmentally appropriate programming for children ages 3-8 in the curriculum areas of literacy and the social world. Appropriate assessment for programming will be included.

**EDEC 462 Classroom Management in Early Childhood (3)**

Juniors or above. Examine those components of effective classroom management procedures with children in groups. Topics include theoretical perspectives, rules and organization, pro-social behavior and effective pedagogical decisions.

**EDEC 470 Early Childhood Student Teaching I (6)**

Prerequisite: Full acceptance into Early Childhood Education PTEP and completion of Block II. Provides focused, intensive teaching experience in educational settings for children, birth through age four, in preschool and/or childcare setting.

**EDEC 480 Early Childhood Curriculum II (3)**

Curriculum content and experiences in math and science; effective strategies for teaching and assessment; developing and implementing integrated lessons/units for primary aged children are addressed.

**EDEC 490 Early Childhood Student Teaching II (6)**

Prerequisite: Full admission into the Early Childhood Education PTEP and completion of Block III. Provides focused, intensive teaching experience in educational settings for children ages 5-8 in a kindergarten and primary school setting.

**EDEC 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**EDEC 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**EDEC 539 Parent Education and Involvement in Early Childhood/Primary (3)**

Deal with relationships between parents, children and teachers stressing parent involvement in education and resources for promoting children's success in school.

**EDEC 562 Classroom Management in Early Childhood (3)**

Juniors or above. Examine those components of effective classroom management procedures with children in groups. Topics include theoretical perspectives, rules and organization, pro-social behavior and effective pedagogical decisions.

**EDEC 601 Practicum (1-3)**

Supervised professional activity in early childhood education, approximately two hours per day. A well-written paper must be filed before credit is given. Repeatable, maximum of six credits.

**EDEC 620 Educational Applications of Child Development in Early Childhood Classrooms (3)**

Study of applications of child development theories and research. Acquisition of knowledge and skills to analyze classroom practice and to apply theory and research to best practice.

**EDEC 622 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**EDEC 648 Psycholinguistics in Early Childhood (3)**

Designed to acquaint the student with the language development of the young child. Attention given to the nature of English, language acquisition, instructional implications and applications.

**EDEC 660 Critical Issues in Early Childhood (3)**

Investigating trends and issues concerning the young child, stressing curriculum, sound education policies, especially the need for cultural diversity, as well as issues of compelling contemporary significance.

**EDEC 662 Research in Early Childhood and Primary Education (3)**

Receive background in research concerning factors affecting the development and learning of young children and their families, engage in single-subject behavior management research.

**EDEC 663 Educational Assessment, Evaluation and Prescription for the Young Child (3)**

Focus on assessment tools and techniques for teacher evaluation of educational progress in young children. Plan educational programs with appropriate curricular content for individual children.

**EDEC 664 Seminar in Early Childhood and Primary Education (3)**

Explore topics in early childhood education in planned sequence that includes research, field settings, discussions and contemporary issues, especially the need for cultural diversity.

**EDEC 670 Curriculum and Instruction in Early Childhood and Primary Education (3)**

Examine components of effective instruction in early childhood and primary levels, including theoretical bases, environment, organization and management, teacher's role, curriculum content and evaluation. Relevant research is investigated.

**EDEC 675 Play and Psychosocial Development in Early Childhood (3)**

Focus on theories of play in socio-drama, therapy and cognition. Motor, emotional and psychosocial development explored. Play of successive development phases and individual meaning for each child emphasized.

**EDEC 677 Problem Solving Strategies in Early Childhood and Elementary Mathematics (2)**

Prerequisite: EDEL 520 or equivalent. Exploration of problem solving as a focus in elementary math. Emphasis on activities and strategies in problem solving in math and other subjects in elementary schools.

**EDEC 680 Play and Development of High Risk Children (2)**

Prerequisite: EDEC 675 or equivalent. Examination of psychosocial development of young children and the role of play, particularly with high risk children. Stages, values and assessment of play discussed.

**EDEC 701 Advanced Practicum in Early Childhood Education (1-4)**

Open only by invitation to resident doctoral students. Supervised professional activity in Early Childhood Education. A well-written paper must be filed with the supervising instructor before credit is given. S/U graded. Repeatable, maximum of six credits.

**EDEC 750 The Professional Early Childhood Teacher Educator (3)**

Designed for the Early Childhood professional completing doctorate. Examines and encourages participation in scholarly activity, professional service and organizational activity in Early Childhood.

**EDEC 790 Supervised Practicum in College Teaching (3)**

Receive experiences in observation and supervised practice in college teaching to be used as basis for analysis of learning experiences. S/U graded. Repeatable, maximum of six credits.

**EDEC 797 Doctoral Proposal Research (1-4)**

Required of all doctoral students. Students must earn 4 hours of credit for doctoral dissertation research proposal in partial fulfillment of requirements for doctoral degree before admission to candidacy. S/U graded. Repeatable, maximum of four credits.

**EDEC 799 Doctoral Dissertation (1-12)**

Required of all doctoral candidates, who must earn 12 hours of credit for the dissertation in partial fulfillment of requirements for the doctoral degree. S/U graded. Repeatable, no limitations.

**EDEC 999 Graduate School Continuous Registration (1)**

To permit a graduate student to continue making progress in a degree program. S/U graded. Repeatable, no limitations.

**EDEL — ELEMENTARY EDUCATION****EDEL 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**EDEL 430 Learning About Teaching and Learning (6)**

Full admittance to PTEP required. Students immersed in learning about teaching, reflecting on learning and learners. One week prior to University classes in partnership schools. Seminars, educational technological applications and classroom interactions located in schools.

**EDEL 450 Effective Instruction in Elementary School Social Studies (3)**

Full admittance to PTEP or certification at undergraduate level required. An in-depth consideration of issues, problems and practices in the elementary social studies classroom, including instructional strategies, planning, materials and evaluation. Emphasis on thinking in a pluralistic democratic society.

**EDEL 460 Integrated Methods I: Reading, Language Arts, Science and Health (9)**

Must take concurrently with EDEL 480. Full admittance to PTEP required. Juniors or above. Course integrates methods of reading and reading diagnosis, language arts, science and health. Students learn discipline specific instructional techniques, activities and content knowledge in a school setting.

**EDEL 461 Integrated Science Methods I (1)**

Majors only (Urban Education). Students will learn how to conduct Project WILD activities, explore ways to integrate this resource into school curricula, and participate in activities to become comfortable and knowledgeable to teach science.

**EDEL 462 Integrated Science Methods II (1)**

Majors only (Urban Education). Prerequisite: EDEL 461. Students will design a lesson plan, distinguish between science lessons and thematic units, and create assessment tools applicable to their needs. They will learn how to do Project WILD activities.

**EDEL 463 Integrated Science Methods III (1)**

Majors only (Urban Education). Prerequisite: EDEL 461, EDEL 462. Students will apply the Learning Cycle to lesson planning, and construct thematic units taking advantage of interdisciplinary planning, teaming, "hands-on, minds-on" activities and assessment instruments.

**EDEL 464 Integrated Literacy Methods - Writing Process (1)**

Majors only (Urban Education). Must take concurrently with ENG 122. Develops an understanding of children's growth in the writing process, and examines recording, assessing and reporting student progress. Students will participate in a field-related apprenticeship.

**EDEL 465 Integrated Literacy Methods - Literature Response and Classroom Application (1)**

Majors only (Urban Education). Must take concurrently with ENG 131. This course emphasizes the writing process. Students will develop an understanding of children's growth in the writing process and examine recording, assessing and reporting student progress. Field-related apprenticeship required.

**EDEL 466 Integrated Literacy Methods - Strategic Literacy and Instruction (1)**

Majors only (Urban Education). Learn strategies related to emergent literacy, word knowledge, recognition, and analysis, and the ability to flexibly combine these strategies with the broader purpose of reading for meaning. Tutoring component required.

**EDEL 467 Integrated Literacy Methods - Diagnosis, Individualism and Assessment (1)**

Majors only (Urban Education). Prerequisite: EDEL 466. Examines reading difficulties, diagnosis and individualization; experience using formal/informal standards-based assessment. Explores literacy assessment; requires demonstrated ability to use performance-based assessment in literacy instruction. Tutoring component required.

**EDEL 468 Integrated Literacy Methods - Reading and Writing Across the Curriculum (1)**

Majors only (Urban Education). Develops sensitivity to the affective and cognitive needs of elementary students in reading and writing to learn in the content areas. Students will participate in field related apprenticeships.

**EDEL 469 Integrated Health Methods (1)**

Majors only (Urban Education). A foundation in school health programs and opportunities to develop skills in organizing and presenting learning experiences in a comprehensive and sequential health curriculum are provided.

**EDEL 470 Integrated Methods II: Math, Social Studies, Art, Music and Physical Education (9)**

Prerequisites: EDEL 460, EDEL 480. Must be taken concurrently with EDEL 490. Full admittance to PTEP required. Seniors or above. Course integrates methods of math, social studies, art, music and physical education. Students learn discipline specific instructional techniques, activities and content knowledge in school setting.

**EDEL 471 Integrated Instruction in Elementary School Social Studies - Geography (1)**

Majors only (Urban Education). Students will learn curriculum, course planning, teaching strategies, materials, and assessment, with examples of successful pedagogical approaches for teaching standards-based geography concepts.

**EDEL 472 Integrated Instruction in Elementary Social Studies - History (1)**

Majors only (Urban Education). Students will learn curriculum, course planning, teaching strategies, materials, and assessment with examples of successful pedagogical approaches for teaching standards-based concepts.

**EDEL 473 Integrated Instruction in Economics and Citizenship Education (1)**

Majors only (Urban Education). Students will learn curriculum, course planning, teaching strategies, materials, and assessment with examples of successful pedagogical approaches for teaching standards-based economics and citizenship education concepts.

**EDEL 474 Integrated Elementary Math Education I (1)**

Majors only (Urban Education). Must take concurrently with MATH 181 and MATH 182. Focus on a small, integrated unit involving children's literature, social studies and math. Number sense, use of hands-on materials and problem solving to construct understanding in math are emphasized.

**EDEL 475 Integrated Elementary Math Education II (1)**

Majors only (Urban Education). Prerequisite: EDEL 474. Focuses on problem solving emphasizing real world application and the use of technology. Colorado Model Standards for Mathematics and Performance-Based Standards for Colorado Teachers will be applied.

**EDEL 476 Integrated Elementary Math Education III (1)**

Majors only (Urban Education). Prerequisites: EDEL 474, EDEL 475. Focus on assessment, continuing development of lesson plans based on authentic problem solving and integration with other content areas. Colorado Model Standards for Mathematics will be applied.

**EDEL 477 Integrated Elementary Art Education (1)**

Majors only (Urban Education). Students learn instructional techniques, activities and content knowledge appropriate for the teaching of art in the elementary school setting. Integration with other content areas is emphasized.

**EDEL 478 Integrated Elementary Music Education (1)**

Majors only (Urban Education). Elements of music, benefits of music study, practice in reading non-traditional music notation, making/playing musical instruments, movement, listening, beginning improvisation and composition, multi-cultural resources, and music technology.

**EDEL 479 Integrated Elementary Physical Education (1)**

Majors only (Urban Education). Study effective teaching and learning theories, basic movement principles and activities included in a quality program of physical education in the elementary school. Integration with content areas is emphasized when appropriate.

**EDEL 480 Student Teaching Block I and Seminars (6)**

Full admittance to Elementary PTEP is required. EDEL 460 is taken concurrently with EDEL 480. A field experience that includes ten weeks of continuous field experiences with supervision by university and school faculty and integrated seminars. S/U graded.

**EDEL 490 Student Teaching Block II and Seminars (6)**

Full admittance to Elementary PTEP is required. EDEL 470 is taken concurrently with EDEL 490. A field experience that includes eleven weeks of continuous field experiences with supervision by university and school faculty and integrated seminars. S/U graded.

**EDEL 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**EDEL 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**EDEL 520 Effective Instruction in Elementary School Mathematics (3)**

Prerequisite: EDRD 510 or take concurrently. Full admittance to PTEP or certification at undergraduate level required. A comprehensive examination of issues, trends and practices in elementary school mathematics programs, including instructional strategies, planning, development, materials and evaluation. Emphasis on promoting problem solving in school mathematics curriculum.

**EDEL 525 Integrated Methods: Visual Arts, Music and Physical Education (1-3)**

Prerequisites: Full admittance to PTEP. Integration of visual art, music and physical education. Students learn discipline specific instruction techniques, strategies, activities and content knowledge to effectively integrate these areas across the curriculum.

**EDEL 540 Effective Instruction in Elementary School English/Language Arts (3)**

Full admittance to PTEP or certification at undergraduate level required. EDEL 550 is taken concurrently with EDEL 540. Examines acquisition of English as a basis for effective instruction: handwriting, spelling, oral and written composition. Considers methods, materials, selection and placement of content, diagnosis and evaluation for individual differences.

**EDEL 544 Elementary Student Teaching and Capstone Seminar (1-12)**

Prerequisites: Full admittance to PTEP required. Meets student teaching requirement for certification. S/U graded. Repeatable, maximum of 12 credits.

**EDEL 550 Effective Instruction in Elementary School Social Studies (3)**

Corequisites: EDEL 540, EDFE 370. Full admittance to PTEP or certification at undergraduate level required. In-depth consideration of issues, problems and practices in the elementary social studies classroom, including instructional strategies planning, materials and evaluation. Emphasis on thinking in a pluralistic democratic society.

**EDEL 601 Practicum and Capstone Seminar in Elementary Education (3)**

Provides opportunities for students to collaborate in the completion of a teacher research project, revise the curriculum development project, finalize the professional portfolio, prepare for and take the comprehensive examination.

**EDEL 602 Elementary School Practicum (1-3)**

Prerequisites: Full admittance to PTEP required. This practicum is designed to immerse students in the elementary school classroom. Opportunities are provided to inquire, analyze and reflect on classroom routines.

**EDEL 610 Teacher Research in the Elementary School (3)**

Provides teachers with an analytic framework for understanding different types of teacher research, as well as strategies and techniques for conducting their own research in elementary school.

**EDEL 612 Elementary School Curriculum (3)**

A review and analysis of competing conceptualizations of the elementary-school curriculum. Teachers develop, implement, and evaluate curriculum in elementary classrooms. Current topics, trends and issues in curriculum are explored.

**EDEL 613 Integrated Curriculum (3)**

Theory, design, development, implementation and evaluation of integrated curriculum. Students develop interdisciplinary units of study and learn active learning strategies and techniques consistent with an effective rationale for integrated curriculum.

**EDEL 619 Pluralism in Education (3)**

Full admittance to PTEP or certification at undergraduate level required. Assists student in recognizing need for creating processes that enable children, educators and others to support and design a culturally and socially diverse curriculum.

**EDEL 620 Researched Applications for Instruction in Mathematics, K-9 (3)**

Prerequisite: EDEL 520 or experience as elementary/middle school teacher. Consider in detail the problems concerned with selection of what to teach, grade placement of content, methods and materials for teaching and means of evaluating achievement in mathematics.

**EDEL 622 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**EDEL 640 Instruction in Language Arts and Literacy in the Elementary School (3)**

Prerequisite: EDEL 460 or EDEL 540 and/or teaching experience. Teachers develop their abilities as readers, writers and thinkers as they examine current research and practice in language arts and literacy instruction.

**EDEL 645 Assessment of Language Arts and Literacy in the Elementary School (3)**

Prerequisite: EDEL 640 and teaching experience. A consideration of problems, trends, and issues in the assessment of language arts and literacy. Focus on reading and writing as integrated processes.

**EDEL 650 Researched Application for Instruction in Social Studies, K-9 (3)**

Prerequisite: EDEL 450 or EDEL 550 or experience as elementary/middle school teacher. Designed for experienced teachers, course focuses on strategies for improving social studies curriculum and instructions. Studies trends, issues and research affecting educating children for citizenship in a pluralistic/democratic society.

**EDEL 725 Seminar in Elementary School Mathematics (2)**

Prerequisite: EDEL 520 or EDEL 620. Cover important problems in the teaching and supervision of mathematics in the elementary school. Content may vary from year to year according to needs of participants. S/U graded.

**EDEL 745 Seminar in Elementary School English (2)**

Prerequisite: EDEL 540. Advanced study and original research in teaching English/language arts in the elementary and middle school. S/U graded.

**EDEL 755 Seminar in Elementary Education Social Studies (2)**

Prerequisite: EDEL 550 or EDEL 650. A consideration of the research applicable to crucial issues in elementary social studies including the child's development of key concepts, values, morals and skills; curriculum development and evaluation. S/U graded.

**EDEL 790 Supervised Practicum in College Teaching (3)**

Experience in observation and supervised practice of college teaching for doctoral candidates planning to teach at college level. Observations and experiences used as basis for analysis of learning experiences. S/U graded. Repeatable, maximum of six credits.

**EDEL 797 Doctoral Proposal Research (1-4)**

Required of all doctoral students. Students must earn 4 hours of credit for doctoral dissertation research proposal in partial fulfillment of requirements for doctoral degree before admission to candidacy. S/U graded. Repeatable, maximum of four credits.

**EDEL 799 Doctoral Dissertation (1-12)**

Required of all doctoral candidates. Students must earn 12 hours of credit for the dissertation in partial fulfillment of requirements for the doctoral degree. S/U graded. Repeatable, no limitations.

**EDEL 999 Graduate School Continuous Registration (1)**

To permit a graduate student to continue making progress in a degree program. S/U graded. Repeatable, no limitations.

## EDF — FOUNDATIONS OF EDUCATION

### EDF 366 Conceptions of Schooling: Context and Process (4)

Corequisites: ET 247 for Elementary PTEP; EPSY 348 and EDMG 310 for Middle Grades PTEP; STEP 262 for Secondary PTEP. Provisional or full admittance to PTEP required. Social, historical and philosophical perspectives of schooling including legal, ethical and multicultural foundations for the professional educator in a democratic society and their implications for classroom communication, organization and management.

### EDF 385 Law and the Classroom Teacher (2)

Focus on legal rights, roles and responsibilities of educators, emphasizing obligations to students, administrators, school boards and public. Examine current issues in school management, organization, finance, child abuse and neglect.

### EDF 408 Workshop (1-3)

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

### EDF 422 Directed Studies (1-3)

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

### EDF 500 Conceptions of Schooling (3)

Investigation of social contributions of schools. Determination of what the public expects from local schools, assessing how accurately present systems meet public's expectations and individual implications for teaching.

### EDF 508 Workshop (1-3)

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

### EDF 513 Professional Renewal (1-3)

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

### EDF 622 Directed Studies (1-3)

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

### EDF 640 Psychological Foundations of Education (3)

Exploration and analysis of possible range of assumptions about nature of human activity (thinking, behaving, feeling) and implications of those assumptions relative to educational enterprise.

### EDF 662 Foundations of Curriculum Development and Instructional Practice (4)

Designed to focus on nature and scope of curriculum planning and development and the instructional approaches, traditional and contemporary, for putting curriculum into affect.

### EDF 665 Sociological Foundations of Education (3)

Analyze role of educational institution from sociological perspectives. Focus upon socialization process, issues arising from social and cultural differences in school populations and examine sociology oriented strategies for educational change.

### EDF 685 Philosophical Foundations of Education (3)

Examine leading contemporary and classical philosophical systems and how they culminate in practical educational goals, systems of justification and practices. Includes the study of educational aims and values.

## EDFE — EDUCATIONAL FIELD EXPERIENCES

### EDFE 170 Introduction to Field Based Experience (1-3)

Instructor consent. Practical experience for those wishing to explore a career in teaching. Placement in most public or private schools, agencies, preschool through high school. Experience is to coordinate practice with theory. S/U graded. Repeatable, no limitations.

### EDFE 270 Field Based Experience (2)

Consent of instructor and first semester at UNC or UNC GPA of 2.50. Provisional or full admittance to PTEP required. Entry into the teaching profession. Attend orientation presentation and apply for admission to PTEP. Aide assignment in school or agency at preschool-12 level. Required portfolio and seminars. S/U graded.

### EDFE 271 Field Experience Seminar (1)

Consent of instructor and first semester at UNC or UNC GPA of 2.50, waiver of EDFE 270 field component. Provisional or full admittance to PTEP required. Designed to introduce students to issues and professional concerns of educators. Students are screened for admittance to PTEP. S/U graded.

### EDFE 370 Advanced Field Based Experience (1-3)

Prerequisite: EDFE 270. Full admittance to PTEP or certification at the undergraduate level required, instructor consent. Practical experience in teacher preparation programs. Assignments to assist personal or professional development in public or private school. Preschool-12 level. Portfolio and seminars required. S/U graded. Repeatable, no limitations.

### EDFE 444 Supervised Teaching (1-15)

Full admittance to PTEP or certification at the undergraduate level required. Meets student teaching requirement for certification. S/U graded. Repeatable, maximum of 15 credits, under different subtitles.

### EDFE 501 Practicum (1-4)

Full admittance to PTEP or certification at undergraduate level required. Arrange with instructor. Undertake educational field studies in school settings, either individual or team oriented and focus on practical and relevant assessment of needs in teacher education. S/U graded. Repeatable, no limitations.

### EDFE 610 Field Experience (1-18)

Full admittance to PTEP or licensure, at graduate level required or previous licensure, EDFE 444, or equivalent. Individually arranged field experiences under supervision of university and school or community staff. A variety of sites are available year round. S/U graded. Repeatable, no limitations.

### EDFE 640 Supervision of Educational Field Experience (2)

Required laboratory arranged. Previous teacher certification required and consent of instructor. Professional development of certified educators in the supervision of teacher aides, clinical experience students, student teachers and interns. Designed to correlate theory and practical supervision techniques in a school setting. S/U graded.

## EDLD — EDUCATION OF LINGUISTICALLY DIFFERENT

### EDLD 508 Workshop (1-3)

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

### EDLD 513 Professional Renewal (1-3)

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**EDLD 592 Second Language Acquisition Theory (3)**

Designed for educators who are preparing to teach or who are already teaching, English Language Learners. Introduces students to the existing body of theory related to second Language Acquisition.

**EDLD 593 Language, School and Society (3)**

Designed for educators who are preparing to teach, or are already teaching, English Language Learners. Primary focus is on the interactions between society, language, and institutions of schooling.

**EDLD 600 Literacy and Content Instruction in Spanish Bilingual Classrooms (3)**

Prerequisite: Fluency in Spanish as indicated by the Oral Proficiency Exam. Designed for educators who are preparing to teach, or are already teaching Spanish speaking children. Primary focus is on literacy strategies and content area knowledge used in the bilingual classroom.

**EDLD 602 Teaching Linguistically Diverse Learners (3)**

This course will introduce future teachers to the theoretical, practical, and legal aspects of the education of students who speak English as a second language.

**EDLD 603 Methods and Assessment for ESL and Bilingual Education (3)**

Prerequisite: EDLD 602. This course will introduce students to the use of assessments and procedures and to teaching methods appropriate when working with linguistically diverse students.

**EDLD 604 Field Experience in TESOL and Bilingual Education (3)**

Prerequisites: EDEL 619, EDLD 602 and EDLD 603. Provides teachers with the opportunity to observe and participate in instructional strategies for English Language Learners.

**EDLD 605 Advanced Seminar in Bilingual Education and TESOL (3)**

Prerequisites: SRM 600 or equivalent and at least six completed graduate credits in Bilingual/ESL. Study contemporary issues, research and practice in bilingual education and English as a second language.

**EDLD 606 Linguistically Diverse Students and the U.S. Educational System (3)**

Introduction to the history of education of linguistically diverse groups in the United States. Study of educational practices that affect their success and influences of language on schooling and culture.

**EDLD 622 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**EDLD 999 Graduate School Continuous Registration (1)**

To permit a graduate student to continue making progress in a degree program. S/U graded. Repeatable, no limitations.

**EDLS — EDUCATIONAL FIELD EXPERIENCE: LABORATORY SCHOOL****EDLS 362 Clinical Experience: Middle School (1-3)**

Full admittance to PTEP or certification at the undergraduate level required. Consent of instructor. Professional development for Middle School majors. Minimum of 25 contact hours with level 6-8 children in a specific area for each hour of credit. Weekly seminar.

**EDMG — ELEMENTARY EDUCATION: MIDDLE GRADES****EDMG 200 Exploring Teaching: Emphasis in the Middle Grades (2)**

Required laboratory arranged. An investigation of the teaching profession K-12, with an emphasis in the middle grades through personal reflection, observation, and diagnostic writing, and discussion activities.

**EDMG 310 Orientation to Middle Grades Licensure (1)**

Corequisites: EDF 366, EPSY 348, ET 248. Sophomore or above. Provisional or full admittance to Middle Grades PTEP required. Introduction to early adolescent students, middle grades organization, standards-based education and licensure requirements for middle grades teaches. Required field experience in partner schools support seminar topics - 30 hours.

**EDMG 320 Introduction to Middle School Grades Education (2)**

Prerequisites: EDMG 200, ET 248, EDMG 310, EPSY 348, EDF 366. Corequisites: EDMG 321, EDSE 311. Juniors or above. Provisional or full admittance to PTEP required. Investigate the history, philosophy, and organization of middle level education. Emphasis placed on the nature of the young adolescent learner, school organization, curriculum and environment. Field Experience: 32 hours.

**EDMG 321 Middle Grades Teaching and Learning (3)**

Prerequisite: EDMG 200 or equivalent and ET 248. Corequisites: EDMG 320 and EDSE 311. Required laboratory arranged. Juniors or above. Provisional or full admittance to PTEP required. An introduction to classroom organization and management, discipline, planning and instructional strategies effective in the middle grades classroom. Required field experience in partner schools - 60 hours.

**EDMG 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**EDMG 440 Middle Grades Integrated Curriculum and Instruction (5)**

Prerequisite: EDMG 321. Corequisites: ET 348 and EDRD 340. Juniors or above. Full admittance to PTEP required. Required field experience arranged in a partner school - 100 hours. This course will provide information and experiences that develop an understanding between developmentally appropriate instructional strategies for early adolescents and curriculum integration.

**EDMG 490 Middle Grades Student Teaching (1-14)**

Prerequisite: EDMG 440. Corequisite: EDMG 491. Full admittance to PTEP required. Capstone field experience in a middle grades classroom setting which includes 16 weeks of continuous field experience with supervision by a University consultant and professional licensed middle grades teacher. S/U graded.

**EDMG 491 Middle Grades Student Teaching Seminar (1)**

Prerequisite: EDMG 440. Corequisite: EDMG 491. Seniors or above. Consent of advisor. Full admittance to PTEP required. This is a capstone seminar which facilitates the knowledge, skills, and dispositions needed to successfully complete the middle grades student teaching experience. S/U graded.

**EDMS — ELEMENTARY EDUCATION: MIDDLE SCHOOL****EDMS 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**EDMS 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**EDMS 601 Practicum (1-3)**

A project designed by the student with consent of an advisor. The project provides a practical application of concepts and skills acquired in the graduate program. Repeatable, may be taken two times.

**EDMS 622 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**EDMS 665 Middle School Theory, Philosophy and Curriculum (3)**

A study of the theory, philosophy, curriculum and instructional practices appropriate for a middle school learning environment.

**EDMS 667 Assessment, Design and Evaluation of Middle School Curriculum (3)**

Identification of content accreditation criteria, curriculum modeling, needs assessments, objectives, curriculum mapping, priority setting and action planning for elementary and middle schools.

**EDMS 669 Integrated Curriculum for Middle Grades (3)**

A investigation of the design options associated with the integration of middle school curriculum using the content areas of language arts, mathematics, science, social studies, literacy and fine arts.

**EDMS 670 Instructional Practices in Middle Grades Education (3)**

A study of the theories, research, and current trends and issues related to instructional strategies, methods and management techniques effective with early adolescence in a middle grades classroom

**EDMS 999 Graduate School Continuous Registration (1)**

To permit a graduate student to continue making progress in a degree program. S/U graded. Repeatable, no limitations.

**EDRD — ELEMENTARY EDUCATION: READING****EDRD 205 Critical Thinking, Inferential Reading and Evaluative Writing (3)**

Students improve critical thinking by studying organization of thought. Apply critical reading to nonfiction, fiction and evaluative writing to journals, summary-reactions and an analytic paper.

**EDRD 308 Reading Literacy Workshop (1-10)**

Subtitle indicates whether workshop is for elementary or secondary teachers. Topics related to remedial reading, word identification, comprehension, study skills, content reading and trends and issues will be included. S/U graded. Repeatable, may be taken four times to a maximum of 10 credits, under different subtitles.

**EDRD 324 Secondary Content Area Literacy (2)**

Prerequisites: STEP 262, ET 248, EDF 366. Corequisites: ET 348, EDSE 360, STEP 363, your academic major methods classes. Full admittance to PTEP required. Develop understanding of the interaction between literacy and content area instruction in the secondary school. Examine related instructional strategies with applications to specific content areas.

**EDRD 340 Developing Language and Literacy in the Content Areas (3)**

Full admittance to PTEP required. Investigate content and processes of reading/writing development of middle level and secondary students. Develop sensitivity to individual differences in literacy development. Investigate strategies to integrate reading/writing across curriculums.

**EDRD 401 Practicum in Literacy (1-3)**

Open by invitation to resident undergraduate students. Supervised professional activity in literacy of approximately two hours per day. A well-written paper must be filed with instructor before credit given. S/U graded. Repeatable, maximum of three credits.

**EDRD 402 America Reads: Content and Processes of Literacy Tutorial Sessions (1)**

Prerequisite: Choose 1 or 2: (1) Admission to a PTEP and eligibility for workstudy; or (2) permission of the instructor. Develop understanding of content and processes of literacy tutoring session. Adjust instruction according to observed behaviors of tutees. Effectively support literacy development of tutee. S/U graded. Repeatable, maximum of two credits.

**EDRD 403 America Reads: Individual Literacy Instruction (1)**

Prerequisite: Admission to a PTEP, eligibility for work study, successful completion of two semesters as an America Reads tutor and successful completion of two semesters of EDRD 402 or permission of the instructor. Refine and extend understandings of the literacy development of elementary students and the ability to adjust instructional interactions according to the observed behaviors of assigned tutees. S/U graded. Repeatable, maximum of four credits.

**EDRD 408 Reading/Literacy Workshop (1-10)**

Subtitle indicates appropriate participants. Topics related to reading/literacy: 1) developmental, intervention, and remedial programs and instructional strategies; 2) standards; assessment; 3) school wide efforts; 4) research; and 5) trends and issues will be included. Repeatable, under different subtitles. S/U graded.

**EDRD 410 Achieving Effective Instruction in Developmental Reading (3)**

Full admittance to PTEP or certification at undergraduate level required. Teaching/learning strategies, reading materials, selection, lesson planning and organizing for instruction in reading across the total curriculum constitute the focus of the course.

**EDRD 411 Elementary Reading Diagnosis and Individualization (3)**

Prerequisites: EDRD 410, Full admittance to PTEP or certification at undergraduate level. Emphasizes reading diagnosis with elementary students leading to instruction through a variety of approaches toward the end of enabling teachers to select appropriate methods/materials.

**EDRD 414 Literature for Children, Adolescents and Young Adults (3)**

Consider interests and abilities governing choice of literature from kindergarten through young adult. Survey literature. Emphasize modern literature, uses of literature in curriculum and multiple responses to literature.

**EDRD 419 Language and Literacy Development of Preschool and Elementary School Children (3)**

Examine development of listening, speaking, reading and writing. Review current research on language and literacy development including environmental factors that enhance or reduce from language/literacy acquisition and development.

**EDRD 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**EDRD 425 Reading in the Content Areas (1)**

Provisional or full admittance to PTEP required. Develop understanding of role physical education teacher plays in facilitating the literacy development of students. Examine effective ways to use reading and writing in physical education content.

**EDRD 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**EDRD 510 Achieving Effective Instruction in Developmental Reading (3)**

Full admittance to PTEP or certification at undergraduate level required. Teaching/learning strategies, reading materials, selection, lesson planning and organizing for instruction in reading across the total curriculum constitute the focus of the course.

**EDRD 511 Elementary Reading Diagnosis and Individualization (3)**

Prerequisites: EDRD 510 or equivalent, Full admittance to PTEP or certification at undergraduate level. Course will emphasize diagnosis leading to instruction through a variety of approaches toward the end of enabling teachers to select appropriate methods/materials.

**EDRD 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**EDRD 519 Reading and Writing Development of Preschool/Primary Children (2)**

Acquaints students with current research on early literacy including environmental factors that enhance or reduce literacy learning and the importance of parents and significant others in literacy development.

**EDRD 523 Reading and Writing in the Content Areas (3)**

Full admittance to PTEP or certification at the undergraduate level required. Develop understanding of cognitive affective needs of middle and secondary students in reading and writing to learn. Develop sensitivity to individual needs. Participate in related field experiences.

**EDRD 601 Practicum in Literacy (1-4)**

Written practicum proposal required before consent of instructor. Supervised professional activity in reading/writing (30 clock hours/credit) designed to enhance individual professional goals. Documentation must follow reading program guidelines. Repeatable, maximum of four credits.

**EDRD 611 Language, Literacy and Cognitive Development (3)**

Prerequisites: Full admittance to PTEP or certification at undergraduate level required. Students examine the developmental nature of language, literacy and cognition birth to adulthood by reading and studying classic and current research. The impact of nature and nurture will be examined.

**EDRD 612 Reading in the Elementary Schools (3)**

Prerequisites: EDRD 611 for Reading Majors. Study of the nature of reading instruction, K-6 as reflected by current research, teaching and evaluation methods and techniques, published and teacher prepared materials, and effective classroom management.

**EDRD 614 Literature for Children, Adolescents and Young Adults (3)**

Prerequisites: Full admission to PTEP or licensure at undergraduate level required. Considers locating and evaluating children's, adolescent, and young adult literature and methods of organizing, teaching, and evaluating a literature program. Examine issues such as censorship, multicultural literature, and style analysis.

**EDRD 615 Topical Seminar in Reading/Literacy (3)**

Advanced study, and inquiry, in Reading/Literacy education. Address landmark research, analysis and synthesis of past and present trends and issues, and scholarly pursuit of scholarly topic. Repeatable, may be taken four times, under different subtitles.

**EDRD 617 Evaluation and Improvements of Literacy Teaching and Learning (4)**

Prerequisites: EDRD 612 and EDRD 620 or equivalent for Reading Education majors. Develop an understanding of the educationally disabled reader and writer in elementary and secondary school. Explore diagnostic and instructional strategies. Required tutoring experiences.

**EDRD 618 Literacy Instruction for Emerging Readers and Writers at Risk (3)**

Consent of instructor. Intense study and guided application of researched early intervention strategies for emerging readers and writers at risk. Students will design, implement and document personal application of concepts presented.

**EDRD 620 Reading in the Middle and Secondary Schools (3)**

Prerequisites: EDRD 611 and EDRD 612 for majors. Introduction to reading skills and reading requirements in developmental reading and subject-matter classes in the middle and secondary school. Examine instructional strategies and evaluation procedures as reflected by research.

**EDRD 621 Critical Reading and Thinking in Content Subjects (3)**

Full admittance to PTEP or certification at undergraduate level required. Teaching subject matter to utilize fundamental reading abilities and knowledge acquisition strategies in the development of content concepts and to develop and utilize critical thinking skills in contemporary society.

**EDRD 622 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**EDRD 642 Teaching the Writing Process in Schools (3)**

Prerequisites: EDRD 611, EDRD 612 and EDRD 620 for reading majors. Assist classroom teachers with children's writing process. Emphasis on: writing process; encouragement of process development; children's growth in writing process; and, recording, assessing, and reporting student progress.

**EDRD 645 Reading Research (3)**

Prerequisites: EDRD 611, EDRD 612 and EDRD 620. Study research procedures and their application to reading education. Critique reading research and reading programs and practices. Develop and present a research project in the area of reading/literacy.

**EDRD 670 Directing a School-Wide Reading/Literacy Program (3)**

Prerequisites: EDRD 617 and full admission to PTEP. Seminar course intended to prepare reading teachers, specialists, coordinators and administrators for directing textbook adoption, curriculum development and issues, staff development, evaluation and supervision of reading/writing programs.

**EDRD 692 Clinical Practicum in Literacy Coaching (4)**

Prerequisites: EDRD 617 and full admission to PTEP. Supervised clinical instruction of elementary/middle/secondary school disabled readers. Continued professional development, in the areas of collegial communications, reflective coaching, and leadership capacity. May be completed at each level. Repeatable for a maximum of 12 hrs.

**EDRD 693 Capstone Reading Seminar (1)**

Prerequisites: Register final semester of coursework for MA in Reading. Explores major trends in reading education; synthesis and assimilation of information gleaned from all courses in the MA in Reading Program. S/U graded.

**EDRD 694 Reading Center Internship: Adult Reading, Literacy and/or Supervision (1-3)**

Prerequisite: EDRD 617. Consent of instructor. Separate internships in each area may be taken for a maximum of six credits. Experiences are individually defined. A minimum 45 hours of supervised work equals one (1) credit. S/U graded.

**EDRD 699 Thesis (1-6)**

Optional for Master of Arts programs on recommendation of major advisor. Successful completion of a formal thesis paper and oral defense required. S/U graded. Repeatable, no limitations.

**EDRD 712 Psychology of Reading (3)**

Study linguistic, psychological, social, and physiological aspects of learning to read. Consider theories and research on perceptual, cognitive, linguistic, and motivational factors in reading, writing, thinking, and learning.

**EDRD 745 Topical Seminar in Reading/Literacy (2-4)**

Advanced study and inquiry, in Reading/Literacy education. Address landmark research, analysis and synthesis of past and present trends and issues, and scholarly pursuit of scholarly topic. Repeatable, may be taken four times, under different subtitles.

**EDRD 750 The Contributing Professional in Reading (3)**

Designed for Reading/Literacy professional completing doctorate. Encourages and examines professional contributions encompassed within the reading/literacy field including scholarly activities, organizational memberships, and service roles.



**EDRD 795 Supervised Practicum in College Teaching (3)**

Experiences in observation and supervised practice in college teaching to be used as basis for analysis of learning experiences. S/U graded. Repeatable, maximum of nine credits.

**EDRD 797 Doctoral Proposal Research (1-4)**

Required of all doctoral students. Students must earn 4 hours of credit for doctoral dissertation research proposal in partial fulfillment of requirements for doctoral degree before admission to candidacy. S/U graded. Repeatable, maximum of four credits.

**EDRD 799 Doctoral Dissertation (1-12)**

Required of all doctoral candidates. Students must earn 12 hours of credit for the dissertation in partial fulfillment of requirements for the doctoral degree. S/U graded. Repeatable, no limitations.

**EDRD 999 Graduate School Continuous Registration (1)**

To permit a graduate student to continue making progress in a degree program. S/U graded. Repeatable, no limitations.

**EDSE — SPECIAL EDUCATION****EDSE 201 Culture of Special Education (3)**

Introduction to special education, including: historical and legal perspective, characteristics of individuals with exceptionalities, issues related to identification and services, role of professionals in special and general education.

**EDSE 202 Communication, Consultation, and Collaboration in Special Education (3)**

Addresses intrapersonal and interpersonal intelligences as applied to the skills of communication, consultation, and collaboration in the context of serving students with special needs in the public schools.

**EDSE 203 The Individualized Education Program and the Collaborative Process (3)**

Prerequisites: EDSE 201 or concurrently. Addresses the development of the Individual Education Program through effective collaboration and consultation, including pre-referral through implementations, individualized planning, and student and family involvement.

**EDSE 254 American Sign Language I (3)**

Introduces the basics of American Sign Language (ASL) and Deaf Culture. The focus of the course is on receptive and expressive skills in basic language, dialogue and vocabulary development.

**EDSE 308 Workshop in Special Education (1-3)**

For beginning teachers and clinicians. Topics will include observation, techniques, programming, community relations, child development as related to exceptional children and evaluation for placement. Repeatable, under different subtitles.

**EDSE 311 Including Exceptional Students in the Middle Grades Classroom (3)**

Prerequisites: Full admittance to PTEP required. Introductory course providing rationale for including students with disabilities in middle school classrooms. Study identification, referral, terminology, methods for adapting curriculum/instruction/behavior, and development of work samples for students.

**EDSE 320 Assessment in Special Education (3)**

Prerequisites: EDSE 201, EDSE 203, or concurrently. Provisional or full admittance to PTEP required. Explore issues in assessment related to exceptional children. Emphasis placed on principles, purposes and processes of assessment related to programming in special education.

**EDSE 321 Advanced Assessment in Special Education (2)**

Prerequisite: EDSE 320. Applied experience in the administration and interpretation of formal and informal achievement tests used with exceptional individuals. Field experience required.

**EDSE 322 K-12 Methods in Special Education (5)**

Prerequisites: EDSE 201, EDSE 203. Provisional or full admittance to PTEP required. Instructional and methodological issues in the education of students with exceptionalities. Emphasis is on academic content areas across the curriculum and the development of positive learning environments. Field experience required.

**EDSE 323 Methods for Elementary Students with Exceptionalities (3)**

Prerequisites: EDSE 201, EDSE 202. Provisional or full admittance to PTEP required. Instructional practices in mathematics, social studies, and science for elementary students with exceptionalities.

**EDSE 324 Special Education Practices in Secondary Schools (4)**

Prerequisites: EDSE 201, EDSE 202. Laboratory required. Provisional or full admittance to PTEP required. Describes the array of practices, methodologies, and evaluation options at the secondary level for students with disabilities. Provides opportunities for person-centered planning and subsequent individualized program implementation.

**EDSE 325 Behavioral Dimensions of Students with Exceptionalities I (2)**

Prerequisites: EDSE 201, EDSE 320. Provisional or full admittance to PTEP required. Addresses behavioral theories and their application in creating effective environments and in assessing and managing classroom behavior.

**EDSE 326 Behavioral Dimensions of Students with Exceptionalities II (3)**

Prerequisites: EDSE 201, EDSE 320 and EDSE 325. Provisional or full admittance to PTEP required. Learners will apply the principles of classroom management, assess student behavior, and develop individualized behavior plans that promote positive affective/social/academic growth. Field experience required.

**EDSE 354 American Sign Language II (3)**

Prerequisite: EDSE 254 or equivalent. This course expands knowledge of and experiences in Deaf Culture and American Sign Language (ASL) skills. It is designed to develop communicative competence at an intermediate level.

**EDSE 360 Adaptation, Modification, and Integration of Curriculum for the Secondary Exceptional Learner (3)**

Provisional or full admittance to PTEP required. Provides secondary classroom teacher information about special education, exceptional learners, and operational components in Special Education, and techniques for integration of special needs students including modification, adaptation, and specialized resources.

**EDSE 406 Behavior is Language: Special Education Strategies for Managing Disruptive Behavior (3)**

Designed to provide teachers with intervention strategies/behavior techniques to remediate disruptive behaviors and reduce power struggles while increasing classroom control.

**EDSE 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**EDSE 430 Exceptional Student in the Elementary Classroom (2)**

Prerequisites: EDF 366, ET 247. Provisional or full admittance to PTEP required. Provide elementary level licensure candidates current research/practices related to students with exceptionalities. Identify/adapt instruction for students with a wide range of disabilities. Field experience will be used extensively.

**EDSE 433 Exceptional Students in the Regular Classroom (2)**

Required of students majoring in Fine Arts, Physical Education, Music Education and Vocational Education. Provides information on handicapped and gifted students, identification procedures and teaching techniques.

**EDSE 440 Introduction to the Education of the Visually Handicapped (3)**

Non-majors only. Descriptions of visual disabilities, the history and background of formalized educational and rehabilitative services, basic medical and psychological aspects and an overview of the types of organizations serving the field.

**EDSE 442 Language and Literacy for Students with Severe Delays (3)**

Prerequisites: EDSE 201, EDSE 203, EDSE 320, EDRD 410, EDRD 411, CMDS 266 and CMDS 365. Full admittance to PTEP required. Exploration of life span relationships between significant oral language delays, home/school dialectical mismatches, or language differences and the acquisition of literacy in both its oral and written dimensions. Field experience required.

**EDSE 443 Support System in Special Education (3)**

Prerequisites: EDSE 201, EDSE 203. Full admittance to PTEP required. Students will acquire skills in case management, facilitating support processes, and delivering direct support within general education settings for students receiving special education services. Field experience required.

**EDSE 444 Student Teaching in Special Education (12-15)**

Prerequisites: EDSE 201, EDSE 203, EDSE 320, EDSE 322, EDSE 323, EDSE 324, EDSE 325, EDSE 326, EDSE 442, EDSE 443. Full admittance to PTEP required. Fifteen weeks full-time teaching (7-8 weeks elementary, 7-8 weeks secondary) in special education, providing competencies for carrying out roles of special education teacher, facilitator of learning and program manager. S/U graded

**EDSE 450 Introduction to Deafness (3)**

History of education of individuals who are deaf or hard of hearing, anatomy of hearing/speech mechanisms, causes and types hearing loss, psychological development, deaf culture, communication, education and sociology.

**EDSE 454 American Sign Language III (3)**

Prerequisites: EDSE 254 and EDSE 354, or equivalent. Expand knowledge of and experiences in Deaf Culture and American Sign Language (ASL). Designed to emphasize ASL grammar and sentence structure and to develop communicative competence beyond an intermediate level.

**EDSE 460 Culturally and Linguistically Diverse Students with Disabilities (3)**

Explores language and cultural variables that influence instruction and assessment practices for students with disabilities who come from culturally and linguistically diverse backgrounds.

**EDSE 500 Field of Special Education (3)**

Historical development and present status of individuals with disabilities and those who are gifted. Focus on communication, parent involvement, finance, legal issues, ethics/professionalism and trends in special education.

**EDSE 501 The Exceptional Learner (3)**

Basic issues in dynamics of learning and evaluation related to exceptionality. Emphasizes understanding learning and evaluation processes for purposes of individual and group educational planning.

**EDSE 502 Communication, Collaboration and Consultation for Special Educators (3)**

Develop skills in intrapersonal/interpersonal dynamics in serving exceptional learners. Focus on communication, collaboration and consultation in the context of multicultural educational settings along a continuum of special education.

**EDSE 503 Effective School Environments for Learners with Exceptional Needs (3)**

Study of components of effective schools and the relationship to child, family, community and professionals. Roles of special educators and different service delivery models presented and analyzed.

**EDSE 504 Transition Planning and Service Delivery for Students with Special Needs (3)**

Provide theoretical framework in transition process from school to adult life including historical/legal, planning, curricular, interagency, self-determination and parent/family aspects of transition.

**EDSE 505 Assessment of Exceptional Individuals (3)**

Explore issues in assessment related to exceptional children. Emphasis placed on principles, purposes, and processes of assessment related to programming in special education.

**EDSE 506 Teaching Students with Special Needs in Inclusive Settings (3)**

Introductory course designed for regular classroom teachers with information about various disabilities and the gifted/talented. Emphasis on identifying, accommodating and adapting for students in inclusive settings.

**EDSE 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**EDSE 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**EDSE 520 Survey of Learners with Profound Needs (3)**

Includes an overview of persons with profound needs and their families including their characteristics and needs. Programmatic issues are also emphasized in relation to current research.

**EDSE 521 Assessment of Learners with Profound Needs (3)**

Prerequisite: EDSE 520. Emphasizes the assessment – intervention – evaluation approach for learners with profound needs. The use of developmental/behavioral/ecological assessment approaches as well as transdisciplinary approaches are emphasized.

**EDSE 522 Methods of Teaching Learners with Profound Needs: Birth to 8 Years (3)**

Prerequisite: EDSE 520. Full admittance to PTEP or certification at undergraduate level required. Review methodological approaches to serving individuals with profound needs and their application; emphasizes teaching strategies, consultation techniques and accessing multi-agency resources.

**EDSE 523 Methods of Teaching Learners with Profound Needs 9 to Adult (3)**

Prerequisite: EDSE 520. Full admittance to PTEP or certification at undergraduate level required. Reviews teaching approaches to serve students with profound needs at the prevocational/vocational levels and application of approaches; emphasis on residential-employment competencies and transition from school to work.

**EDSE 524 Seminar in Education of Learners with Profound Needs (3)**

Prerequisites: EDSE 500, EDSE 501, EDSE 502, EDSE 503. Designed to synthesize experience and coursework in the area of educating students with profound needs. Emphases are on issues, research, classroom application and consultation.

**EDSE 525 Research and Policy for Learners with Profound Needs (3)**

Includes research and policy relative to the learners with profound needs. Ethics of conducting research with these individuals, current research results and relevant public policy are the main foci.

**EDSE 526 Practicum with the Severely/Profoundly Handicapped (3-12)**

Prerequisites: EDSE 521, EDSE 522, EDSE 523. Full admittance to PTEP or certification at undergraduate level required. Entails supervised clinical experience with young and older individuals with profound handicaps. Daily supervision by a master teacher with overall supervision by UNC faculty is provided. S/U graded. Repeatable, maximum of 12 credits.

**EDSE 528 Linguistically Diverse Students with Low Incidence Disabilities (2)**

Prerequisites: Regular admission into one of the Special Education Severe Needs Programs, or completion of one of the programs. Introduce instructional and assessment issues related to the education of linguistically diverse students with low incidence disabilities.

**EDSE 530 Parent/Professional Partnerships (3)**

Prerequisite: EDSE 502. Provides theory and practices regarding understanding and helping parents deal with their young handicapped child. Issues regarding family coping, parent-professional partnerships and parent training are emphasized.

**EDSE 531 Assessing Young Children with Special Needs (3)**

Prerequisites: EDSE 500, EDSE 501, EDSE 502, EDSE 503. Focus on assessment tools and techniques for teacher evaluation of educational progress in young children with special needs. Plan educational programs with appropriate curricular content for individual children.

**EDSE 533 Methods in Early Childhood Special Education (3)**

Prerequisites: EDSE 500, EDSE 501, EDSE 502, EDSE 503. Full admittance to PTEP or certification at undergraduate level required. Provides skills in an assessment-intervention-evaluation programming philosophy. Different aspects of intervention and their common elements are covered. A developmental focus with consideration of child's functional needs is emphasized.

**EDSE 534 Research and Policy in Early Childhood Special Education (3)**

Prerequisites: EDSE 500, EDSE 501, EDSE 502, EDSE 503. Review current policies related to the education of infants and young children with special needs. Familiarize students with research studies and classroom applications.

**EDSE 535 Practicum in Early Childhood Special Education (3-12)**

Prerequisites: EDSE 500, EDSE 501, EDSE 502, EDSE 503. Full admittance to PTEP or certification at undergraduate level required. Integrative field experience in practicum settings under college supervision and certified teacher. Provides experiences of sufficient scope, intensity and length to assure demonstration of competencies in EDSE. S/U graded. Repeatable, maximum of 12 credits.

**EDSE 536 Early Intervention for Infants and Toddlers with Special Needs (3)**

Explores theoretical and practical approaches to early intervention for at-risk or disabled newborns, infants and toddlers. Focus on identification, program development and evaluation, instructional techniques and family involvement.

**EDSE 540 Independent Living for Individuals with Visual Disabilities (1-2)**

Required laboratory arranged. Gain ability to understand the use of adapted materials and techniques in teaching independent living to individuals with visual disabilities. Emphasis given to recreational areas. Repeatable, maximum of 2 credits.

**EDSE 542 Assessment and Methods for Teaching Students with Visual/Multiple Disabilities (3)**

Full admittance to PTEP or certification at undergraduate level required. Discuss causes, characteristics, educational implications and instructional methods for student with visual/multiple disabilities. Learn effective teaming and collaborative planning strategies.

**EDSE 543 Braille Codes and Formats (3)**

Study literary and nemeth codes, basic abacus operations. Techniques of teaching literacy skills to students with visual disabilities are included.

**EDSE 544 Technology for Students with Visual Disabilities (2)**

This course will acquaint the student with state-of-the-art technology for students with visual disabilities. Includes required 4-day seminar on UNC campus.

**EDSE 545 Advanced Braille Codes and Formats (3)**

Prerequisite: EDSE 543 or proof of mastery from an approved examination. Study advanced braille codes and techniques for teaching literacy skills in each code: literary, nemeth, music, foreign language. Basic abacus operations are included.

**EDSE 546 Principles of Orientation and Mobility (2)**

Independence in the environment as a life need. Techniques in developing orientation skills; pre-cane mobility instruction. Philosophy and history of cane instruction, dog guides and other methods of travel.

**EDSE 547 Individual Instruction in Orientation and Mobility (4)**

Prerequisite: EDSE 546. Full admittance to PTEP or certification at undergraduate level required. Consent of instructor. Required laboratory arranged. A study of methods involved in general navigation and environmental awareness relating to severe vision needs. Travel techniques are gained while working under simulated conditions. Repeatable, maximum of four credits.

**EDSE 554 Sign Language in Educational Settings (3)**

Prerequisites: EDSE 254, EDSE 354, EDSE 454 or similar courses. Designed to focus on sign language and communication systems used in educational settings. Will focus on increasing sign vocabulary, understand concepts, conversational skills and the ability to teach academic content.

**EDSE 560 Linguistically Diverse Students with Disabilities (3)**

Introduces students to instructional and assessment issues related to students with disabilities who come from culturally and linguistically diverse backgrounds.

**EDSE 580 Nature and Needs of the Gifted and Talented (3)**

The definitions, characteristics and needs of the gifted and talented will be covered. Emphasis will be placed on the identification and assessment of these children.

**EDSE 581 Teaching Strategies for the Gifted and Talented (3)**

Basic teaching strategies for use with the gifted and talented will be presented. Specific activities for cognitive, emotional and social development will also be included.

**EDSE 582 Curriculum Models for the Gifted and Talented (3)**

Beyond teaching activities and strategies, specific curriculum models for use with the gifted and talented will be presented with specific attention on how to implement these models.

**EDSE 583 History, Organization and Administration of Programs for the Gifted and Talented (3)**

A historical perspective of the education of the gifted and talented will lead to coverage of innovative program design and implementation for the gifted and talented.

**EDSE 584 Practicum in Teaching the Gifted and Talented (1-12)**

Prerequisites: EDSE 580, EDSE 581, EDSE 582. Emphasize actual teaching and facilitation of the gifted and talented in actual supervised teaching experiences. Repeatable, maximum of 12 credits.

**EDSE 585 Facilitating Creativity in the Gifted and Talented Student (2)**

Exploration and application of several theoretical and research approaches to creativity and integrating creative thinking skills of gifted and talented students to their facilitators.

**EDSE 586 Trends, Issues and Thinking Skills in Gifted Education (2)**

Prerequisite: EDSE 580. Exploration of issues in gifted and talented education and the application of critical thinking skills to issues in gifted and talented education.

**EDSE 601 Supporting Special Students in the Mainstream (3)**

Prerequisites: EDSE 500, EDSE 501, EDSE 502, EDSE 503 and EDSE 504. Full admittance to PTEP or certification at undergraduate level required. Interventions for students with moderate academic difficulties in inclusive settings including (a) collaborating in providing direct service and (b) providing scaffolds to enable students to perform independently.

**EDSE 602 Behavioral Disorders: Characteristics, Identification and Intervention (3)**

Examine typical characteristics associated with severe behavior problems and procedures for identification. Emphasis on development of appropriate intervention programs.

**EDSE 603 Practicum with Moderate Needs Students (3-12)**

Prerequisites: EDSE 500, EDSE 501, EDSE 502, EDSE 503, EDSE 504. Full admittance to PTEP or licensure at the undergraduate level required. Consent of Instructor. Supervised practica in programming for and teaching moderate needs students including assigned seminar topics. Additional seminar time required. S/U graded. Repeatable, maximum of 12 credits.

**EDSE 606 Instructional Methods for Students with Special Needs (3)**

Prerequisites: EDSE 500, EDSE 501, EDSE 502, EDSE 503 and EDSE 504. Full admittance to PTEP or certification at undergraduate level required. Teaches about major current techniques, methods, philosophies and trends in teaching communication, affective and cognitive needs students with moderate/severe disabilities.

**EDSE 608 Case Studies with Students with Special Needs (3)**

Required laboratory arranged. Prerequisites: EDSE 500, EDSE 501, EDSE 502, EDSE 503 and EDSE 504. Consent of instructor. Applied experience in assessment and teaching of exceptional individuals. Work a minimum of 45 clock hours one-on-one with exceptional individual in school or clinical setting.

**EDSE 609 Language Development: Disorders of Individuals with Special Needs (3)**

Prerequisites: EDSE 500, EDSE 501, EDSE 502, EDSE 503 or consent of instructor. In-depth study of language and speech disorders, including assessment instruments and teaching strategies related to language and communication. Focuses on the language of students with special needs.

**EDSE 610 Interventions for Students with Severe Affective Needs (3)**

Prerequisites: EDSE 500, EDSE 501, EDSE 502, EDSE 503. Knowledge and classroom application of group and individual interventions for students with severe affective needs. Includes auxiliary services and parent interventions.

**EDSE 611 Seminar in Severe Affective Needs (3)**

Prerequisites: EDSE 500, EDSE 501, EDSE 502 and EDSE 503 or consent of instructor. This course is designed to synthesize experience and coursework in the area of students with severe affective needs. Emphases are on issues, research and classroom application.

**EDSE 612 Practicum with Students with Severe Affective Needs, Ages 5-21 (3-12)**

Prerequisites: EDSE 500, EDSE 501, EDSE 502, EDSE 503, EDSE 504. Full admittance to PTEP or licensure at the undergraduate level required. Consent of instructor. Integrative experiences of sufficient scope, intensity, and length to assure demonstration of all Teacher II affective program competencies. Seminar required. S/U graded. Repeatable, maximum of 12 credits.

**EDSE 615 Special Education Law: Cases and Trends (3)**

Enhances student's skills to read integratively special education laws and ensuing litigation. Readings will include public laws, court transcripts and a selected case synopsis(es) pertaining to a particular exceptionality.

**EDSE 620 Psycho-Social Aspects of Students with Severe Cognitive Needs (3)**

Prerequisites: EDSE 500, EDSE 501, EDSE 502 and EDSE 503. In-depth study of sociological and psychological aspects of students with severe cognitive needs. Focuses on issues relative to life care and treatment of the cognitive needs student.

**EDSE 621 Seminar in Severe Cognitive Needs (3)**

Prerequisites: EDSE 500, EDSE 501, EDSE 502 and EDSE 503. This course is designed to synthesize experience and coursework in the education of students with severe cognitive needs. Emphases are on issues, research and classroom application.

**EDSE 622 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**EDSE 623 Practicum with Students with Severe Cognitive Needs, Ages 5-21 (3-12)**

Prerequisites: EDSE 500, EDSE 501, EDSE 502, EDSE 504. Full admittance to PTEP or licensure at undergraduate level required. Consent of major advisor. Integrative experiences of sufficient scope, intensity, and length to assure demonstration of all Teacher II cognitive program competencies. Seminar required. S/U graded. Repeatable, maximum of 12 credits.

**EDSE 630 Seminar in Severe Communication Needs (3)**

Prerequisites: EDSE 500, EDSE 501, EDSE 502 and EDSE 503. This course is designed to synthesize experience and coursework in the education of the severe communication needs. Emphases are on issues, research and classroom application.

**EDSE 641 Medical and Educational Implications of Visual Handicaps (1-3)**

Anatomy/physiology of the eye, medical and educational assessment of low vision and functional implications of various eye conditions. Techniques to develop use of functional vision. Repeatable, maximum of three credits.

**EDSE 642 Advanced Seminar in Education of Students with Visual Handicaps (3)**

Role of teacher of students with visual disabilities, assessments, compensatory skill methodology, IEP/IFSP development, appropriate placements, sourcing materials and equipment, administrative duties, consulting techniques and volunteer coordination.

**EDSE 643 Psychosocial Needs of Individuals with Visual Handicaps (2)**

Psychosocial implications of visual impairments, sources of self-esteem, the adjusting process and strategies for meeting the blindness-related counseling needs of individuals with visual disabilities and their parents.

**EDSE 644 Practicum in Education of Students with Visual Handicaps, K-12 (2-12)**

Prerequisites: EDSE 542, EDSE 543, EDSE 544, EDSE 546, EDSE 641 and EDSE 643. Full admittance to PTEP or certification at undergraduate level required. Consent of instructor. Supervised teaching experience with students with visual disabilities, K-12, planning and implementing lessons, preparing materials, participating in staffings, IEP/IFSP development and parent conferences. Repeatable, maximum of 12 credits.

**EDSE 647 Applied Methods in Orientation and Mobility (2)**

Full admittance to PTEP or certification at undergraduate level required. Weekly seminar explores methods and strategies for teaching independent travel techniques to students with visual and other disabilities. Student provides individualized instruction to visually impaired person with faculty supervision.

**EDSE 648 Practicum in Orientation and Mobility (9)**

Full admittance to PTEP or certification at undergraduate level required. Consent of major advisor required. Supervised teaching experience with both blind and low vision individuals in orientation and mobility. Observation of varied programs; e.g., resource room itinerant plan, residential school and rehabilitation settings.

**EDSE 652 Speechreading, Auditory Training and Amplification (3)**

Prerequisites: CMDS 370, EDSE 450. Amplification; personal and group, components, evaluation, maintenance, application to auditory training, speech, speech-reading. Develop receptive language through auditory and visual channels for individuals who are deaf or hard of hearing.

**EDSE 653 Speech, Severe Needs: Hearing (3)**

Prerequisite: EDSE 450. Full admittance to PTEP or certification at undergraduate level required. Develop competencies to teach speech to individuals who are deaf or hard of hearing, including appropriate methods, strategies, techniques and materials; develop a speech program, assess speech behaviors.

**EDSE 654 Language, Severe Needs: Hearing (3)**

Prerequisite: EDSE 450. Full admittance to PTEP or certification at undergraduate level required. Consent of instructor. Required laboratory arranged. Develop competencies to assess, teach, and evaluate language for individuals who are deaf or hard of hearing. Methods, materials, and techniques appropriate for developing comprehensive expressive/receptive language program.

**EDSE 655 Reading, Severe Needs: Hearing (3)**

Prerequisite: EDSE 450. Full admittance to PTEP or certification at undergraduate level required. Emphasizes relationship of cognition, language and reading for individuals who are deaf or hard of hearing. Learn process, approaches, methods, techniques, appropriate materials, and assessment of reading behaviors.

**EDSE 656 Methods of Teaching Content: Severe Needs Hearing (3)**

Prerequisite: EDSE 450. Full admittance to PTEP or certification at undergraduate level required. Consent of instructor. Required laboratory arranged. Study design of curriculum. Plan, implement and evaluate learning experiences in content subject areas and create and adapt materials appropriate for individuals who are deaf or hard of hearing.

**EDSE 657 Practicum, Severe Needs: Hearing (6-12)**

Prerequisites: EDSE 653, EDSE 654 and EDSE 656. Full admittance to PTEP or certification at undergraduate level required. Consent of major advisor required. Individual observation and supervised practice in the education of individuals who are deaf or hard of hearing. Repeatable, maximum of 12 credits.

**EDSE 680 Administration and Supervision of Special Education (3)**

Designed to review problems and strategic opportunities in the administration and supervision of special education programs and services. Emphases include leadership and management, organizational planning and change, and strategic thinking.

**EDSE 681 Administrative Planning and Program Evaluation in Special Education (3)**

Prerequisite: EDSE 603. Prepares individuals to conduct program/service evaluations, organize data for decision-making purposes, understand resource utilization, develop collaborative partnerships, and integrate systems of accountability into other administrative functions.

**EDSE 718 Advanced Seminar in Education of Students with Hearing and/or Visual Handicaps (3)**

Investigation of the issues and trends in education of infants, children and youth with hearing and/or visual disabilities: focus on research, curriculum, instructional strategies and other administrative concerns.

**EDSE 720 Professional Development (1)**

Consent of instructor. Basic information about doctoral program in Division of Special Education. Students learn about the program, professional activities of professors and opportunities available within the division. S/U graded.

**EDSE 721 Theoretical Foundations of Special Education I (3)**

In-depth study of special education's enrichment by conceptions of the nature of exceptionality, learning and instruction that have and are emerging from biological and sociocultural constructivism, phenomenology and holism.

**EDSE 723 Seminar in Facilitating Personal and Professional Development in Special Education (3)**

Assist learners with development of the skills and knowledge necessary to function as special educators who effectively interact with diverse students, teachers, administrators and parents.

**EDSE 727 Seminar in Exceptionalities (3)**

Investigation of the issues and trends in education of students with exceptionalities. Focus on research, curriculum and instructional strategies.

**EDSE 728 Seminar in Professional Writing (3)**

To develop an understanding of the importance of and the procedures involved in professional writing, with emphasis on writing grant applications for the United States Department of Education.

**EDSE 729 Apprenticeship in Special Education (1-4)**

Consent of instructor. Jointly defined experiences on campus in intensive mentor/apprenticeship project; participating in all aspects of inquiry, administration, or university teaching from planning through dissemination/publication. Repeatable, maximum of 12 credits, under different subtitles.

**EDSE 730 Externship in Special Education (1-12)**

Consent of Instructor. Supervised program of participation in a variety of settings outside the University that serve exceptional persons. The externship requires an individually arranged field experience. Repeatable, maximum of 12 credits, under different subtitles.

**EDSE 731 Topical Seminar in Special Education (3)**

Course content differs to ensure flexibility promoting cutting-edge knowledge. Faculty share expertise in depth. Students select from offerings to individualize program and utilize wide variety of methods of inquiry. Repeatable, maximum of 15 credits, under different subtitles.

**EDSE 797 Doctoral Proposal Research (1-4)**

Permission of major advisor. Required of all doctoral students. A student must earn 4 hours of credits as a partial fulfillment of requirements for all doctoral degrees before admission to candidacy. S/U graded. Repeatable, maximum of four credits.

**EDSE 799 Doctoral Dissertation (1-12)**

Permission of major advisor. Required of all doctoral candidates. A student must earn 12 hours of credit for the dissertation as a partial fulfillment of requirements for any doctoral. S/U graded. Repeatable, no limitations.

**EDSE 999 Graduate School Continuous Registration (1)**

To permit a graduate student to continue making progress in a degree program. S/U graded. Repeatable, no limitations.

**EED — ENGLISH EDUCATION****EED 301 Beginning Tutoring Strategies for Composition (1)**

Sophomores or above. Consent of instructor. After training in tutoring strategies, participants will spend 30 class hours assisting in a composition class or writing laboratory to prepare for clinical and student teaching.

**EED 302 Advanced Tutoring Strategies for Composition (2)**

Prerequisite: EED 301. Sophomores or above. Consent of instructor. Additional tutor training. 50 class hours spent working closely with a faculty mentor, tutoring in a composition class/writing laboratory.

**EED 341 Methods and Materials for Teaching Language and Composition in the Secondary School (3)**

Content covers writing process, teaching of writing theory, language and writing development in grades K-12 with an emphasis on methods of teaching writing in K-12.

**EED 402 Methods and Materials for Teaching Young Adult Literature in the Secondary Schools (4)**

Prerequisite: Full admission to PTEP or certification at undergraduate level. Prerequisite to student teaching. Selection of literature for young adults, use of media, curriculum and classroom organization, standards-based education, assessment and evaluation in a secondary school program.

**EED 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**EED 541 Methods and Materials for Teaching Language and Composition in the Secondary School (3)**

Content covers writing process, teaching of writing theory, language and writing development in grades K-12 with an emphasis on methods of teaching writing in K-12.

## ELPS — EDUCATIONAL LEADERSHIP AND POLICY STUDIES

### ELPS 513 Professional Renewal (1-3)

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

### ELPS 601 Leadership Development Through Inquiry (3)

Experiences help students understand the nature of leadership and the importance inquiry plays in creating, using, and acquiring knowledge.

### ELPS 603 Shaping Organizations: Management and Leadership in Education (3)

Prerequisite: ELPS 601 or consent of instructor. Introduces students to qualities of effective leadership and management; organizational skill development; organizational behavior; and change in organizations.

### ELPS 604 Understanding People: Professional Development and Educational Leadership (3)

Prerequisite: ELPS 601 or consent of instructor. The fundamentals of working with people in educational organizations is reviewed. Emphasis is on adult learning, communications and working in teams, and personnel issues.

### ELPS 605 External Environments: Social, Political, and Economic Influences in Educational Leadership (3)

Prerequisite: ELPS 601 or consent of instructor. External influences on policies, curriculum and operations, including demographics, diversity, governance, partnership, integrated service delivery for children and families sources of revenue, budgeting and accountability.

### ELPS 606 Internship in Educational Leadership (1-9)

Advisor approval required. Involves part-or full-time leadership assignments in educational organizations. S/U graded. Repeatable, no limitations.

### ELPS 608 Issues in Educational Leadership: Implications for Practice (3)

Prerequisites: ELPS 601, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Multiple perspectives will be used to review and analyze critical past issues and current educational dilemmas. Focus on solution strategies and their impact on practice.

### ELPS 622 Directed Studies (1-3)

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

### ELPS 650 School Finance and Budgeting (3)

Prerequisites: ELPS 601, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Examines economics and politics of education, revenues for school systems, principles of taxation, conflicts between equality and efficient goals and local state and federal policies for education.

### ELPS 651 School Business Management (3)

Prerequisites: ELPS 601, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Develops understanding of problems and procedures of such management functions as transportation, property control, food services, facility maintenance, purchasing, insurance and investments. Provisions for applications of technology to financial management.

### ELPS 654 Instructional Leadership and Supervision (3)

Prerequisites: ELPS 601 or consent of instructor. Examine the school leader's role supervising the teaching and learning process. Focus on curriculum development, instructional improvement, and developing capacity of others to become curricular and instructional leaders.

### ELPS 655 Seminar in Learning in Adulthood (3)

A comprehensive overview of learning in adulthood. Emphasis on context, the participants, learning process and the relevance for practice in educational leadership.

### ELPS 660 Law and the Administrator (3)

Prerequisites: ELPS 601, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Relate statutory provisions, court decisions, common law principles and constitutional requirements to legal problems affecting organization and administration of public and private school systems.

### ELPS 662 Design and Delivery of Professional Development (3)

Prerequisites: ELPS 601, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Explores the planning, delivery, and evaluation of professional development activities for adults. Emphasizes practical aspects such as needs identification and learning transfer. Course outcomes include creating a professional development program.

### ELPS 663 Developing Grants and Contracts (3)

Prerequisite: ELPS 601 or consent of instructor. Identifying various funding sources; understanding the explicit and implicit aspects of proposal writing for public and private agencies, proposal review processes, and elements of project operations.

### ELPS 665 Policy Analysis and Development (3)

Prerequisites: ELPS 601, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Study standard techniques for analyzing, evaluating and developing policies for educational systems and organizations, with special attention to contemporary policy issues.

### ELPS 666 Planning and Change in Education (3)

Prerequisites: ELPS 601, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Understand planning and change theories; strategic planning development; particular emphasis on restructuring educational environments.

### ELPS 670 The Principalship: Leadership at the School Site Level (3)

Prerequisites: ELPS 601, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Examine leadership and management issues of building principals, instructional leadership and problems facing principals at the site level.

### ELPS 695 Practicum in Educational Leadership (1-3)

Consent of instructor. Enables students to engage in a particular task/activity in educational leadership in one or more field sites. S/U graded. Repeatable, no limitations.

### ELPS 711 Advanced Theories for Changing Organizations (3)

Prerequisites: ELPS 603 and ELPS 666 or equivalent. Consent of instructor. Advanced theories of organizations; basic research on organizations and leader behavior; primary research about and models for facilitating change are combined to analyze, plan and evaluate major organizational change processes.

### ELPS 747 Leadership at the School District Level (3)

Prerequisites: ELPS 601, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Study the leadership responsibilities of school district administrators, with special emphasis on the knowledge, skills and values needed by effective superintendents.

### ELPS 751 Doctoral Core I (6)

Consent of instructor. Team-taught seminar focusing on teambuilding and group processing, inquiry and reflective practice, and moral and ethical dimensions of leadership. Extensive attention given to developing scholarly writing skills.

### ELPS 752 Doctoral Core II (6)

Prerequisite: ELPS 751 or consent of instructor. Continued doctoral study in educational leadership and policy. Team-taught seminar exploring the nature of organizations, leadership and policy through readings, group discussions, and a collaborative research project.

### ELPS 754 Research in Educational Leadership (3)

Prerequisites: ELPS 751, ELPS 752, SRM 602, SRM 603, or consent of instructor. Classic and contemporary published quantitative and qualitative studies on organizations, leadership and policy studies are used to analyze research strategies and tactics.

**ELPS 797 Doctoral Proposal Research (1-4)**

Prerequisites: ELPS 751, ELPS 752. To enable advanced doctoral students to learn the essential elements of effective research proposals and to develop analytic skills needed to critique other research. S/U graded. Repeatable, maximum of four credits.

**ELPS 799 Doctoral Dissertation in Educational Leadership and Policy Studies (1-12)**

Prerequisite: ELPS 797. Approval of research advisor required. Complete research of a major problem in educational leadership and policy. Must earn total of 12 hours of credit. S/U graded. Repeatable.

**ELPS 999 Graduate School Continuous Registration (1)**

To permit a graduate student to continue making progress in a degree program. S/U graded. Repeatable, no limitations.

**ENG — ENGLISH****ENG 122 College Composition (3)**

Introduces different modes of expository writing with an extensive review of mechanics. Emphasis on full and logical development of thesis, use of both personal and academic styles and clear organization. (GenEd)

**ENG 123 College Research Paper (3)**

Prerequisite: ENG 122. Instruction in diction, style, logical analysis, research techniques and organization of college-level research papers. (GenEd)

**ENG 131 Introduction to Literature (3)**

The study of selected poetry, plays and works of fiction with an emphasis on developing skills in analysis, interpretation and critical thinking. (GenEd)

**ENG 211 Survey of American Literature (3)**

Prerequisite: ENG 122. Study of American Literature from its beginning to the present. Emphasizes the cultural, historical appreciation of selected representative works and contribution of the literature to contemporary life and thought. (GenEd)

**ENG 213 Survey of British Literature I (3)**

Prerequisite: ENG 122. Chronological survey of English literature from the Anglo-Saxon period through the 18th century. This literature will be considered from various perspectives, but with constant attention to its historical context. (GenEd)

**ENG 214 British Literature II (3)**

Prerequisite: ENG 122. Survey of British literature from the Romantic Period to the present. Emphasizes close reading of selected major works in historical context. (GenEd)

**ENG 225 Communications on a Theme (3)**

Prerequisite: ENG 122. Topics for writing chosen from ideas of historical influence and/or contemporary problems. Repeatable, may be taken two times, under different subtitles. (GenEd)

**ENG 227 Technical Writing (3)**

Prerequisite: ENG 122. Analysis of sentence structure, order of presentation and use of illustration in writing essential for the technician, engineer, scientist, with emphasis on arranging and stating information clearly. (GenEd)

**ENG 235 World in Literature (3)**

Variable content course studying literature of countries predominantly other than England or America. Readings may be thematic, comparative, geographic, generic. Repeatable, maximum of nine credits, under different subtitles.

**ENG 236 Ethnic American Literature (3)**

Prerequisite: ENG 122. Introduce themes and ideas in ethnic American literature by studying representative authors of one or more U.S. ethnicities. Repeatable, under different subtitles. (GenEd)

**ENG 238 Introduction to Folklore (3)**

The study of tales, legends and other lore passed on orally or by customary example in groups bound by common background or experience. Subtitle may indicate specific group or groups. Repeatable, maximum of six credits, under different subtitles.

**ENG 239 Topics in Women's Literature (3)**

Investigation, from a feminist perspective, of writing by or about women. Figures, nationalities, genres and periods will vary with subtitles. Repeatable, maximum of nine credits, under different subtitles.

**ENG 240 Introduction to Creative Writing (3)**

Introduction to techniques in writing fiction, poetry, or in theatre, film and television. Repeatable, maximum of nine credits, under different subtitles.

**ENG 250 Introduction to Cultural Studies (3)**

A historical survey of the development of cultural studies. The investigation of "culture" as a symbolic practice, and the various critical methodologies used to interpret cultural "texts."

**ENG 262 Masterpieces of World Literature (3)**

Study of the riches of world literature in translation. Course content will be designated by one of the following subtitles: Continental Masterpieces, Masterpieces of Russian Literature, Masterpieces of the Orient. Repeatable, maximum of nine credits, under different subtitles. (GenEd)

**ENG 303 The Essay (3)**

Prerequisite: ENG 122, ENG 123 or equivalent. An in-depth study of essay modes, structures, and themes in which theory and observation are supplemented with practice as students read and write essays on topics of their choice.

**ENG 308 Workshop in English (1-9)**

A series of specialized English topics. Subject matter may deal with any area of English or English Education. Subtitle will indicate course content. Repeatable, maximum of nine credits, under different subtitles.

**ENG 310 Major Writers of English Literature (3)**

In-depth study of the works of a single writer. Repeatable, maximum of nine credits, under different subtitles.

**ENG 312 Shakespeare in Context: Histories and Comedy (3)**

Prerequisite: ENG 122. An in-depth study of Shakespeare's histories and comedies, as well as relevant plays, poetry and prose by contemporary authors. Includes background on literary and theatrical history, and recent criticism.

**ENG 313 Shakespeare in Context: Tragedies and Romances (3)**

Prerequisite: ENG 122. An in-depth study of Shakespeare's tragedies and romances, as well as related plays by his contemporaries. Includes background on literary and theatrical history, and recent criticism.

**ENG 314 Shakespeare in Context: Poetry (3)**

Prerequisite: ENG 122. An in-depth study of Shakespeare's non-dramatic works, as well as related poetry by his contemporaries. Includes background on literary history and recent criticism.

**ENG 318 Traditional and Modern Grammars (3)**

Describes English as treated by traditional grammarians, structuralists and transformationalists. Topics range from word classes, tense and voice, to operations and processes underlying modern grammar.

**ENG 319 Advanced Expository Techniques (3)**

Prerequisites: ENG 122. Reading, writing and formal analysis of various prose pieces and study of logical fallacies in ancient and modern political writing.

**ENG 325 Studies in Fantasy and Science Fiction (3)**

Different approaches to the literature of wonder, including concentration on a particular writer, a theme such as women in science fiction, or a historical study of the genre.

**ENG 335 World Literature By and About Women (3)**

The contributions of important early and modern women writers. Novels, plays and poetry or short stories of world writers will be studied.

**ENG 336 European Immigrant Literature (3)**

Prerequisite: ENG 122. Study of late nineteenth- and twentieth-century literature by and about European immigrants to the U.S. Also an introduction to theories of ethnicity and literature in the U.S.

**ENG 337 Chicana/o Literature and Theory (3)**

Prerequisite: MAS 100 and MAS 110 or ENG 236. In-depth study of contemporary Chicana/o literature and theory. Course will be thematic and will focus on the disciplinary and cultural connections between the literary, the aesthetic, and the theoretical.

**ENG 340 Creative Writing - Advanced (3)**

Prerequisite: ENG 240 in the appropriate subtitle or equivalent. Subtitles: Poetry, Fiction, Drama. Repeatable, maximum of nine credits, under different subtitles.

**ENG 345 Literary Theory and Criticism(3)**

Study of literary works through a variety of approaches such as sociological, psychological, deconstructionist and other contemporary theories.

**ENG 346 Chicana/o Theory (3)**

Prerequisites: MAS 100 or ENG 250 or ENG 345. An in-depth study of issues and topics in Chicana/o theory and related fields. May focus on specific periods, specific issues, and/or specific authors. Repeatable, may be taken two times, under different subtitles.

**ENG 351 Medieval Literature (3)**

Works from the Old and Middle English periods. Selections such as anonymous Anglo-Saxon lyrics, Beowulf, Chaucer, Sir Gawain and the Green Knight and Morte D'Arthur.

**ENG 352 Renaissance Literature (3)**

English poetry and prose of the Renaissance. Selections from such authors as Spenser, Jonson, Marlowe, Bacon, the Metaphysical poets, Milton and the chroniclers.

**ENG 353 Restoration and Eighteenth Century (3)**

Selected authors (Dryden, Pope, Swift, Defoe, Fielding, Boswell, Johnson, Goldsmith, Sheridan) and genres (comic drama, satiric poetry, the novel, biography) representative of literature in England from 1660 to 1800.

**ENG 354 The Romantic Movement (3)**

A study of the development of English Romanticism through the works of such writers as Blake, Wordsworth, Coleridge, Byron, Shelley and Keats.

**ENG 355 Victorian Prose and Poetry (3)**

A study of the major Victorian writers and their themes. Special emphasis upon intellectual currents of the 19th century as reflected in the poetry and prose.

**ENG 356 Twentieth Century English Literature (3)**

Selected reading from authors such as Shaw, Joyce, Woolf, Yeats, Thomas, Lessing and Fowles to bring out themes and intellectual currents of the present century.

**ENG 371 American Literature through the 19th Century (3)**

Careful study of major writers and literary movements from the Puritan period up to 1900.

**ENG 372 American Literature of the 20th Century (3)**

Careful study of major writers and literary movements from 1900 to the present.

**ENG 402 The Short Story (3)**

Analysis of modern short stories.

**ENG 403 Techniques of the Novel (3)**

A study of seven or eight important English and American novels to show different techniques used to reveal the novelists' artistic insight.

**ENG 404 Modern Literature About Childhood and Adolescence (3)**

The concept of childhood and adolescence in the writing of 20th century British and American authors, with emphasis on the ideas of innocence and initiation.

**ENG 406 Advanced Studies in Drama (3)**

Prerequisite: ENG 122. Study of a variety of dramatists, historical periods or special problems in drama; may focus attention on specific dramatist or sub-genre. Repeatable, under different subtitles.

**ENG 407 Advanced Studies in Poetry (3)**

Study of one or more poets or special problems in poetry; may focus attention on a specific poet or sub-genre.

**ENG 408 Advanced Topics in Rhetoric and Composition (3)**

Prerequisite: ENG 122, ENG 123 or equivalent. Advanced study in various topics in rhetoric and composition, such as technical writing, classical rhetoric, computers and writing and writing theory. Repeatable, maximum of six credits, under different subtitles.

**ENG 409 Advanced Topics in Literature (3)**

Topics may focus on themes, literary theory, genres, historical periods or selected writers.

**ENG 414 Greek and Comparative Mythology (3)**

Greek myths as an important source of literary allusion and imagery and as a comparative vehicle to show what is common to all mythologies.

**ENG 418 Advanced Topics in Linguistics (3)**

An investigation of selected topics of current linguistic interest. Topics such as syntax, stylistics, semantics and sociolinguistics are explored. Repeatable, maximum of six credits, under different subtitles.

**ENG 419 Language and the History of English (3)**

A survey of general linguistics as applied to the history of the English language. Includes vocabulary and dictionary study, regional and social dialects, semantics and pragmatics, childhood acquisition of language.

**ENG 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**ENG 430 Advanced Studies in World Literature (3)**

An investigation of a theme, form or problem that cuts across periods and nationalities. Repeatable, maximum of nine credits, under different subtitles.

**ENG 436 Major Ethnic Writers (3)**

Prerequisite: ENG 122. Focus on the work of one or two writers and delve into critical and theoretical issues in ethnic studies. Repeatable, maximum of nine credits, under different subtitles.

**ENG 441 Colloquium in Literature (3)**

One great work of literature or a small group of such masterpieces that are closely related either in form or idea. Repeatable, maximum of nine credits, under different subtitles.

**ENG 495 Advanced Cultural Studies (3)**

An intensive study of one particular cultural phenomenon from a variety of critical perspectives. Repeatable, maximum of six credits, under different subtitles.

**ENG 497 Senior Seminar (3)**

Juniors or above. Detailed investigation of a specific author, period, text, or topic in literary studies, composition and rhetoric, or linguistics. Substantial research and at least one oral presentation required. Repeatable, under different subtitles.

**ENG 503 Techniques of the Novel (3)**

A study of seven or eight important English and American novels to show different techniques used to reveal the novelists' artistic insight.

**ENG 506 Advanced Studies in Drama (3)**

Studies of a variety of dramatists, historical period or problems in drama; may focus attention on a specific dramatist or sub-genre. Repeatable, under different subtitles.

**ENG 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**ENG 510 Advanced Placement Program-English (1-3)**

Consent of Instructor. A course designed to provide content and pedagogical information related to the teaching of writing and literature in the secondary school English advanced placement program. S/U graded. Repeatable, no limitations.

**ENG 513 Professional Renewal (1-4)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.



**ENG 514 Greek and Comparative Mythology (3)**

Greek myths as an important source of literary allusion and imagery and as a comparative vehicle to show what is common to all mythologies.

**ENG 530 Advanced Studies in World Literature (3)**

An investigation of a theme, form or problem that cuts across periods and nationalities. Repeatable, under different subtitles.

**ENG 535 World Literature By and About Women (3)**

The contributions of important early and modern women writers. Novels, plays and poetry or short stories of world writers will be studied.

**ENG 593 The Rocky Mountain Writing Project (6)**

Consent of instructor. Teachers teaching teachers about writing to extend their knowledge in theory and practice and to prepare them as writing consultants. Open to K-12 teachers in all disciplines. S/U graded. Repeatable, maximum of 12 credits.

**ENG 594 Practicum in the Teaching of College Composition (4)**

Consent of instructor. Train new teaching assistants in Department of English to teach college level composition to UNC students.

**ENG 600 Introduction to Graduate Study (3)**

An orientation to graduate study in general and the nature and methods of research in particular. Should be taken during the first semester of graduate work.

**ENG 622 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**ENG 623 Old English (3)**

Students will study the language and literature of Anglo-Saxon England, translating important historical and literary documents in prose and poetry, including works by Alfred, Aelfric, and others.

**ENG 624 Middle English (3)**

An introduction to Middle English literature. Authors considered may include Chaucer, Langland, Kemppe, and the Pearl poet. Readings may include drama, narrative poetry, lyric poetry, narrative prose and devotional literature.

**ENG 625 Studies in the Renaissance (3)**

A survey of selected Renaissance texts, including works by Spenser, Shakespeare, Donne, and Milton. Emphasis on historical contexts and recent criticism, including new historicist, feminist, psychoanalytic, and queer approaches.

**ENG 626 Studies in the Restoration and Eighteenth Century (3)**

Representative poetry, prose, and/or drama in England from 1660-1789, including such writers as Dryden, Behn, Astel, Finch, Pope, Swift, Defoe, Fielding, Boswell, Johnson, Gray, Equiano, Barbauld, Wycherley, and Congreve.

**ENG 627 British Romantic Literature (3)**

British Literature, 1780-1835, with emphasis on poetry, the novel, and non-fiction prose. Central issues include the Romantic poetic, the French Revolution, and the growth of the English nation

**ENG 628 Studies in the Victorian Period (3)**

British literature from 1832-1900, with primary focus on prose fiction, non-fiction, and poetry. emphasis on the intellectual currents of the period as reflected in the literature of the age.

**ENG 629 20th Century British Literature (3)**

Studies in British literature of the twentieth century, with primary focus on fiction, poetry, and non-fiction prose. Emphasis on cultural and intellectual influences on the literature of the era.

**ENG 630 American Literature to the Civil War (3)**

American literature from 1590-1865, with primary focus on prose fiction, non-fiction, and poetry. Emphasis on New- and Old-World cultures and the contribution of writing in the creation of cultures.

**ENG 631 Studies in American Literature Civil War to WWI (3)**

Seminar in ideas and representative authors during the late 19th and early 20th centuries. An examination of both the intrinsic literary quality of selected texts and their sociopolitical, historical, and cultural contexts.

**ENG 632 American Literature WWI to Present (3)**

Studies in American literature 1914 to the present, with primary focus on fiction, poetry, and non-fiction prose. Emphasis on cultural and intellectual influences on the literature of the era.

**ENG 633 Studies in Linguistics (3)**

Seminars in various topics ranging from the evolution of English from its beginnings to dialectology, semantics, stylistics and psycholinguistics. Repeatable, maximum of nine credits, under different subtitles.

**ENG 634 Studies in World Literature (3)**

Seminars in writers or works in translation to illustrate generic, thematic, national, or cultural approaches to world literature. Repeatable, maximum of nine credits, under different subtitles.

**ENG 638 Literary Criticism and Theory (3)**

Prerequisite: ENG 600. Historical survey of different theoretical approaches to literary and cultural criticism and pedagogy, including classical, renaissance, and eighteenth-century movements. Emphasis on twentieth-century schools.

**ENG 639 Colloquium in Literature (3)**

Seminars in various topics (e.g., the tragic hero, alienation, the experimental novel) related in form and/or idea and drawn from American, British or World literature in translation. Repeatable, maximum of nine credits, under different subtitles.

**ENG 640 History and Theory of Rhetoric (3)**

Readings in selected rhetoricians, including Plato, Aristotle, Augustine, Erasmus, Ramus, Bacon, Montaigne, Campbell, Blair, Bakhtin, Richards, Gates, Cixous, Kristeva.

**ENG 641 Studies in Composition Research and Pedagogy (3)**

Reading in composition theory and pedagogy, including expressivist, cognitive, historical, rhetorical, social epistemic, discourse, and cultural studies.

**ENG 642 Film Theory and Analysis (3)**

This seminar explores major debates and developments in film theory from the 1920s to recent decades. Theories are illustrated with the technical and aesthetic analysis of specific films.

**ENG 692 Teaching Internship (3)**

Consent of Instructor. Course offers community college teaching experience to English M.A. students. Interns teach a course at an appropriate community college, receive monitoring, and provide a portfolio describing the teaching experience. Repeatable, may be taken two times.

**ENG 697 MA or Creative Project (3)**

Consent of Instructor. Select MA project, a journal-appropriate research paper of 30-50 pp., or creative project (collection of poems, short stories, or novel chapters). Proposal approval by advisor and public presentation (faculty/students) required.

## ENST — ENVIRONMENTAL STUDIES

**ENST 100 Introduction to Environmental Studies (3)**

Explore the nature of environmental problems and gain an overall understanding of the complexity of these problems. (GenEd)

**ENST 205 Environment, Politics and Law (3)**

Analysis of the causes and proposed solutions of environmental problems and of environmental issues and their political resolution.

**ENST 215 Human Behavior and Environment (3)**

Prerequisite: ENST 100 recommended. Examine interrelationships between human behavior and the environment. Review personal, social and structural dimensions of everyday life relating to the environment. Understand environmental problems and consider alternative behavior models.

**ENST 225 Energy and the Environment (3)**

Study past, present and future methods of energy production and limitations imposed by the laws of physics. Discuss applications to transportation, home and industry. Taught by the Physics department. (GenEd)

**ENST 235 Chemistry and the Environment (2)**

The cause and effect of nuclear waste, pesticides, air pollution, water pollution, toxic waste, food additives and alternative energy sources from a chemical perspective. (GenEd)

**ENST 255 Atmospheric Environment of Humans (2)**

Air pollution and temperature inversions, global circulation of pollutants, acid rain, human impact on the ozone layer, carbon dioxide and climatic change, nuclear winter and other climate/human relationships.

**ENST 265 Conservation of Natural Resources (2)**

Learn the characteristics of the major natural resources and the scientific basis behind current resource use practices. The environmental consequences of their use and abuse will be emphasized.

**ENST 291 Ecological Commerce (3)**

Use case studies to explore a general overview of commerce, economics, and business as it relates to the environment and human interactions.

**ENST 331 Global Population and Human Needs (3)**

Demographic perspective on human populations. Introduction to population processes of fertility, mortality, migration. Analysis of global patterns of demographic processes and the relation of culture to population growth and decline.

**ENST 335 Environmental and Resource Economics (3)**

Prerequisite: ECON 105. Students will examine the strengths and weaknesses of economic theory in analyzing the seriousness of resource and environmental issues facing society.

**ENST 355 Introduction to Environmental Health (3)**

Discussion of the relationships of environmental pollution to the ecosystem and health of humans. Analyze major areas of environmental pollution: water, air, solid wastes, pesticides, radioactive wastes and population.

**ENST 375 Literature and the Environment (3)**

Explore human relationships with nature writing from various periods and cultures. Economic, scientific, philosophic and religious attitudes emerge from attitudes about nature. Do these influence human treatment of natural things?

**ENST 380 Sustainable Living (3)**

Examine the sustainability of contemporary living patterns. Explore alternative approaches to meeting transportation, domestic power and heating, food production and waste disposal needs on the personal and community levels.

**ENST 385 Art and the Environment (2)**

Investigate and participate in the process of art as it relates to the different environments of human existence. (GenEd)

**ENST 405 Senior Seminar (3)**

Discuss current environmental issues in depth and in detail, on the basis of student background, library resources, interviews and guest speakers. Individuals and small groups analyze and present problems.

**ENST 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**ENST 492 Internship in Environmental Studies (4-15)**

Permission of ENST coordinator. Practical experience and training in areas related to the environment. Credit hours and nature of experience arranged individually. Repeatable, maximum of 15 credits.

**ENST 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**ENST 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**ENST 515 Environment and Environmental Problems (2)**

Examine the structural and functional relationships of the environment with emphasis on present and long-term problems. Previous experience or courses in natural and social sciences useful but not required.

**EPSY — EDUCATIONAL PSYCHOLOGY****EPSY 347 Educational Psychology for Elementary Teachers (3)**

Provisional or full admittance to PTEP required. Study the relationships between theory, research, and practice in learning, memory, child development, motivation, and educational assessment for elementary classroom settings.

**EPSY 348 Educational Psychology for Middle School Teachers (3)**

Provisional or full admittance to PTEP required. Study the relationships between theory, research, and practice in learning, memory, child development, motivation, and educational assessment for middle school classroom settings.

**EPSY 349 Educational Psychology for Secondary Teachers (3)**

Provisional or full admittance to PTEP required. Study the application of principles derived from research on learning, memory, adolescent development, motivation, and educational assessment and measurement to secondary classroom settings.

**EPSY 530 Life Span Developmental Psychology (3)**

Human growth and development from conception through senescence, focusing on cognitive, affective, social and psychomotor development throughout the life span.

**EPSY 540 Theories and Principles of Learning (3)**

A survey of classical and contemporary theory and research related to human cognition. Topics include the study of learning processes, memory and higher cognitive functions.

**EPSY 622 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**EPSY 630 Child and Adolescent Psychology (3)**

Prerequisite: EPSY 530 or equivalent. Physical, social and emotional development of children from conception through puberty, stressing normal development and major development theories.

**EPSY 631 Psychology of Youth, Adulthood and Aging (3)**

Prerequisite: EPSY 530 or equivalent. Cognitive, social and physical developments that affect transitions in youth, adulthood and senescence.

**EPSY 635 Individual Differences in Cognition (3)**

Prerequisite: EPSY 540 or equivalent. Examine individual differences between learners from a cognitive viewpoint. Review verbal, mathematical and spatial abilities, cognitive styles, problem solving and gender and cultural differences. Seminar format.

**EPSY 654 Seminar in College Teaching (3)**

Practices, issues and research in college teaching. Instructional models and methods, course planning, cognition, testing and grading, student-teacher interaction and ethics.

**EPSY 661 Trends and Issues in Educational Psychology (3)**

Majors only. Examines professional, philosophical, theoretical issues and trends across the discipline. Students practice and receive feedback regarding written and oral communication skills. S/U graded.

**EPSY 663 Apprenticeship (1-3)**

Consent of instructor. Work with faculty member on professional endeavors such as research, writing, course planning or public service. Requires 3 hours per week for each credit. S/U graded. Repeatable, maximum of nine credits.

**EPSY 674 Measurement I: Educational Testing (3)**

Prerequisite: SRM 600. Construction and evaluation of tests and other measures. Topics include score and norm interpretation, reliability and validity. Item construction and analysis, rating scales and questionnaires.

**EPSY 675 Measurement II: Advanced Techniques (3)**

Prerequisite: EPSY 674. Classical and modern measurement theory and methods. Derivations of reliability and validity formulae, test bias, item response theory, logistic models, score equating, standards, individual prediction and classification.

**EPSY 680 Seminar in Advanced Research Practices and Applications (3)**

Prerequisites: EPSY 674 or consent of instructor. Provides advanced coverage of research techniques, e.g., observation and interview methods, protocol analysis and neural networks. Topics arranged to reflect the instructor's and student's interest. Repeatable, maximum of nine credits.

**EPSY 682 Cognition and Instruction (3)**

Prerequisite: EPSY 540. A critical survey and analysis of the research literature in cognitive psychology pertaining to issues of instruction and human performance. Research on learning environments and cognitive apprenticeships is also examined.

**EPSY 684 Advanced Seminar in Human Development (3)**

Prerequisite: EPSY 530. For Graduate students wishing to develop advanced competency. Periodically, seminar may focus on topic reflecting instructor's interest area or on developing a student's inquiry. Repeatable, maximum of nine credits.

**EPSY 685 Advanced Seminar in Learning and Cognition (3)**

Prerequisite: EPSY 540. Pursue original research into learning and cognitive processes under the guidance of a faculty member. Arranged to reflect faculty and students' interests. Repeatable, maximum of nine credits.

**EPSY 686 Advanced Seminar in Measurement and Assessment (3)**

For graduate students wishing to develop a competency in psychological and educational measurement. The seminar will focus on an advanced topic in contemporary measurement and assessment. Repeatable, maximum of nine credits.

**EPSY 692 Internship in Educational Psychology (1-9)**

Consent of instructor. Full-or part-time assignment in a field-based setting under supervision. Students work a minimum of 3 hours per week for each hour of credit. S/U graded. Repeatable, maximum of 18 credits.

**EPSY 694 Practicum (1-9)**

Consent of instructor. Experiential learning in an on-campus setting in conjunction with supervision by a faculty member. Students work a minimum of 3 hours per week for each hour of credit. S/U graded. Repeatable, maximum of 18 credits.

**EPSY 695 Special Topics in Educational Psychology (1-3)**

Specialized topics or contemporary issues. Topics vary. Repeatable, maximum of two times, under different subtitles.

**EPSY 699 Thesis (1-6)**

Empirical investigation under the direction of a graduate faculty member. Thesis must be approved by the faculty committee and submitted in appropriate style and format to the Graduate School. S/U graded. Repeatable, no limitations.

**EPSY 797 Doctoral Proposal Research (1-4)**

Doctoral students must earn 4 hours as partial fulfillment of requirements for the doctorate. Check with the Graduate School regarding appropriate procedures and formats. S/U graded. Repeatable, maximum of four credits.

**EPSY 799 Doctoral Dissertation (1-12)**

Must earn 12 hours as partial fulfillment of requirements for the doctorate. Dissertation must be approved by and defended before the dissertation committee. S/U graded. Repeatable, no limitations.

**EPSY 999 Graduate School Continuous Registration (1)**

To permit a graduate student to continue making progress in a degree program. S/U graded. Repeatable, no limitations.

**ESCI — EARTH SCIENCES****ESCI 265 Earth Science Concepts for Elementary Teachers (3)**

(2 lecture, 2 laboratory) An investigation of basic concepts in the Earth Sciences through lecture, discussion and laboratory investigations. This course is ideal for those seeking elementary teacher certification. (GenEd)

**ESCI 450 Strategies in Teaching in Earth Sciences (1)**

(2 laboratory) Demonstration and strategies appropriate for teaching earth science concepts, presentation of controversial issues and management of laboratory and field trip activities.

**ESCI 484 Earth Sciences Field Experiences (1-15)**

Consent of instructor. Field studies in astronomy, geology, meteorology and/or oceanography, usually preceded by on-campus orientation. Schedule of classes lists specific area and topic to be investigated when course is offered. Repeatable, under different subtitles. Field trip required.

**ESCI 492 Earth Science Internship (1-15)**

Consent of instructor. Internship in a public agency or private firm to provide professional experience under the supervision of an area specialist. S/U graded. Repeatable, maximum of 15 credits.

**ESCI 497 Undergraduate Research (1-4)**

Consent of instructor. Original research in the earth sciences conducted under the guidance of a faculty advisor. Results of the investigation are to be presented both in a written report and orally. Repeatable, maximum of six credits.

**ESCI 550 Strategies in Teaching in Earth Sciences (1)**

(2 laboratory) Demonstration and strategies appropriate for teaching earth science concepts, presentation of controversial issues and management of laboratory and field trip activities.

**ESCI 575 Earth Systems Science Education (1-6)**

A variable content course covering integrated science content and pedagogy from the following: atmosphere (air), biosphere (life), hydrosphere (water), and/or lithosphere (land/rock). Repeatable, under different subtitles.

**ESCI 584 Earth Sciences Field Experiences (1-15)**

Consent of instructor. Field studies in astronomy, geology, meteorology and/or oceanography, usually preceded by on-campus orientation. Schedule of classes lists specific area and topic to be investigated when course is offered. Repeatable under different subtitles. Field trip required.

**ESCI 599 Seminar in Earth Sciences (1)**

Consent of instructor. Invited speakers, including graduate students, faculty and guests, present current earth science research topics in seminar format. Required of graduate students all semesters they are in residence at UNC. S/U graded. Repeatable, no limitations.

**ESCI 600 Introduction to Earth Science Research (2)**

Consent of instructor. Nature and methods of research in the earth sciences. Development of research proposal that will provide the basis for thesis or graduate research project. Required of all first year Earth Sciences graduate students.

**ESCI 695 Special Topics in Earth Sciences (2)**

Consent of instructor. Faculty and students select an earth sciences topic for intensive study beyond the scope of existing departmental course offerings. Repeatable, under different subtitles.

**ESCI 697 Graduate Research (1-6)**

Consent of instructor. Qualified graduate students select and research a problem and present professional quality written report. Repeatable, maximum of six credits.

**ESCI 699 Thesis (1-6)**

Intensive study of selected earth sciences topic under the direction of student's graduate studies committee. S/U graded. Repeatable, no limitations.

**ESL — ENGLISH AS A SECOND LANGUAGE****ESL 051 Writing for Foreign Students I (6)**

Intermediate. Assist international students with language skills in the areas of reading, writing, listening and speaking. Continuing Education course; no credit. Repeatable.

**ESL 052 Writing for Foreign Students II (3-6)**

Advanced. Assist international students with language skills in the areas of reading, writing, listening and speaking. Continuing Education course; no credit. Repeatable.

**ET — EDUCATIONAL TECHNOLOGY****ET 100 Computer Applications for Composition (1)**

Taken concurrently with composition classes. Word processing, graphics and stylistic analysis applications to improve student's writing process. Includes CAI tutorials and tests.

**ET 247 Technology in Education for Elementary Teaching (1)**

Corequisites: EDF 366. Provisional or full admittance to PTEP required. Instruction and practice using a variety of technology tools. Focus on the application of these tools (intellectual freedom, critical viewing skills, technology access and equity) within the elementary classroom.

**ET 248 Technology in Education for Middle Grades Teaching (1)**

Corequisites: EDMG 310. Instruction and practice using a variety of technology tools. Focus on the application of tools (intellectual freedom, critical viewing skills, technology access and equity) within the middle grades classroom setting.

**ET 249 Technology in Education for Secondary Teaching (1)**

Corequisites: STEP 161. Provisional or full admittance to PTEP required. Instruction and practice using a variety of technology tools. Focus on application of these tools (intellectual freedom, critical viewing skills, technology access and equity) within the secondary classroom.

**ET 347 Educational Technology Applications for Elementary Teaching (1)**

Prerequisite: ET 247. Provisional or full admittance to PTEP required. Sophomores or above. Integration of various instructional delivery systems within teaching. Content-specific and elementary applications of computing, video, print, hypermedia and multimedia, telecommunications technologies and issues relevant to the elementary education community.

**ET 348 Educational Technology Applications for Middle Grades Teaching (1)**

Prerequisite: ET 248. Corequisites: EDMG 340 and EDMG 440. Full admittance to PTEP required. Sophomores or above. Integration of various instructional delivery systems within teaching. Content-specific and middle grades applications of computing, video, print, hypermedia and multimedia, telecommunications technologies and issues relevant to middle grades.

**ET 349 Educational Technology Applications for Secondary Teaching (1)**

Prerequisite: ET 249. Corequisites: STEP 363, EDRD 324 and appropriate secondary methods course for the secondary education program. Full admittance to PTEP required. Sophomores or above. Integration of various instructional delivery systems within teaching. Content-specific and secondary applications of computing, video, print, hypermedia and multimedia, telecommunications technologies and issues relevant to secondary education.

**ET 422 Directed Study (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**ET 425 Computer Applications (3)**

Course content includes spreadsheets, word processing, data base, presentation software, communication software, graphics and content specific software applications. S/U graded.

**ET 495 Special Topics in Educational Technology (1-3)**

Consent of instructor. Scheduled on irregular basis. Explore special topics in Educational Technology. An appropriate subtitle will explain each course. Repeatable, may be taken two times, under different subtitles.

**ET 500 Introduction to Educational Technology (3)**

A survey course examining the field of educational technology, especially its impact on teaching and learning. Includes historical and current perspectives, as well as trends and issues in the field.

**ET 501 Introduction to Applications of Educational Technology (3)**

Instruction and practice with computer systems, video and other technological tools. Application include word processing, spreadsheets and presentation software. Visual and information literacy skills and copyright trends are addressed.

**ET 502 Instructional Design (3)**

Covers design procedures and analysis techniques for determining instructional content. Evaluation tools for determining instructional efficiency at the systems, curriculum, course and lesson levels are explored.

**ET 503 Computers in Education (3)**

Prerequisite: ET 501 or permission of instructor. Instruction for intermediate to advanced applications of current computer-based technologies. Introduction to a variety of other technology related topics with an emphasis on educational applications and integration.

**ET 504 Instructional Materials Design (3)**

Procedures for designing and developing instructional materials. Includes scripting and production specifications for graphic, audio, slide/tape and/or video formats.

**ET 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**ET 524 Design of Computer Assisted Instruction (3)**

Prerequisite: ET 503. A study of the design and development of computer assisted instruction, introducing both authoring system and general purpose programming language paradigms.

**ET 530 Media Cataloging and Classification (3)**

Study the purpose, theory and principles of cataloging and classifying media. Includes Dewey Decimal, Library of Congress and other systems, as well as on-line cataloging.

**ET 533 Reference and Information Management (3)**

Discuss suitable materials for elementary, secondary and post-secondary resource centers as well as data bases and research indices for students, instructors and administrators.

**ET 535 Administration of Instructional Resources (3)**

Learn the essentials of organizing and administering instructional resource centers at elementary, secondary and post-secondary levels. Includes budget preparation and personnel management.

**ET 536 Media Selection, Utilization and Evaluation (3)**

Selection principles, utilization strategies and evaluative criteria for print and non-print media for individuals, groups, different ages and cultural groups. Includes CAI/CMI evaluation.

**ET 601 Strategies for Teaching Technology Skills (3)**

Prerequisites: ET 502, ET 503. For teachers of technology skills in diverse environments (public schools to corporations). Topics include instructional design, theories, strategies, ethics and interpersonal skills for effective and appealing learning environments.

**ET 602 Instructional Analysis and Design (3)**

Prerequisite: ET 502. Application of contemporary methods of assessment, design, development, implementation and evaluation of instructional courses, programs and systems.

**ET 604 Advanced Design of Instructional Materials (3)**

Prerequisites: ET 504, EPSY 540. Application of principles of human learning, perception, and motivation to the design and production of materials to support learning and performance.

**ET 613 Instructional Telecommunications (3)**

Conceptual issues and production techniques for developing instructional telecommunication systems and programs.

**ET 615 Distance Education: Theories and Practice (3)**

Includes an overview of distance education foundations, design issues systems development and applications across curricula.

**ET 617 Development of Online Applications (3)**

Prerequisites: ET 502, ET 503 and ET 524; ET 613 or ET 615 strongly recommended. Focus on the design, development and implementation of interactive online network applications. Emphasis on instructional environments, application development necessary simulations, database development, evaluation. Secondary emphasis creating an ADA compliant online application.

**ET 622 Directed Study (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**ET 627 Computer Assisted Instruction Authoring Systems (3)**

Prerequisites: ET 503, ET 524. The generation and validation of computer based courseware using programming languages and authoring systems.

**ET 628 Design of Multimedia Learning Environments (3)**

Prerequisites: ET 503, ET 524. Investigation of the theory, implementation, practice, and research on interactive, computer based instructional systems including videodisk, videotape, digital video, CD-ROM, and image capture technologies.

**ET 650 Corporate Course Design (3)**

Consent of instructor. Reviews issues related to corporate course design. RFP preparation, human factors, incentive systems, pluralism and resource management are also featured.

**ET 680 Integration of Technology into Curricula (3)**

Prerequisite: ET 503 or consent of instructor. Deals with issues and methodologies for integrating technology into existing K-12 curricula. Specific approaches and problems with current models will be investigated and directions for research discussed.

**ET 684 Seminar in Educational Technology (3)**

Consent of instructor. For graduate students wishing to develop advanced competency in educational technology. Periodically, seminar may focus on topic reflecting instructor's interest area or on developing a student's inquiry.

**ET 692 Internship (3)**

Advisors recommendation and permission of program director. Individual field experience in educational technology. Field experience and summative report format must be approved by advisor. S/U graded. Repeatable, no limitations.

**ET 693 Practicum (1-3)**

Supervised professional activity requiring a minimum of 10 hours per week. Develop project, product or technological device unique to the field. An approved end of semester project report is required. S/U graded. Repeatable, no limitations.

**ET 695 Special Topics in Educational Technology (1-3)**

Consent of instructor. Scheduled on irregular basis. Explore special topics in Educational Technology. An appropriate subtitle will explain each course. Repeatable.

**ET 702 Instructional Design Theory and Research (3)**

Prerequisite: ET 602. Includes examinations of theories underlying instructional design methods. Review and critique of basic and applied research bases is featured.

**ET 735 Design of Complex Technology Systems (3)**

Exploration of the design, organization and administration of large and complex technology systems. Investigation of the essential elements necessary for the successful operation of large complex systems.

**ET 780 Diffusion of Technological Innovations (3)**

Investigation of the literature and research base in diffusion of innovations. Application of theoretical and research findings to the diffusion of technological innovations.

**ET 784 Doctoral Seminar in Educational Technology (3)**

Prerequisite: ET 500. Investigation of the development, theory, and research bases of the field of Educational Technology.

**ET 797 Doctoral Proposal Seminar (1-4)**

Design of research proposals and conducting pilot studies to examine feasibility of proposed hypothesis. Summarize existing research, identify problems, develop hypotheses and justify selection of design components. S/U graded. Repeatable, maximum of four credits.

**ET 799 Doctoral Dissertation (1-12)**

Required of all doctoral candidates. Student must earn 12 hours of credit for the dissertation as partial fulfillment of requirements for all doctoral degrees. Repeatable, no limitations.

**ET 999 Graduate School Continuous Registration (1)**

To permit a graduate student to continue making progress in a degree program. S/U graded. Repeatable, no limitations.

**FL — FOREIGN LANGUAGES****FL 341 Methods of Teaching in the Secondary School (3)**

Full admittance to PTEP or permission of instructor required. Prerequisite to student teaching. Emphasize teaching techniques, curriculum and classroom organization, testing and evaluation, procedures and materials, relationship of subject area to entire secondary program.

**FL 395 Special Topics (1-4 credits)**

Explore a special topic related to foreign language study. Conducted in English or in any language taught in the Department of Foreign Languages. Repeatable, under different subtitles.

**FL 400 Traditions in International Film (3)**

Research and discuss film in international and cross-cultural contexts, especially Western film in relation to ongoing European film traditions and theories. Conducted in English.

**FL 440 Methods of Teaching Foreign Languages in K-6 (3)**

Designed to prepare future foreign language teachers to teach at the kindergarten through sixth grade levels.

**FL 531 Teaching of Foreign Languages (1-4)**

Study problems in teaching at secondary and elementary school levels, content development for course of study, organization of learning materials, teaching procedures, testing and evaluating. Normally conducted in workshop format. Repeatable, under different subtitles.

## FND — FOOD, NUTRITION AND DIETETICS

### FND 210 Medical Terminology (2)

For students of any major. Terminology used in medical sciences. Development of medical vocabulary.

### FND 250 Principles of Nutrition (3)

For students of any major. Investigation of the principles of nutrition as applied to humans. (GenEd)

### FND 252 Nutrition in the Life Cycle (3)

Prerequisite: FND 250. Nutrition applied to the various stages of life, from conception to the later years. Socioeconomic, psychological, physiological factors affecting food intake.

### FND 342 Food Science (4)

(2 lecture, 2 laboratory) Prerequisites: CHEM 108, FND 250. Study of the chemical and physical properties of food and the effects of processing and preparation, preservation and storage.

### FND 357 Nutrition in Health and Illness (4)

Prerequisites: CHEM 108, BIO 350 or take concurrently. Basic nutrition concepts including individual nutrients and their association with disease states. Course is intended for nursing and other allied health professional students.

### FND 370 Nutrition Education and Application Strategies (3)

Prerequisites: FND 250 or FND 357. Nutrition education and application strategies to enhance dietary change.

### FND 410 Professional Development Seminar (2)

Dietetic majors only. Development of the dietetic profession. Examination of topics in nutrition and dietetics not covered in previous coursework. S/U graded.

### FND 420 Maternal and Child Nutrition (3)

Prerequisite: FND 250 or FND 357. Developmental stages, nutrient requirements, appropriate diet and eating behaviors for children from conception through school age. Nutrition related conditions of children and nutrition for the pregnant and lactating woman.

### FND 422 Directed Studies (1-3)

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

### FND 430 Nutrition Assessment and Intervention (3)

(2 lecture, 1 laboratory) Prerequisites: FND 252, BIO 245, CHEM 109. Laboratory required. Nutrition assessment and intervention during acute and chronic disease. Theory and practical application presented.

### FND 431 Medical Nutrition Intervention (3)

(2 lecture, 1 laboratory) Prerequisite: FND 430. Continuation of FND 430. Laboratory required. Nutrition assessment and intervention during acute and chronic disease. Theory and practical application presented.

### FND 446 Foodservice Systems Management (4)

(3 lecture, 1 laboratory) Prerequisites: FND 252, FND 342. Laboratory required. Systems approach applied to commercial and noncommercial food service facilities including: procurement, production, distribution, service and maintenance. Management of foodservice operations.

### FND 451 Advanced Nutrition (3)

Prerequisites: FND 250, CHEM 109, BIO 245. Metabolic, physiological and biochemical functions of nutrients and sub cellular components and their role in maintaining the integrity of the organism.

### FND 452 Community Nutrition (3)

Prerequisites: FND 250 and FND 252. Systematic analysis of community food and nutrition problems and programs. Role of public and private sectors in community health promotion.

### FND 455 Nutrition for Fitness and Athletic Performance (3)

Prerequisite: FND 250. The study of nutrition principles as they apply to the promotion of optimal physical fitness and athletic performance. Current research and evaluation of nutritional recommendations will be stressed.

### FND 508 Workshop (1-3)

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

### FND 512 Medical Nutrition Therapy Skills (2)

An overview with case practice of medical nutrition therapy for dietetic interns. Several topics are covered with an emphasis on clinical skills.

### FND 513 Professional Renewal (1-3)

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

### FND 520 Maternal and Child Nutrition (3)

Prerequisite: FND 250 or FND 357. Developmental stages, nutrient requirements, appropriate diet and eating behaviors for children from conception through school age. Nutrition related conditions of children and nutrition for the pregnant and lactating woman.

### FND 555 Nutrition for Fitness and Athletic Performance (3)

Prerequisite: FND 250. The study of nutrition principles as they apply to the promotion of optimal physical fitness and athletic performance. Current research and evaluation of nutritional recommendations will be stressed.

## FR — FRENCH

### FR 101 Elementary French I (4)

Corequisite: FR 151. For students with no previous French. Develop four language skills, especially speaking. Stresses practical communication, comprehension, pronunciation, fluency and cultural awareness. (GenEd)

### FR 102 Elementary French II (4)

Prerequisite: FR 101 or equivalent. Corequisite: FR 152. Continuation of FR 101 or equivalent. Develop four language skills, especially speaking. Stresses practical communication, comprehension, pronunciation, fluency and cultural awareness. (GenEd)

### FR 116 Contemporary France (3)

Become familiar with the culture and society of France with special emphasis on contemporary French issues. Conducted in English. (GenEd)

### FR 151 Elementary French Lab I (1)

Practice elementary French skills through workbook and lab activities commensurate with skill level in FR 101. Repeatable, may be taken two times.

### FR 152 Elementary French Lab II (1)

Practice elementary French skills through workbook and lab activities commensurate with skill level in FR 102. Repeatable, may be taken two times.

### FR 201 Intermediate French I (3)

Corequisite: FR 251. Review language structures and develop reading and writing skills. Gain vocabulary through conversational practice on topics of cultural interest. (GenEd)

### FR 202 Intermediate French II (3)

Prerequisite: FR 201 or equivalent. Corequisite: FR 252. Review language structures and develop reading and writing skills. Gain vocabulary through conversational practice on topics of cultural and literary interest. (GenEd)

### FR 251 Intermediate French Lab I (1)

Practice intermediate French skills through the use of workbook exercises and computer software commensurate with skill level in FR 201. Repeatable, may be taken two times.

### FR 252 Intermediate French Lab II (1)

Practice intermediate French skills through the use of workbook exercises and computer software commensurate with skill level in FR 202. Repeatable, may be taken two times.

### FR 301 France: Its People and Culture (3)

Prerequisite: FR 202 or equivalent. Develop fluency in writing and conversation and build vocabulary through discussion and compositions about everyday life in contemporary France.

**FR 302 Current Events in France (3)**

Prerequisite: FR 202 or equivalent. Acquire advanced reading, writing and conversation skills through discussions and compositions about current events in France.

**FR 311 French Civilization and Literature Survey I (3)**

Prerequisite: FR 202 or equivalent. Study of French civilization from prehistoric times up through the eighteenth century, including the historical, geographical, economic, political, artistic and literary development of France. Conducted in French.

**FR 312 French Civilization and Literature Survey II (3)**

Prerequisite: FR 202 or equivalent. Study of French civilization from the French Revolution to the present, including the historical, economic, political, social, artistic and literary development of France. Conducted in French.

**FR 407 French for Oral Proficiency (3)**

Intermediate oral proficiency in French required. Designed to develop oral proficiency by exposing students to advanced and superior linguistic functions and prepare them for the Oral Proficiency Interview (OPI).

**FR 411 France Then and Now (2)**

Prerequisite: FR 202 or equivalent. Study the importance of selected periods of French history. Examine the role and the art, literature and philosophy of these periods in the development of contemporary French civilization. Repeatable, under different subtitles.

**FR 412 French Politics and Society (2)**

Prerequisite: FR 202 or equivalent. Study the political and social systems of modern France. Learn of France's involvement in the European Community and the implications of this involvement for French politics and society.

**FR 413 The Francophone World (2)**

Prerequisite: FR 202 or equivalent. Study the differing cultures of countries and/or regions of the non-European francophone world, in particular Quebec, the French West Indies, and French-speaking Africa.

**FR 414 Language and Society (2)**

Prerequisite: FR 202 or equivalent. Study areas of the evolving French language relative to contemporary French society. Topics include commercial French, French in the popular press, familiar language and slang, and regionalism.

**FR 422 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**FR 450 Readings in French Literature (3)**

Prerequisite: FR 202 or equivalent. Study the masterpieces and literary movements of French literature. Learn to read and discuss complete works of literature in French. Acquire the skills to write research papers on course topics. Repeatable, under different subtitles.

**FR 475 Research Seminar: French Texts and Contexts (3)**

Prerequisite: FR 202 or equivalent. Study thematically related literary, historical, cultural and contemporary texts. Develop, express and critique textual interpretation and analysis in a research paper. In French and English. Repeatable, under different subtitles.

**GEOG — GEOGRAPHY****GEOG 100 World Geography (3)**

Introduction to the complex relationships that link humans with their physical, cultural and spatial environments. Students will investigate these diverse relationships through a variety of worldwide examples. (GenEd)

**GEOG 110 Geography of the United States and Canada (3)**

An analysis of the cultural and environmental patterns of North America, with emphasis on the geographic processes that shape them. (GenEd)

**GEOG 200 Human Geography (3)**

Study the role of location and locational questions in human behavior including how locational factors influence behavior and resulting social and cultural modifications. (GenEd)

**GEOG 232 Physical Geography (4)**

(3 lecture, 2 laboratory) Study the natural environments that cover the earth, the processes that shape them and their role as settings for human action. Field trip required.

**GEOG 274 Maps and Data Analysis (3)**

Examines the fundamental concepts necessary for map reading and interpretation. Includes an introduction to thematic data representation.

**GEOG 300 Advanced Human Geography: Topics (3)**

Prerequisite: GEOG 200. Examine the evidence and imprint of cultural values on geographic landscapes; utilize techniques of spatial diffusion, cultural ecology and integration and landscape analysis to identify and investigate culture regions. Repeatable, under different subtitles.

**GEOG 302 Cartography (3)**

Required laboratory arranged. Prerequisite: GEOG 274. Study the fundamentals, theory and practice of maps and graphic representation. Two one-hour lectures and one credit hour for arranged laboratory work.

**GEOG 312 Economic Geography (3)**

Prerequisite: GEOG 200. Discern how geographic and economic conditions affect the products, industries, commerce and resources of the world, particularly the United States.

**GEOG 315 Resource Management (3)**

Prerequisite: GEOG 232. Explore the theoretical nature of human-environment systems from a geographical viewpoint and examine locational factors that influence behavior and resulting geographic patterns.

**GEOG 318 Australia (2)**

Prerequisite: GEOG 100 or GEOG 110. The geographic arrangement and interaction of human communities, social groups and urban and rural population in Australian society. The relationship of Australia's physical environment to the human patterns.

**GEOG 320 Population Geography (3)**

Prerequisite: GEOG 200. Analysis of world population distribution and change utilizing geographic themes and demographic measures, with particular attention to migration, urbanization, environmental impact, and national planning.

**GEOG 325 Advanced Physical Geography: Topics (3)**

Prerequisite: GEOG 232 or equivalent. Study the complexities of the physical world and investigate the interactions between human activities and the physical environment. Repeatable, under different subtitles.

**GEOG 326 Africa (3)**

Prerequisite: GEOG 100 or GEOG 110. Identify and analyze relationships between the physical and cultural patterns, including land use, resource development, social, political and economic problems.

**GEOG 335 Geography of Middle America (3)**

Prerequisite: GEOG 100 or GEOG 110. Examines patterns of population, politics, economy and life-styles as they relate to the diverse physical and multicultural environments of Middle America. Analyze the strategic location of this region. (GenEd)

**GEOG 340 Europe (3)**

Prerequisite: GEOG 100 or GEOG 110. Study the relationships between the physical and cultural environments, including land use, resources, economics and political problems.

**GEOG 344 Asia: Special Topics (3)**

Prerequisite: GEOG 100 or GEOG 110. Study the regions of Asia through variable offerings. Examine patterns of physical and cultural landscapes, social organization and economic activities. Repeatable, under different subtitles.

**GEOG 350 Colorado (3)**

Prerequisite: GEOG 100 or GEOG 110. Study the geographical and human resources of Colorado, including physical features, climate, landform regions and natural resources and their utilization and conservation.

**GEOG 360 Political Geography (3)**

Prerequisite: GEOG 100. Examine political phenomena as they relate to a particular geographic setting. Topics of study include territorial expansion, global overpopulation, national resources, territorial sea and warfare.

**GEOG 365 Russia and Eurasia (3)**

Prerequisite: GEOG 100 or GEOG 110. A regional analysis of geographic conditions, their historical importance and their relation to economic, social and political problems in Russia and the other republics of the former Soviet Union. (GenEd)

**GEOG 370 Urban Geography (3)**

Prerequisite: GEOG 200. Analysis of the origins, distribution, growth, functions, transportation and land use patterns of cities, emphasizing the North American city.

**GEOG 375 Quantitative Techniques in Geography (3)**

Prerequisite: STAT 150 or consent of instructor. Examine elementary statistical techniques useful to the analysis of geographical data. Some background in mathematics useful.

**GEOG 407 Geographic Information Science (3)**

Examines the nature and accuracy of spatially referenced data, as well as methods of data capture, storage, retrieval, modeling and output using GIS software.

**GEOG 410 Teaching Geography in Secondary Curriculum (1)**

Prerequisite: SOSC 341 or equivalent. Full admittance to PTEP or current licensure required. Study fundamental themes in geography, use current materials and create new lessons and materials for teaching geography at the secondary level. S/U graded.

**GEOG 411 Geography Concepts and Issues (2)**

Prerequisites: GEOG 100 or GEOG 110; and at least one GEOG course at the 200 level or higher OR consent of instructor (need to interview student to determine expertise and academic background). Investigation and analysis of geography's major concepts and issues with examples of successful pedagogical approaches for teaching such standards-based geography concepts and skills.

**GEOG 412 Advanced Cartography (3)**

Prerequisite: GEOG 302 or consent of instructor. Study fundamental thematic map communication concepts emphasizing data collection and processing, symbolization, map design and computer-assisted drafting.

**GEOG 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**GEOG 432 Rural Development in the American West (3)**

Prerequisites: GEOG 200, GEOG 312 or consent of instructor. Analyze rural geography and economic development in the American West. Special emphasis on historical development of the Rocky Mountain region, and the geographic economic processes driving growth and development today.

**GEOG 440 Biogeography (3)**

Prerequisites: GEOG 232 or equivalent; and BIO 111 or equivalent. Identify meaningful patterns in the distributions of plants and animals and explain how/why those patterns developed. Includes an examination of the role humans have played in shaping those patterns.

**GEOG 453 Geography of the Great Plains (3)**

Prerequisite: GEOG 100 or GEOG 110. Survey the physical and cultural landscapes of the Great Plains, particularly the unifying character of the physical environment and aspects of culture that make this a distinct geographic region.

**GEOG 475 Advanced Geographic Techniques: Topics (1-3)**

Prerequisite: Consent of instructor. Advanced study of geographic techniques. Topics will relate to applications in GIS, remote sensing, quantitative analysis, land use analysis, or the mapping sciences. Repeatable, under different subtitles.

**GEOG 492 Internship (1-6)**

Advanced undergraduate majors and minors use geographic training while working in local, state or federal agencies. Participants must meet university internship requirements. Repeatable, no limitations.

**GEOG 495 Senior Seminar (3)**

Research selected geographic topics based on the student's major emphasis. Course focuses on the assessment of students' geographic knowledge base, research and analysis skills.

**GEOG 507 Geographic Information Science (3)**

Consent of instructor (interview to determine expertise and academic background). Examines the nature and accuracy of spatially referenced data, as well as methods of data capture, storage, retrieval, modeling and output using GIS software.

**GEOG 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**GEOG 509 Advanced Placement Institute in Human Geography (2)**

Graduates only. Intensive course for teachers planning to teach or currently teaching AP Human Geography. Topics include both content and pedagogy for establishment, development and maintenance of an AP program. S/U graded. Repeatable, no limitations.

**GEOG 510 Topics in Teaching Geography (2)**

Appraise and become familiar with various concepts, theories and skills in geography and with the techniques and methodologies appropriate for teaching them. Repeatable, maximum of six credits.

**GEOG 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**GEOG 520 Topics in Systematic Geography (2)**

Graduates only or consent of instructor. Examine a selected area of systematic geography; consider appropriate pedagogical approaches in teaching about that geographic topic. Repeatable, under different subtitles.

**GEOG 525 Topics in Regional Geography (2)**

Graduates only or consent of instructor. Examine a selected geographic region; consider appropriate pedagogical approaches in teaching the geography of the region. Repeatable, under different subtitles.

**GEOG 540 Biogeography (3)**

Identify meaningful patterns in the distributions of plants and animals and explain how/why those patterns developed. Includes an examination of the role humans have played in shaping those patterns.

**GEOG 560 Maps and Mapping in Geographic Education (2)**

Graduates only or consent of instructor. Study concepts of location on the earth's surface, map projections, data acquisition and processing, thematic mapping. Work with computer-assisted drafting and thematic mapping packages. Develop applications for teaching geography.

**GEOG 565 Computer Applications in Geographic Education (2)**

Graduates only or consent of instructor. Examine computer-based resources for managing and displaying geographic information; develop applications for teaching geography.

**GEOG 622 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**GEOL — GEOLOGY**

**GEOL 100 General Geology (4)**

(3 lecture, 2 laboratory) Survey for non-science majors. Origins and classification of minerals and rocks, landscape development and earth's structure and history. Field trips required. No credit for both GEOL 100 and GEOL 201. (GenEd)

**GEOL 110 Our Geological Environment (3)**

Investigation of the interaction between people and geologic environments. Focus on earth materials, geologic time, landscapes, mineral and energy resources, and geologic hazards (earthquakes, volcanoes, floods and landslides). (GenEd)

**GEOL 201 Physical Geology (4)**

(3 lecture, 3 laboratory) For Geology and other science majors. Introduction to earth materials, landform development, geologic structures and tectonics. Field trips required. No credit for both GEOL 100 and GEOL 201.



**GEOL 202 Historical Geology (4)**

(3 lecture, 3 laboratory) Prerequisite: GEOL 100 or GEOL 201 or equivalent. Geologic history of the earth and its past life and principles and techniques employed to interpret this history from rocks and fossils. Field trips to investigate local geologic history required.

**GEOL 320 Mineralogy (4)**

(2 lecture, 4 laboratory) Prerequisites: GEOL 201, CHEM 111. Introduction to crystallography, crystal chemistry, descriptive and determinative mineralogy, study of mineral occurrences and associations. Examine crystallography and identify minerals by physical and x-ray techniques in laboratory. Field trip(s) required.

**GEOL 330 Earth Materials (3)**

(2 lecture, 3 laboratory) Prerequisite: GEOL 100 or GEOL 201. Crystals, minerals and igneous, metamorphic and sedimentary rocks - their origins, descriptions and classifications.

**GEOL 340 Paleontology (4)**

(2 lecture; 6 laboratory) Prerequisite: GEOL 202. Fossil animals and plants - fossilization processes, collecting procedures, specimen preparation, description, classification, functional morphology, paleoecology, biostratigraphy, evolutionary trends. Field trip required.

**GEOL 390 Colorado Geology (3)**

Prerequisite: GEOL 100 or equivalent. Colorado rocks, minerals, fossils, landforms, oil, coal, oil shale, geologic history and geologic hazards explored in informal atmosphere. Includes four-day field trip to investigate geological features in natural settings.

**GEOL 410 Groundwater Geology (2)**

Prerequisite: GEOL 201. Groundwater in the geologic setting. Hydrology of groundwater basins. Well hydraulics. Principles of flow in saturated and unsaturated materials. Modeling of hydrogeologic systems. Applications to groundwater contamination and management problems.

**GEOL 421 Optical Mineralogy and Petrography (4)**

(2 lecture, 4 laboratory) Prerequisite: GEOL 320. Use of the petrographic microscope to study minerals in immersion media and in rock thin sections and the hand sample and microscopic description of rocks.

**GEOL 422 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**GEOL 450 Sedimentology and Stratigraphy (4)**

(3 lecture, 3 laboratory) Prerequisite: GEOL 202. Sedimentary processes; depositional environments; classification and structures of sedimentary rocks; field and laboratory methods of analyzing and interpreting outcrops and samples. Regional stratigraphy of northeastern Colorado investigated. Field trips required.

**GEOL 460 Geomorphology (3)**

(2 lecture, 3 laboratory) Prerequisite: GEOL 100 or GEOL 201. Origin and evolution of landforms emphasizing fluvial processes, hydraulic characteristics of streams, morphology of drainage basins, landscape evolution by stream sculpture and deposition and lithologic, climatic and structural controls.

**GEOL 464 Glacial and Quaternary Geology (3)**

Prerequisite: GEOL 100 or GEOL 201. A survey of geologic phenomena that characterized the Quaternary Period, with emphasis on the behavior of glaciers, glacial landforms and sediment and climatic implications. Two Saturday field trips required.

**GEOL 470 Structural Geology (4)**

(3 lecture, 3 laboratory) Prerequisites: GEOL 201, PHYS 220, MATH 125. Mechanics of rock deformation and geologic structures of the earth's crust - their description and classification, theories and facts regarding their origins and methods of investigating them. Field trips required.

**GEOL 481 Geologic Field Techniques (2)**

(4 laboratory) Prerequisites: GEOL 202, GEOL 470. Techniques of obtaining and recording geological data in the field and constructing geological maps. Includes use of Brunton compass, plane table and aerial photographs and the preparation of geological reports.

**GEOL 510 Groundwater Geology (2)**

Groundwater in the geologic setting. Hydrology of groundwater basins. Well hydraulics. Principles of flow in saturated and unsaturated materials. Modeling of hydrogeologic systems. Applications to groundwater contamination and management problems.

**GEOL 521 Optical Mineralogy and Petrography (4)**

(2 lecture, 4 laboratory) Prerequisite: GEOL 320. Use of the petrographic microscope to study minerals in immersion media and in rock thin sections and the hand sample and microscopic description of rocks.

**GEOL 540 Paleontology (4)**

(2 lecture; 6 laboratory) Prerequisite: GEOL 202. Fossil animals and plants - fossilization processes, collecting procedures, specimen preparation, description, classification, functional morphology, paleoecology, biostratigraphy, evolutionary trends. Field trip required.

**GEOL 550 Sedimentology and Stratigraphy (4)**

(3 lecture, 3 laboratory) Prerequisite: GEOL 202. Sedimentary processes; depositional environments; classification and structures of sedimentary rocks; field and laboratory methods of analyzing and interpreting outcrops and samples. Regional stratigraphy of northeastern Colorado investigated. Field trips required.

**GEOL 560 Geomorphology (3)**

(2 lecture, 3 laboratory) Prerequisite: GEOL 100 or GEOL 201. Origin and evolution of landforms emphasizing fluvial processes, hydraulic characteristics of streams, morphology of drainage basins, landscape evolution by stream sculpture and deposition and lithologic, climatic and structural controls.

**GEOL 564 Glacial and Quaternary Geology (3)**

Prerequisite: GEOL 100 or GEOL 201. A survey of geologic phenomena that characterized the Quaternary Period, with emphasis on the behavior of glaciers, glacial landforms and sediment and climatic implications. Two Saturday field trips required.

**GEOL 567 Volcanic Geology (3)**

(2 lecture, 3 laboratory) Prerequisite: GEOL 421 or GEOL 521 or consent of instructor. A study of volcanoes and volcanic processes and products. Emphasis on the origin, classification and interpretation of volcanic rocks and ejecta and volcanic structures and landforms.

**GEOL 570 Structural Geology (4)**

(3 lecture, 3 laboratory) Prerequisites: GEOL 201, PHYS 220, MATH 125. Mechanics of rock deformation and geologic structures of the earth's crust - their description and classification, theories and facts regarding their origins and methods of investigating them. Field trips required.

**GEOL 581 Geologic Field Techniques (2)**

(4 laboratory) Prerequisites: GEOL 202 and GEOL 470. Techniques of obtaining and recording geological data in the field and constructing geological maps. Includes use of Brunton compass, plane table and aerial photographs and the preparation of geological reports.

**GEOL 590 Rocky Mountain Geology Seminar (2)**

Consent of instructor. Geology of selected Rocky Mountain area thoroughly investigated by means of four-day field trip to that area followed by seminar presentations on topics relevant to geology of specified area.

**GEOL 622 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**GEP — GENERAL EDUCATION PILOT****GEP 101 Antiquity and the Classical Age (3)**

An introduction to the origins of our intellectual and artistic heritage through a study of texts and works of art from a wide variety of Western and non-Western cultures. Credit in General Education category 4 for Fine Arts or History or Literature or Philosophy. (GenEd)

**GER 102 Evolutions of Cultures (3)**

Prerequisite: GER 101 or consent of instructor. An examination of the evolution of major traditions around the world from the third century to the sixteenth century through a study of representative texts and works of art. Credit in General Education category 4 for Fine Arts, History, Literature or Philosophy. (GenEd)

**GER 110 Science: A Way of Knowing (3)**

A general overview of the nature of science as a way of knowing. Includes discussion of the way science is actually conducted - through investigation - and applied to solve societal problems.

**GER 120 Social Science Methods of Inquiry (3)**

A survey and critique of theoretical and methodological issues in the social sciences. Includes discussion of discipline-based representative theories and methods and their application to contemporary social issues.

**GER 302 Natural World Capstone: Global Systems (3)**

Prerequisite: Completion of all other courses required for the pilot or consent of instructor. An interdisciplinary seminar exploring science, global systems, and the way science can be used to develop solutions to global problems.

**GER — GERMAN****GER 101 Elementary German I (4)**

Corequisite: GER 151. For students with no previous German. Develop four language skills, especially speaking. Stresses practical communication, comprehension, pronunciation, fluency and cultural awareness. (GenEd)

**GER 102 Elementary German II (4)**

Prerequisite: GER 101 or equivalent. Corequisite: GER 152. Continuation of GER 101 or equivalent. Develop four language skills, especially speaking. Stresses practical communication, comprehension, pronunciation, fluency and cultural awareness. (GenEd)

**GER 116 Contemporary Germany (3)**

Become familiar with the culture and society of Germany with special emphasis on contemporary German issues. Conducted in English. (GenEd)

**GER 151 Elementary German Lab I (1)**

Practice elementary German skills through workbook and lab activities commensurate with skill level in GER 101. Repeatable, may be taken two times.

**GER 152 Elementary German Lab II (1)**

Practice elementary German skills through workbook and lab activities commensurate with skill level in GER 102. Repeatable, may be taken two times.

**GER 201 Intermediate German I (3)**

Corequisite: GER 251. Review language structures and develop reading and writing skills. Gain vocabulary through conversational practice on topics of cultural interest. (GenEd)

**GER 202 Intermediate German II (3)**

Prerequisite: GER 201 or equivalent. Corequisite: GER 252. Review language structures and develop reading and writing skills. Gain vocabulary through conversational practice on topics of cultural and literary interest. (GenEd)

**GER 251 Intermediate German Lab I (1)**

Practice intermediate German skills through the use of workbook exercises and computer software commensurate with skill level in GER 201. Repeatable, may be taken two times.

**GER 252 Intermediate German Lab II (1)**

Practice intermediate German skills through the use of workbook exercises and computer software commensurate with skill level in GER 202. Repeatable, may be taken two times.

**GER 301 Germany and the Germans I (3)**

Prerequisite: GER 202 or equivalent. Practice advanced language skills and acquire flexibility in written and spoken expression using a wide variety of authentic materials.

**GER 302 Germany and the Germans II (3)**

Prerequisite: GER 202 or equivalent. Continue to study complex elements of German syntax and structure. Use authentic materials to acquire idiomatic expressions and versatility in speaking and writing.

**GER 311 German Civilization and Literature Survey I (3)**

Prerequisite: GER 202 or equivalent. Study of German civilization from prehistoric times up to the 19th century, including the historical, geographical, economic, political, artistic and literary development of Germany. Conducted in German.

**GER 312 German Civilization and Literature Survey II (3)**

Prerequisite: GER 202 or equivalent. Study of German civilization from the Revolution of 1848 to the present, including the historical, economic, political, social, artistic and literary development of Germany. Conducted in German.

**GER 407 German for Oral Proficiency (3)**

Intermediate oral proficiency in German. Develop student's oral proficiency by exposure to advanced and superior linguistic functions; defined in the American Council on the Teaching of Foreign Languages (ACTFL) proficiency guidelines for the Oral Proficiency Interview (OPI).

**GER 411 Germany Then and Now (2)**

Prerequisite: GER 202 or equivalent. Examine one important period in German history and understand its *Zeitgeist* as an interaction among politics, economics, social aspects, philosophical developments and the arts. Repeatable, under different subtitles.

**GER 412 Politics and Society (2)**

Prerequisite: GER 202 or equivalent. Study the political and social systems of Germany; interpret current events from the complex interaction of German history, today's society and Germany's role in the world.

**GER 413 German Cultural Identity (2)**

Prerequisite: GER 202 or equivalent. Examine surface-culture phenomena of deep culture in both the U.S. and Germany. Explore the ramifications of immigration on German culture and the impact of German-American culture on the U.S.

**GER 414 Language, Society and the Profession (2)**

Prerequisite: GER 202 or equivalent. Learn about many aspects of German, especially language history dialects and sociolects. Study specific professional vocabulary and terminology of a field determined by the student's interest.

**GER 422 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**GER 450 Literature, Self and Society (3)**

Prerequisite: GER 202 or equivalent. Variable topics include analysis and discussion of literary topics, genres and periods from the Middle Ages to present, including how literature reflects personal and social issues. Repeatable, under different subtitles.

**GER 475 Research Seminar: German Texts and Contexts (3)**

Prerequisite: GER 202 or equivalent. Study thematically related literary, historical, cultural and contemporary texts. Develop, express and critique textual interpretation and analysis in a research paper. In German and English. Repeatable, under different subtitles.

**GER 622 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**GERO — GERONTOLOGY****GERO 205 Introduction to Gerontology (3)**

Survey of the field of gerontology with attention to the physical, psychological, social, economic and cross-cultural aspects of aging. (GenEd)

**GERO 422 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**GERO 455 Grant Development and Administration (3)**

Examine and apply methods for developing and writing grant proposals, including understanding appropriate ways to identify and seek funding sources. Identify key elements in writing and managing a fundable grant.

**GERO 460 Community Resources for the Elderly (4)**

Field experience required. Review service needs of older persons and existing community resources. Evaluate the full continuum of long-term care in relation to program models, service gaps and funding mechanisms.

**GERO 465 Management Concepts and Resource Development in Health and Human Services (3)**

Examines basic concepts of management and administration of health and human service organizations, including resource development. Emphasizes principles and practices currently used in public, private nonprofit and proprietary programs.

**GERO 490 Senior Seminar and Research in Gerontology (3)**

Traces history and current status of the field of Gerontology through the integration of previous coursework. Emphasizes research and research methodology. Explores career goals and internship opportunities.

**GERO 492 Undergraduate Internship in Gerontology (6-15)**

Completion of 21 hours of required gerontology courses. Only 12 credits may be counted towards degree program. S/U graded. Repeatable, maximum of 15 credits.

**GERO 495 Special Topics in Gerontology (1-4)**

Course designed to investigate specific aspect of Gerontology. Repeatable, maximum of six credits, under different subtitles.

**GERO 560 Community Resources for the Elderly (4)**

Field placement required. Review service needs of older persons and existing community resources. Evaluate the continuum of long-term care in relation to program models, service gaps and funding mechanisms.

**GERO 565 Management Concepts for Aging Services (3)**

Examines basic concepts of management and administration of human service organizations. Emphasizes principles and practices currently used in public, private nonprofit and proprietary aging programs.

**GERO 595 Special Topics in Gerontology (1-4)**

Course designed to investigate specific aspect of Gerontology. Repeatable, maximum of six credits, under different subtitles.

**GERO 622 Directed Study in Gerontology (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**GERO 625 Psychosocial Aspects of Aging (3)**

Applies developmental theories to explain concepts of aging. Emphasizes current research in the exploration of issues facing older adults.

**GERO 630 Intervention Strategies with the Elderly (3)**

Analyze major intervention strategies and techniques for utilization with older adults. Emphasizes individual, group and paraprofessional systems. Classroom practice of actual treatment techniques.

**GERO 635 Social Policies of Aging (3)**

Traces history and current status of major policies that benefit elderly. Reviews legislation, levels of policy-making and policy concerns of older population. Includes recent policy changes and policy directions.

**GERO 640 Health Aspects of Gerontology (3)**

Identifies major health problems, concerns and practices of the elderly. Examines health care policies, financing, health promotion and wellness concepts.

**GERO 650 Personnel Practices of Aging (3)**

Surveys basic personnel management practices: employee recruitment, selection, performance enhancement, performance review and promotion. Includes issues of volunteers, older workers and legal aspects of human resource management.

**GERO 655 Program Planning and Evaluation in Gerontology (3)**

Survey of basic concepts used in the development and implementation of aging programs. Emphasizes methods and skills needed for the assessment, development and evaluation of programs.

**GERO 660 Financial Management and Budgeting for Aging Programs (3)**

Overview of financial and budgeting functions within human services. Emphasizes public and private nonprofits. Directed to non-accountants. Develop basic skills in financial control and fund-raising.

**GERO 665 Grant Development and Administration (3)**

Overview of proposal planning and grant development process. Application of skills in identifying funding options, program planning, proposal writing, budgeting and establishing controls for grant administration.

**GERO 692 Graduate Internship in Gerontology (6-15)**

Only 12 credits may be counted towards degree program. S/U graded. Repeatable, maximum of 15 credits.

**GERO 694 Practicum in Gerontology (1-4)**

Make application to the department before registration. Repeatable, maximum of eight credits.

**GERO 699 Thesis (1-6)**

S/U graded. Repeatable, no limitations.

**HESA — HIGHER EDUCATION AND STUDENT AFFAIRS LEADERSHIP****HESA 173 Career Theories and Employment Trends (1)**

Designed to explore career theories and their application to the world of work. Students will investigate current occupational information and trends of the future.

**HESA 210 Human Values (2)**

Identify, clarify and critique personal values. Expand awareness of cross-cultural values, life-style choices, sources of values and the process of making value commitments.

**HESA 220 Death and Dying (2)**

Examines current American views of death and dying from perspectives of psychology, religion, medicine and sociology. Explores attitudes toward death, grief, mourning and reactions to imminent death.

**HESA 260 Paraprofessionals in Residence Life (2)**

Consent of Instructor. For resident assistants only. Offers practical preparation to those who assist students making the transition to the University setting and living in the residence hall environment.

**HESA 263 Peer Advising I (1)**

Study current theories of student development and practice the interpersonal communication skills needed by effective peer helpers; discuss and critique strategies for assisting students making the transition into postsecondary education.

**HESA 308 College Student Personnel Administration Workshop (1-5)**

Special short course for undergraduates on topics or issues in College Student Personnel Administration. Offered during summers and other semesters as need arises and resources are available. S/U graded. Repeatable, under different subtitles.

**HESA 355 Perspectives of Orientation in Student Affairs (1)**

Consent of instructor. Provides an overview of student development theory, basic helping skills, and current issues on college campuses from an orientation perspective.

**HESA 360 Paraprofessionals in Student Affairs (1-2)**

Consent of instructor. Comprehensive training and support for persons interested in working as paraprofessionals in student services. Includes basic skills and development of sensitivity in meeting the developmental needs of college students. Repeatable, no limitations.

**HESA 361 College Student Governance (2)**

Consent of instructor. Designed to assist in personal and leadership development, awareness of social and campus issues; to help translate course information into practical applications and better understanding of issues facing higher education.

**HESA 362 Cultural Relations/Study Abroad (2)**

Consent of instructor. This course has been developed to assist students who are studying abroad in the process of understanding cultural issues in their new environment. Repeatable, may be taken two times.

**HESA 363 Peer Advising II (1)**

Prerequisite: HESA 263. Study theories of cognitive development, psychological type, and learning strategies as they apply to the increasingly diverse needs of incoming college students; discuss and practice strategies for mentoring students.

**HESA 365 Tutorial Assistance in the College Classroom: Level I Supplemental Instruction (1)**

Beginning tutorial leaders will become acquainted with the history of Student Affairs, student development theory, principles of learning assistance, communication skills, and standards of professional behavior.

**HESA 367 The Experienced Resident Assistant (1)**

Consent of instructor. Juniors or above. For resident assistants only. Will examine both theoretical and practical issues of leadership on the University campus in general and in the residence halls specifically.

**HESA 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**HESA 431 McNair Scholars Research Studies I (2)**

Prerequisites: Admission to the McNair Scholars Program. Gives students an overview of the research process and skills for graduate school success, as well as a mentored opportunity to participate in the initial steps of research development.

**HESA 432 McNair Scholars Research Studies II (2)**

Prerequisites: HESA 431. Provides students an overview of research design and method, as well as a mentored opportunity to design a research study.

**HESA 463 Peer Advising III (1)**

Prerequisites: HESA 263, HESA 363. Research topics related to the creation of a cohesive campus community and a welcoming environment for students; take leadership role in activities to provide a smoother transition for new students.

**HESA 465 Tutorial Assistance in the College Classroom: Level 2 Supplemental Instruction (SI) Leader (1)**

Prerequisite: HESA 365. Increases tutorial leaders' competencies in applying learning assistance theory, facilitating structured study sessions, and attending to individual differences; particular emphasis is placed on the development of leadership and mentoring skills.

**HESA 467 The Experienced Student Leader (1)**

Consent of instructor. Juniors or above. For resident assistants only. This class will explore student development and other theoretical perspectives of working with college students and translating leadership experience into transferable skills for a career.

**HESA 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**HESA 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**HESA 583 Crisis Intervention (1)**

Prerequisite: PSY 344 or PPSY 612 or equivalent. A theoretical and practical approach to intervention in crises common to college students. Emphasis on individual, group and environmental interventions.

**HESA 622 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**HESA 650 College Student Development: Theory and Research (3)**

Examines theories of human development applicable to college student populations and practice of student affairs. Assessment techniques and instruments useful in measuring student development are examined.

**HESA 651 Philosophical, Historical and Cultural Foundations of Student Affairs in Higher Education (3)**

Philosophies of education and epistemology. History of U.S. higher education. Origin/history of student affairs. Emphasizes cultural perspective of ethnic minorities, women and other cultural subgroups in higher education.

**HESA 652 Enrollment Management Services (3)**

Examines and reviews the history, purposes, functions, organization and administration of Admissions, Financial Aid, Records and Registration, Advising and Orientation.

**HESA 653 Services for Environmental and Student Development (3)**

Covers history, purposes, functions, administrative and programming needs of such student services as counseling, health, career development and placement, student activities, residence life and services for diverse populations.

**HESA 655 Multiculturalism in Higher Education (3)**

Understand various cultures' impact on formation of values, attitudes and behaviors. Various factors are examined in relation to their influence on students' ability to benefit from higher education.

**HESA 656 Student Services in the Community College (2)**

Through understanding the educational mission and philosophy of the community college, students will develop skills to analyze the student service needs of community college students, design and evaluate delivery systems.

**HESA 658 Management and Administration in Student Affairs (3)**

Application of management tools to student affairs. Skill development focuses on budgeting models, resource management, planning, evaluation and intervention strategies.

**HESA 661 Practicum in College Teaching for Student Development (2)**

Consent of instructor. Actual classroom experience in teaching under supervision any course that has as a part of its objectives, developmental content. S/U graded.

**HESA 668 Higher Education in the United States (3)**

Prerequisites: ELPS 601, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Organization and leadership of higher education from department, campus wide, state and federal levels is examined by tracing historical antecedents and using contemporary research findings, models and theories.

**HESA 669 College and University Curriculum (3)**

Prerequisites: ELPS 601, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Develop an understanding of college and university curriculum by examining undergraduate and graduate program structures for liberal arts and professional programs, curriculum development processes, and current issues impacting curriculum.

**HESA 670 Internship in Student Affairs (6)**

Consent of instructor and on-site supervisor. Minimum of 18 hours per week in practical, field-based, skill-building, experiential training. Provides in-depth experience with student services delivered at the site. S/U graded. Repeatable, maximum of 18 credits.

**HESA 675 Field Experience in Student Affairs (2)**

Experiential training in a field experience setting provides an overview of student service related to understanding of College Student Personnel Administration. S/U graded. Repeatable, maximum of 12 credits.

**HESA 680 Law and Higher Education (3)**

Prerequisites: ELPS 601, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Relate statutory provisions, court decisions, common law principles and constitutional requirements to legal problems affecting public and private higher education institutions and systems.

**HESA 682 Legal Issues in Student Affairs (3)**

An examination of the legal implications for College Student Personnel Administration and the student-institutional relationship.

**HESA 683 Finance and Resource Management in Higher Education (3)**

Prerequisites: ELPS 601, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Analyze issues of financing public and private higher education; examine alternative financing sources and methods; develop skill in resource allocation and management.

**HESA 684 Group Leadership in Student Affairs (2)**

Majors only. Theories underlying group dynamics and their application to student affairs settings. Topics include group norms, pressure, standards and membership, leadership issues and ethics. Experience in leading a group is included.

**HESA 685 Human Resources in Higher Education (3)**

Prerequisites: ELPS 601, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. The course focuses on understanding Human Resource Management (HRM) as an energy source for shaping institutions. Emphasis is on the practical application of achieving change through personnel and compensation administration.

**HESA 750 College Students: Culture, Characteristics, Campus Life (3)**

Prerequisite: HESA 650. Investigates student affairs profession and impact on development of college students. Examines current college subcultures. Considers effect on students' progress and success, of campus norms and student characteristics.

**HESA 752 Current Issues in College Student Personnel Administration (2)**

Consent of instructor. Examines and analyzes current problems and issues in the college student personnel field. Seminar format.

**HESA 753 Evaluative Strategies for Student Affairs (2)**

Examine techniques of evaluating student personnel services in higher education. Evaluate reported research and identify areas of needed research.

**HESA 755 Advanced Research Seminar (1)**

Prerequisite: SRM 700 or take concurrently and 9 hours of statistics. Examine research needs of the profession. Develop a focused research question for the dissertation. Explore research planning and financial support. S/U graded. Repeatable, may be taken twice.

**HESA 758 Seminar in College Student Personnel Administration (1)**

Consent of instructor. Required doctoral seminar that covers topics of special importance to the profession. Must be taken three times, although credit is only required the first time. S/U graded. Repeatable, maximum of ten credits.

**HESA 771 Administrative Leadership in Student Affairs (3)**

Studies each student's leadership styles and examines available measurement instruments. Applies findings to conflict management, organizational communication systems, budget paradigms and authority/responsibility scenarios.

**HESA 797 Doctoral Proposal Research (1-4)**

Permission of major advisor. Required dissertation proposal experience for all doctoral students. Four hours of credit must be earned in this course in partial fulfillment of requirements for doctoral degrees before admission to candidacy. S/U graded. Repeatable, maximum of four credits.

**HESA 799 Doctoral Dissertation (1-12)**

Permission of major advisor. Required of all doctoral candidates under the direction of a graduate faculty committee. May be taken only after admission to candidacy. S/U graded. Repeatable, no limitations.

**HESA 999 Graduate School Continuous Registration (1)**

To permit a graduate student to continue making progress in a degree program. S/U graded. Repeatable, no limitations.

**HHS — HEALTH AND HUMAN SCIENCES****HHS 394 Practicum in Public Service (3)**

Prerequisite: Consent of instructor. Students will gain practical skills in leadership within a discipline-related environment. Supervisor evaluation and written report must be filed with the instructor. S/U graded.

**HHS 408 Workshop in Health and Human Sciences (1-6)**

Offers a variety of workshops on special health-related topics. S/U or letter graded. Repeatable, under different subtitles.

**HHS 415 Bio-Physical Changes in Aging (3)**

Prerequisite: BIO 101, BIO 245 or equivalent. Study systemic, physiological and psychomotor changes during normal human aging. Theorized and known effects of behavioral changes will be examined relative to their impact on the biological and physical aging processes.

**HHS 431 Informatics for Health Care Professionals (2)**

Participants gain basic skills in health care informatics and use of computer technology. Focuses on information technologies for health care professionals, electronic communication and knowledge resources online and related software.

**HHS 492 Internship in Public Service (1-9)**

Consent of instructor. Supervised experience in health or human services organizations will allow students to apply concepts of management and leadership necessary for responsible administration of organizations. S/U graded. Repeatable, maximum of nine credits.

**HHS 496 Entrepreneurship: Theory and Practice (3)**

An overview of entrepreneurship to help students determine their level of interest in pursuing an entrepreneurial endeavor while providing numerous tools the student can apply in today's ever-changing marketplace.

**HHS 508 Workshop in Health and Human Sciences (1-6)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**HHS 515 Bio-Physical Changes in Aging (3)**

Prerequisite: BIO 101, BIO 245 or equivalent. Study systemic, physiological and psychomotor changes during normal human aging. Theorized and known effects of behavioral changes will be examined relative to their impact on biological and physical aging processes.

**HHS 758 Seminar in Collaborative Research in Human Sciences (3)**

Doctoral students only. Supervised experience in conducting collaborative research in human sciences. Students gain experience in research methods, design, statistical analyses and submit their research paper to an academic journal of their choice. Repeatable, maximum of six credits.

**HISP — HISPANIC STUDIES***and***MAS — MEXICAN AMERICAN STUDIES****MAS 100 Introduction to Mexican American Studies (3)**

Introduces issues impacting the Mexican American populations. Provides an overview of issues in education, gender, demographics, health, immigration and border patterns, and the environment. (GenEd)

**HISP 102 Hispanic Cultures in the United States (3)**

A study of the development of cultural patterns among the three largest Hispanic communities in this country: Chicanos, Puerto Ricans and Cuban-Americans — their differences and commonalities. Taught in English. (GenEd)

**MAS 110 Contemporary Chicano Literature (3)**

Provides students with understanding of literature written by Chicano authors. Focus on major works of fiction, theater, poetry, autobiography. Socio-historical context plus cultural images, style, structure, technique, themes studied. (GenEd)

**HISP 111 Introduction to Hispanic Literature (3)**

An introduction to prominent contemporary writers. Includes theatre, novel, short story and poetry in translation. Works of Lorca, Matute, Unamuno, Borges, Rulfo, Garcia Marquez, Anaya. Taught in English. (GenEd)

**HISP 121 Spanish Civilization and Culture (3)**

Introduction to the general trends of Spanish civilization and culture. Historical, economical, political and artistic developments of Spain from prehistoric times to the present. Taught in English.

**HISP 131 Latin American Civilization and Culture (3)**

Introduction to the general trends of Latin American civilization and culture. Historical, economic, political and artistic development from the pre-Columbian period to the present. Taught in English. (GenEd)

**MAS 141 Mexican Civilization and Culture (3)**

A study of Mexican civilization and culture. Surveys historical, political and artistic developments from early times to present. Emphasis on life-style of the contemporary Mexican. Taught in English. (GenEd)

**MAS 225 Latina/Latino History (3)**

Prerequisite MAS 100. Will examine the historical and historiographical trend lines of the Latino experience. Among the issues to be explored: identity, heritage, language, gender roles. May be taken once as either MAS 225 or HIST 225.

**MAS 275 Education of Mexican American Students (3)**

Prerequisite: Completion of 30 undergraduate credits. The course will inform students who plan to teach about current research and knowledge concerning the schooling experience of Mexican American students.

**MAS 280 Topics in Chicana/Chicano Art and Culture (3)**

An in-depth study of issues and topics in Chicana/Chicano art and culture. May focus on specific periods, issues, forms, artists, and/or authors. Repeatable, two times, under different subtitles.

**MAS 301 Mexican American Politics and Leadership (3)**

Prerequisite MAS 100. Examines the political behavior of Mexican American populations in the U.S. from 1950 to present. Provides students with an understanding of linkages between political behavior, electoral processes and public policy.

**MAS 337 Chicana/o Literature and Theory (3)**

Prerequisite: MAS 100, MAS 110 or ENG 236. Can be taken either as MAS 337 or ENG 337. In-depth study of contemporary Chicana/o literature and theory. Course will be thematic and will focus on the disciplinary and cultural connections between the literary, the aesthetic, and the theoretical. Repeatable, two times, under different subtitles.

**MAS 346 Chicana/o Theory (3)**

Prerequisites: MAS 100 or ENG 250 or ENG 345. An in-depth study of issues and topics in Chicana/o theory and related fields. May focus on specific periods, specific issues, and/or specific authors. Repeatable, two times, under different subtitles.

**MAS 395 Topics in Gender Issues (3)**

Prerequisite: MAS 100. This course provides an in-depth examination of the impact of gender on all aspects of the lives of Mexican Americans. Repeatable, two times, under different subtitles.

**HISP 395 History and Philosophy of Bilingual Education (3)**

This course provides an in-depth examination of the impact of gender on all aspects of the lives of Mexican Americans. Repeatable, two times, under different subtitles.

**HISP 400 Methods and Assessment for Bilingual Education and ESL (3)**

Prepare teachers to work/meet linguistic needs of children in bilingual/ESL classrooms. Learn theory, implement corresponding instructional techniques, understand cultural/linguistic forces that affect children, know appropriate assessment instruments, techniques. Required for K-6 or 5-9 Bilingual endorsement.

**HISP 410 Assessment and Diagnostic Testing in Bilingual Classrooms (3)**

Designed to give bilingual and ESL teachers expertise in the area of assessment and diagnostic testing.

**MAS 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**MAS 450 Research Internship in Mexican American Studies (4)**

Seniors only. In this course students learn qualitative research methods to conduct field studies, at internship sites, on topics relevant to the Mexican American community.

**MAS 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**MAS 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**MAS 622 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**HIST — HISTORY****HIST 100 Survey of American History from Its Beginnings to 1877 (3)**

Survey of American history through Reconstruction to examine efforts to found New World communities, gain an American identity, secure independence and to define and secure the union under a federal government. (GenEd)

**HIST 101 Survey of American History from 1877 to the Present (3)**

Survey of American history from Reconstruction to the present to examine geographical expansion, the rise of industrial and military power, five American wars, reform cycles and the shaping of modern America. (GenEd)

**HIST 110 African Civilization (3)**

An introduction to the society, economy, culture and politics of traditional Africa from the Empire of Ghana to the European conquest in the nineteenth century. (GenEd)

**HIST 112 Asian Civilization I: From Prehistory to the 1600s (3)**

Introduction to the historical development of pre-modern cultures in East, South and Southeast Asia. (GenEd)

**HIST 113 Asian Civilization II: The Modern Transformation (3)**

Examination of the modern transformation of East, South and Southeast Asian societies. (GenEd)

**HIST 118 History of Mexico (3)**

Mexican history from pre-Columbian times to the present emphasizing 19th and 20th centuries. Covers socioeconomic, political and cultural change. (GenEd)

**HIST 120 Western Civilization from Ancient Greece to 1689 (3)**

A survey of Western Civilization from ancient Greece to the Glorious Revolution. (GenEd)

**HIST 121 Western Civilization from 1689 to the Present (3)**

A survey of Western Civilization from the Glorious Revolution to the present. (GenEd)

**HIST 217 Europe and Islam: Myth and Reality (3)**

With reference to literature, art, film and memoir, this course examines the changing ways in which European society (Christendom) has viewed its Middle Eastern counterpart (Islam) over the centuries and vice versa.

**HIST 224 History of Colorado (3)**

A survey of Colorado history from prehistoric times to the post-World War II era.

**HIST 225 Latina/Latino History (3)**

Seeks to examine the historical and historiographical trend lines of the Latino experience. Among the issues to be explored: identity, heritage, language, gender roles. May be taken once as either MAS 225 or HIST 225.

**HIST 230 Class and Culture in America (3)**

An introduction to the role of class distinctions and cultural pluralism in American life. Emphasis is on timeline of culture and class from 1492 to the present.

**HIST 240 Modern America, 1914-Present (3)**

A tracing of American history topically since World War I, emphasizing foreign policy, presidential politics, civil rights, the growth of the welfare state and the changing American character.

**HIST 250 United States Military History, 1775-Present (3)**

Survey of American military and naval history from the Revolution to the present, with an emphasis on the strategies, tactics and technologies employed.

**HIST 260 History of Science and Technology of the West (3)**

Origins and development of science and technology from antiquity to the 20th century with the emphasis on the intellectual, social and cultural implications.

**HIST 262 American Cultural History (3)**

Prerequisites: HIST 100 or HIST 101. An examination of the growth and development of American thought and culture by surveying major works of literature and examples of popular culture in their historical context.

**HIST 263 European Intellectual History (3)**

A consideration in depth of selected topics in European intellectual history from the Enlightenment to the present.

**HIST 265 Women in Europe to 1700 (3)**

This survey of the history of women from circa 1200 B.C. - 1700 A.D. examines western institutions and intellectual and religious traditions that controlled and shaped women's lives.

**HIST 266 Women in Europe 1700 to the Present (3)**

Women's roles in history, and the opportunities and obstacles offered to women by European social, cultural, and political institutions from the Enlightenment to the present.

**HIST 267 Age of Revolution Since the 17th Century (3)**

An examination of selected political and ideological revolutionary upheavals since the 17th century. Emphasis will be on comparative analysis and applicability of this analysis to 20th century revolution or liberation movements. (GenEd)

**HIST 283 Russian Civilization (3)**

Development of Russian culture and society from the beginning to the present, with emphasis on the late 19th and 20th centuries. (GenEd)

**HIST 286 History of Imperial Russia, 1700-1917 (3)**

A history of imperial Russia from the reign of Peter the Great to the coming of the Russian revolutions and the end of the Romanov Dynasty in 1917.

**HIST 290 American Immigration (3)**

An examination of immigration to the United States, emphasizing 19th and 20th centuries. Includes Irish, English, German, Italian, Scandinavian, Jewish, Asian and Latin American immigrants as well as nativist and immigration legislation. (GenEd)

**HIST 307 History of China to 1840 (3)**

A study of the development of Chinese civilization from antiquity to the Opium War, stressing social, political and cultural change.

**HIST 309 Modern Southeast Asia (3)**

An analysis of the historical experience of Vietnamese, Filipinos, Indonesians, Thais and others caught between China/India, religions of the West and East, colonialism/nationalism and traditional vs. modern life-styles.

**HIST 310 Modern China (3)**

An analysis of the Chinese experience from the impact of Western imperialism in the mid-19th century to the present. Emphasizes internal changes in China's political, social, economic and cultural institutions.

**HIST 311 Modern Japan (3)**

An historical analysis of the late Tokugawa period to the present. Emphasizes internal changes in political, social, economic and cultural institutions.

**HIST 313 India (3)**

A study of the layers in Indian history, including the Indus Civilization, Brahmanic and Buddhist culture, the Gupta classical age, Islam's impact, Mughal India, the British Raj, the nationalist period and independent India.

**HIST 314 History of Latin America to 1855 (3)**

A survey of Spanish America and Brazil from pre-Columbian civilizations to 1855. Covers conquest, church, Indian labor, administration, independence and beginning of nations.

**HIST 315 History of Latin America: 1855 to the Present (3)**

A thematic study of personalism, nationalism, militarism, foreign influences and socioeconomic classes with particular reference to Nicaragua, Cuba, Chile, Argentina and Brazil.

**HIST 316 Central America and the Caribbean (3)**

Explores major historical themes in the area in the 20th century: revolution, indigenous cultures, dictatorships, religion, reform efforts and U.S. influence. Emphasis on revolutions in Cuba and Nicaragua.

**HIST 317 Faces of Latin America: People and Issues (3)**

Explores 20th century topics and the forces which affect the daily lives of the people of the hemisphere: urban migration, occupations, children, race, gender, guerrilla movements, drug traffic, environmental changes and popular culture.

**HIST 318 Modern Africa (3)**

A study of the social, political, economic and cultural transformation of 20th century Africa.

**HIST 320 Colonial America, 1492-1763 (3)**

An examination of the European background of colonization, the founding of New World communities, the growth of an Anglo-American identity and the growing tension and conflict between England and her colonies.

**HIST 321 The New American Nation, 1763-1800 (3)**

A study of the background of the American Revolution, the Revolution itself, the Confederation, the framing of the Federal Constitution and the social, economic, political and religious patterns of the Early Republic.

**HIST 323 Sex, Marriage and Family in America to 1920 (3)**

Studies early-American contests over family life, marriage, child-rearing, and sex. We focus on native-, Anglo-, and African-American domestic arrangements. Thus we analyze any early-American "sexual revolution."

**HIST 327 The Early American West (3)**

Divides the American frontier into two parts: the Spanish and English language frontiers. Included is analysis of themes of environment, culture and perception of the frontier before 1846.

**HIST 328 The United States West Since 1846 (3)**

Analyzes the themes of modernization, cultural change, environment and perception that arose from the American presence in the West after the war with Mexico, including the 20th century.

**HIST 329 American Indian History (3)**

Covers the American Indian experience from prehistory to the present, emphasizing themes of environment, diversity and perception of native peoples by outside observers.

**HIST 330 Age of Jackson (3)**

An examination of post-1815 nationalism, the political and economic trends in the Jacksonian Era and the ramifications of the expansionist, religious, sectional and reform movements, which characterized the period.

**HIST 331 Civil War and Reconstruction (3)**

Major topics studied include political upheavals in the 1850s, the growth of southern nationalism, attempts at compromising constitutional differences, the Civil War and problems in reconstructing the Union.

**HIST 332 United States Diplomatic History to 1914 (3)**

A survey of American foreign policy from the War for Independence to World War I, emphasizing territorial expansion and the emergence of the United States as a great world power.

**HIST 333 United States Diplomatic History Since 1914 (3)**

A survey of American foreign policy from World War I to the present, emphasizing the problems of war and peace and the internationalist-isolationist conflict in the 20th century.

**HIST 337 History of American Education (3)**

The development of American education from colonial times to the present, focusing on the European roots of the educational system to its impact on America's character.

**HIST 338 Advanced Overview of American History (3)**

Advanced survey of American history from its beginning. Students will learn concepts of historical thinking and how to analyze the "processes and resources" of historical inquiry as these affect America.

**HIST 340 American Constitutional History to 1870 (3)**

An analysis of the origins of the constitution, differences over constitutional philosophy and the drafting, ratification and subsequent shaping of the federal constitution to 1870 by executive, legislative and judicial actions.

**HIST 341 American Constitutional History from 1870 (3)**

A thematic survey of the development of constitutional interpretation from the post-Civil War era to the present by examining major cases in their historical context.

**HIST 345 Baseball and American Society, 1840-1992 (3)**

Examines American society from the perspective of professional baseball and its development. It deals with the rise of professionalism as well as changes in racial attitudes, technology and business practices.

**HIST 347 United States Women's History to 1877 (3)**

A survey of women in the United States to 1877. Examines gender ideologies, population movements, patterns of work, reform activities, and early women's rights from Colonization through Reconstruction.

**HIST 348 United States Women's History Since 1877 (3)**

A survey of women in the United States since 1877. Examines gender ideologies, population movements, patterns of work, reform activities, and feminist politics from Reconstruction to the present.

**HIST 350 Industrial America (3)**

Focus on the industrial transformation of the United States during the late 19th century. The economic developments as well as the political, social and cultural ones will be examined.

**HIST 351 History of World War II (3)**

A survey of World War II from the rise of the totalitarian states to the dropping of the atomic bombs; emphasis on the military and social aspects of the war.

**HIST 354 The United States and the Vietnam Wars (3)**

Prerequisite: HIST 101. Through a variety of readings, the course will concentrate on the political, social and cultural importance of Vietnam for American history from 1945 to 1975 and beyond.

**HIST 361 History of Classical Greece and Rome (3)**

A survey of Greek and Roman civilization from the origins of Greece to the decline of Rome. Emphasis will be placed on their cultural and intellectual heritage.

**HIST 363 Medieval History (3)**

A survey of the Christian, Islamic, Greek and Jewish civilizations from the decline of Rome to the Renaissance (500-1500).

**HIST 367 History of the Renaissance and Reformation (3)**

A survey of the social, economic, religious and cultural developments in Western Europe from approximately 1300 to 1600.

**HIST 368 Tudor-Stuart England, 1485-1689 (3)**

An investigation of the history of England, Scotland, Wales and Ireland from 1485 to 1689, focusing on political, constitutional, social and cultural developments.

**HIST 369 Britain in the Modern Age, 1689 to the Present (3)**

An investigation of the emergence of modern Britain and Ireland through the growth of Parliament/Cabinet government, the development of a complex society and economy and the flowering of culture.

**HIST 374 Old Regime, 1648-1789 (3)**

An examination of Western European political, economic, intellectual and cultural developments, beginning with the Peace of Westphalia and ending with the outbreak of the French Revolution. Focus is France in its greatest century.

**HIST 375 France in Revolution, 1774-1848 (3)**

Causes and consequences of the French Revolution of 1789 and its impact on 19th century France and Europe. After Napoleon: analyze strains of politics, intellectual life and society leading to 1848 upheaval.

**HIST 376 France from 1848 (3)**

Study significant personalities and political and constitutional issues in French history from the Revolution of 1848 to the present, examining the Second Republic, Second Empire, Third, Fourth and Fifth Republics.

**HIST 382 Hitler's Germany 1890-1945 (3)**

The recent history of Germany focusing on the forces, events and individuals that gave rise to National Socialism and contributed to the decline of Europe into war and revolution.

**HIST 385 History of the Holocaust, 1933 to the Present (3)**

An examination of the intellectual and racial antecedents of the Holocaust, its bureaucracy, operating mechanics for murder and the steps taken toward the "final solution," the elimination of European Jewry.

**HIST 386 Twentieth Century Russia (3)**

A detailed consideration of the establishment of the Soviet Union, its dissolution, and the contemporary role of Russia in the world.

**HIST 387 Russian Intellectual-Cultural History, 1700-Present (3)**

A detailed discussion of Russian-Soviet intellectual and cultural history, 1700 to the present at the advanced level.

**HIST 389 Modern Europe (3)**

A consideration in depth of European historical development from 1815 to the present, focusing on political, diplomatic and economic matters. Repeatable, maximum of nine credits, under different subtitles.

**HIST 396 World History (3)**

One semester thematic course in world history for history secondary-education concentrations; open also to all history majors. May be counted as 300/400 level European or non-western history.

**HIST 397 History Colloquium (3)**

Introduction to major historical and interdisciplinary works; discussion of their historiographical significance.



**HIST 400 Teaching History in the Secondary Curriculum (1)**

Prerequisites: SOSC 341 (may be taken concurrently). Provisional or full admittance to PTEP required, or current licensure in social studies. Teaching history methods, emphasizing content based history standards at secondary school level. S/U graded.

**HIST 422 Directed Study (1-6)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**HIST 430 Topics in American History (3)**

In-depth examination of various aspects related to American social and cultural history since the American Revolution. Repeatable, maximum of six credits, under different subtitles.

**HIST 480 Senior Seminar (3)**

Students will examine a specific topic and write a critical essay incorporating research, historical methodology, analysis and expository skills. Repeatable, maximum of six credits, under different subtitles.

**HIST 492 Internship (1-3)**

Independent, individualized projects jointly directed by faculty supervisors and staff of cooperating office or institution. Repeatable, maximum of six credits.

**HIST 509 Modern Southeast Asia (3)**

Graduates only. An analysis of the historical experience of Vietnamese, Filipinos, Indonesians, Thais and others caught between China/India, religions of the West and East, colonialism/nationalism and traditional vs. modern life-styles.

**HIST 510 Modern China (3)**

Graduates only. An analysis of the Chinese experience from the impact of Western imperialism in the mid-19th century to the present. Emphasizes internal changes in China's political, social, economic and cultural institutions.

**HIST 511 Modern Japan (3)**

Graduates only. An historical analysis of the late Tokugawa period to the present. Emphasizes internal changes in political, social, economic and cultural institutions.

**HIST 512 Seminar in Asian History (3)**

Graduates only. Investigates selected topics in the history of China, Japan, India and Southeast Asia. Repeatable, maximum of six credits, under different subtitles.

**HIST 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**HIST 515 History of Latin America: 1855 to the Present (3)**

Graduates only. A thematic study of personalism, nationalism, militarism, foreign influences and socioeconomic classes with particular reference to Nicaragua, Cuba, Chile, Argentina and Brazil.

**HIST 516 Seminar in Latin American History (3)**

Graduates only. Investigates selected topics in Latin American history. May focus on colonial or post-independence period. Repeatable, may be taken two times, under different subtitles.

**HIST 518 Modern Africa (3)**

Graduates only. A study of central issues of modern African history, including social transformation, the emergence of the nation-state, economic underdevelopment and the problem of southern Africa.

**HIST 520 Colonial America 1492 to 1763 (3)**

Graduates only. Investigates topics in the history of colonial and revolutionary America through direct research and/or readings.

**HIST 522 Seminar in Southwest History (3)**

Graduates only. Focus of seminar will be on research and writing topics for the American Southwest from the Spanish period through the territorial period to the statehood period when full admission secured.

**HIST 529 American Indian History (3)**

Graduates only. Covers the American Indian experience from prehistory to the present, emphasizing themes of environment, diversity and perception of native peoples by outside observers.

**HIST 530 Topics in American History (3)**

Graduates only. Investigation of a topic in American history. Content depends on instructor. Repeatable, maximum of 15 credits, under different subtitles.

**HIST 534 Advanced Placement Program in World History (1-3)**

Graduates only. Intensive course in the study and interpretation of world history, designed for secondary school teachers teaching advanced placement courses in world history. Includes writing of model syllabi and extensive historical analysis. S/U graded. Repeatable, no limitations.

**HIST 535 Advanced Placement Program-US History (1-3)**

Graduates only. Intensive course in United States historiography and interpretation, designed for secondary school teachers teaching advanced placement courses in United States history. Includes writing of model syllabi and extensive historical analysis. S/U graded. Repeatable, no limitations.

**HIST 536 Advanced Placement Program in European History (1-3)**

Graduates only. Intensive course in European historiography and interpretation, designed for secondary school teachers teaching advanced placement courses in European history. Includes writing of model syllabi and extensive historical analysis and assessment. S/U graded. Repeatable, no limitations.

**HIST 537 Advanced Study in the History of American Education (3)**

Graduates only. Review of the development of American education from colonial times to the present, focusing on the European roots of the educational system to its impact on America's character.

**HIST 544 Seminar in European Intellectual History (3)**

Graduates only. A consideration of selected topics in European Intellectual History from the Enlightenment to the present in a seminar format.

**HIST 550 Industrial America (3)**

Graduates only. Focus on the industrial transformation of the United States during the late nineteenth century. The economic developments as well as the political, social and cultural ones will be examined.

**HIST 552 History of World War II (3)**

Graduates only. A survey of World War II from the rise of the totalitarian states to the dropping of the atomic bombs, with an emphasis on American military and naval operations.

**HIST 557 Seminar in Medieval and Renaissance History (3)**

Graduates only. A seminar for advanced undergraduate and graduate students that will investigate select topics in Medieval and Renaissance history through research and readings.

**HIST 589 Modern Europe (3)**

Graduates only. A consideration in depth of European historical development from 1815 to the present, focusing on political, diplomatic and economic matters. Repeatable, maximum of 15 credits, under different subtitles.

**HIST 600 Introduction to Graduate Historical Study (3)**

Examines the nature of history, historical research and the writing of history.

**HIST 622 Directed Studies (1-6)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**HIST 699 Thesis (1-6)**

Optional for Master of Arts programs on recommendation of the major advisor. S/U graded. Repeatable.

## HON — HONORS PROGRAM

### HON 100 Honors Connections Seminar I (2)

A variable content seminar for Honors students only, emphasizing the connections between areas of knowledge such as the Sciences, Arts, Philosophy, History, Literature and Sociology.

### HON 200 Honors Connections Seminar II (2)

A variable content seminar for Honors students only that will engage them in a concentrated analysis of their values in the context of their times.

### HON 351 Junior Honors Seminar (1-2)

Consent of instructor. A seminar or tutorial required of juniors in honors. Provides enrichment work in the student's discipline of choice and a start on the senior honors research thesis. Repeatable, maximum of two credits.

### HON 451 Senior Honors Research Thesis (1-4)

Consent of instructor. Different sections are offered by different departments. Required for senior participants in the Honors Program. Repeatable, maximum of four credits

## HRS — HUMAN REHABILITATIVE SERVICES

### HRS 290 Introduction to Human Rehabilitative Services (3)

Overview of human rehabilitative service delivery systems such as rehabilitation, social services, mental health and corrections. Orientation to current practices of the rehabilitative services professional. (GenEd)

### HRS 380 Rehabilitation Principles and Case Management (3)

Introduction to comprehensive rehabilitation history, philosophy, legislation and process. Details role and functions of case management and coordination with community, government, industry.

### HRS 385 Working with Families in Rehabilitation (3)

Prerequisite: HRS 290 or consent of instructor. Provides an analysis of relevant issues and critical problems concerning the effective utilization of family members in rehabilitation. Concerns of families in different cultures are addressed.

### HRS 394 Practicum in Human Services (1-4)

Supervised experience in service agency. Supervisor evaluation and written report describing agency experience must be filed with instructor. S/U graded. Repeatable, maximum of eight credits.

### HRS 397 Rehabilitation of the Substance Abuser (3)

Psychological, biological, sociological and cultural problems related to substance abuse, effects on family and adult children of alcoholics. Emphasis on treatment, multidimensional assessment program development and community resources.

### HRS 422 Directed Studies in Human Rehabilitation (1-4)

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

### HRS 470 Client Assessment (3)

Basic principles and practices utilized in vocational assessment. Emphasis on the unique interpretation necessary for handicapping conditions and special adaptations of assessment tools for persons with disabilities.

### HRS 480 Human Service Helping Skills (3)

Study and develop effective interpersonal communications and human relations skills for human service workers.

### HRS 485 Medical/Psychological Aspects of Disability for Human Service Workers (3)

Juniors or above. An introduction to the nature of specific disabling conditions as well as various disease entities common among human service clients.

### HRS 490 Career Planning and Placement (3)

Investigate career development process and sources of occupational information. Focus on developing skills in job development, job analysis and job placement through self-exploration.

### HRS 492 Clinical Internship (1-18)

Application to Department one semester before registration. Supervised experience in service agency. Time participation in an approved setting. Minimum of 600 clock hours over the 18 credit hours. S/U graded. Repeatable, maximum of 18 credits.

### HRS 495 Special Topics in Rehabilitation (1-4)

Course designed to investigate a specific aspect of rehabilitation. Repeatable, maximum of nine credits.

### HRS 580 Rehabilitation Principles and Case Management (3)

Introduction to comprehensive rehabilitation history, philosophy, legislation and process. Details role and functions of case management and coordination with community, government and industry.

### HRS 581 Vocational Evaluation and Assessment of People with Disabilities (3)

Basic principles in vocational evaluation and assessment of persons with disabilities. Skills development in use of various testing instruments, methods and effective interpretation of results.

### HRS 585 Occupational Information and Job Placement (3)

Presents theories of vocational choice and use of labor market information. Identifies job analysis, development and placement practices for successful transitions of handicapped client to gainful employment.

### HRS 595 Special Topics in Rehabilitation (1-4)

Course designed to investigate a specific aspect of rehabilitation. Repeatable, maximum of nine credits, under different subtitles.

### HRS 597 Counseling and Treatment of the Substance Abuser (3)

This course will provide advanced work in the area of substance abuse treatment and counseling. Instruction in treatment modalities, explore research topics and build counseling techniques appropriate for this population.

### HRS 601 Practicum in Rehabilitation (1-4)

Supervised professional activity in student's major field; approximately 37 clock hours of work per credit. Two copies of well written paper must be filed before credit is given. Repeatable, no limitations.

### HRS 604 Family, Cultural and Psychological Aspects of Disability (3)

Develop an understanding of and sensitivity to the psychological, social, interpersonal, family and cultural aspects of and adjustments to disability, including successful vocational outcomes.

### HRS 605 Medical Aspects of Disability (3)

Appraises medical implications in rehabilitation: nature, cause, treatment, limitation, progress, social and occupational aspects of injury, medical terminology and the role of medical specialist.

### HRS 610 Interpretation and Evaluation of Behavioral Research (3)

Understanding of applications of appropriate statistical techniques and necessary skills for interpretation and evaluation of research in human services. Emphasizes basic concepts, design and utilization of behavioral research.

### HRS 611 Vocational Evaluation Planning and Reporting (3)

Prerequisite: HRS 581. Consent of instructor. Principles and techniques of planning in the vocational evaluation process and integration of assessment data and behavioral observations in report writing.

### HRS 612 Seminar in Vocational Evaluation Systems (3)

Prerequisite: HRS 581. Examination of various vocational evaluation systems, their uses and limitations in assessing vocational potential of the handicapped.

### HRS 622 Directed Studies in Human Rehabilitation (1-4)

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

### HRS 630 Human Services Counseling Theories and Techniques (3)

Analyze counseling theories as they are applied to human services. Develop basic counseling skills.

**HRS 631 Group Processes in Rehabilitation (3)**

An integrated perspective of the stages of groups, basic concepts and goals of groups with rehabilitation clients.

**HRS 650 Human Resources System (3)**

Addresses leadership issues in human resource planning, management and development necessary for achieving responsible change. Examines various organizational components and their interrelationship and interdependence with other organization systems.

**HRS 659 Seminar in Rehabilitation Counseling Supervision (2)**

An investigation of the major approaches to counseling supervision intended to increase the student's understanding of clinical supervision as it relates to rehabilitation counselor training.

**HRS 660 Advanced Seminar in Client Assessment (3)**

Consent of instructor. Practices individual client assessment, particularly vocational implications of assessment techniques and the application of information in client treatment plans.

**HRS 692 Clinical Internship in Rehabilitation (1-18)**

Prerequisites: HRS 630, HRS 694. Field experience for qualified human service major at department approved location. Written application to department at least one semester before registration. S/U graded. Repeatable, maximum of 18 credits.

**HRS 693 Practicum in Vocational Evaluation (6)**

Prerequisite: HRS 581. Consent of instructor. Meets minimum of 12 hours per week. Qualified human services majors engage in vocational evaluation activities in department's clinic under the supervision of one or more university staff. S/U graded.

**HRS 694 Supervised Counseling in Human Services (6)**

Prerequisite: HRS 630. Meets minimum of 12 hours per week. Qualified human services majors engage in counseling interviews and activities under the supervision of one or more university staff members. S/U graded.

**HRS 695 Seminar in Foundations of Human Rehabilitation (3)**

This graduate seminar will focus on core issues confronting the field of rehabilitation. Issues will be examined from a historical, theoretical and research perspective.

**HRS 696 Advanced Rehabilitation Counseling Theories and Approaches (3)**

Prerequisite: HRS 630 or equivalent. Consent of instructor. Major counseling theories are comprehensively reviewed in terms of their utility with individuals who have disabilities and in order to enhance student preparation for rehabilitation counselor education and supervision.

**HRS 706 Advanced Seminar in Psychosocial Aspects of Disability (3)**

Theoretical and conceptual frameworks of adjustment of various disabling conditions are comprehensively investigated. A thorough review of the research literature regarding psychosocial aspects of disability will be undertaken.

**HRS 755 Supervised Practicum in College Teaching (3)**

Majors only. Experiences in observation and supervised practice in teaching at college or university level. Repeatable, maximum of nine credits.

**HRS 757 Advanced Seminar in Rehabilitation Administration (3)**

Majors only. Students will receive supervised experience in administration, program planning, evaluation and grant writing. Approximately 150 clock hours per semester are required for three credits. Repeatable, maximum of nine credits.

**HRS 759 Advanced Practicum in Rehabilitation Counseling Supervision (3)**

Majors only. Students receive supervised experience in studying problems in training rehabilitation counselors. Approximately 150 clock hours per semester required for three credits. Repeatable, maximum nine credits.

**HRS 797 Doctoral Proposal Research (1-4)**

Majors only. Required of doctoral students. Students must earn 4 hours of credit towards doctoral degrees before candidacy. S/U graded. Repeatable, maximum four credits.

**HRS 799 Doctoral Dissertation (1-12)**

Majors only. Required of doctoral candidates. Students must earn 12 hours of dissertation credit for doctoral requirements. S/U graded. Repeatable, no limitations.

**HUM — HUMANITIES****HUM 120 Introduction to Film (3)**

Learn to analyze film and appreciate film as art by looking at a variety of styles, genres, and ideological directions in Hollywood and non-Hollywood films. (GenEd)

**HUM 320 Topics in Film (3)**

Prerequisite: HUM 120. Study of a particular area of film criticism, history, or theory, considering classical and contemporary debates. Repeatable, maximum of nine credits, under different subtitles.

**HUM 331 Images of Women in Literature and the Arts (3)**

Investigation of stereotypes, dreams, roles and goals of women manifested in creative works by and about women. (GenEd)

**ID — INTERDISCIPLINARY STUDIES****ID 108 Freshman Workshop (1-3)**

Study topics relevant to the freshman's transition into the academic community. Emphasis on critical thinking, writing, and problem-solving skills. Repeatable, under different subtitles.

**ID 308 Workshop (1-3)**

Study problems in education, with area covered in any one workshop determined by title. Repeatable, under different subtitles.

**ID 420 Legal Research and Writing (3)**

Develop knowledge, skills and attitudes for legal research and writing. Emphasis is on practical skills which are helpful to think like an attorney about the law.

**ID 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**ID 513 Professional Renewal (1-4)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**JAPN — JAPANESE**

Note: Not all Japanese courses are offered on a regular basis. Consult the Department of Foreign Languages for current offerings.

**JAPN 101 Beginning Japanese (5)**

For students with no previous Japanese. Conversational Japanese using oral techniques with reading and writing skills. Stresses comprehension, structure, pronunciation, fluency and cultural awareness. (GenEd)

**JAPN 102 Elementary Japanese II (5)**

Prerequisite: JAPN 101. Continuation of JAPN 101. Conversational Japanese using oral techniques with reading and writing drills. Stresses comprehension, structure, pronunciation, fluency and cultural awareness. (GenEd)

**JAPN 116 Contemporary Japan (3)**

Become familiar with the culture and society of Japan with special emphasis on contemporary Japanese issues. Conducted in English. (GenEd)

**JAPN 201 Intermediate Japanese I (3)**

Prerequisite: JAPN 102 or equivalent. Review language structures and develop reading and writing skills. Gain vocabulary through conversational practice on topics of cultural interest. Conducted in Japanese. (GenEd)

**JAPN 202 Intermediate Japanese II (3)**  
Prerequisite: JAPN 201 or equivalent.  
Review language structures and develop reading and writing skills. Gain vocabulary through conversational practice on topics of cultural and literary interest. Conducted in Japanese.  
(GenEd)

**JAPN 422 Directed Studies (1-4)**  
Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

## JMC — JOURNALISM AND MASS COMMUNICATIONS

**JMC 100 Introduction to Journalism and Mass Communications (3)**  
The economic, social and legal forces shaping media content today; how our perception of mass media is a reflection of their history and current function.

**JMC 210 Newswriting (3)**  
Prerequisite: ENG 122 with a "C" or higher and either JMC 100 or consent of instructor. Functional typewriting skill (25 wpm). Sharpen skills and judgment in reporting and writing for broadcast and non-broadcast mass media.

**JMC 241 Radio Production and Broadcast Announcing (3)**  
Majors only. Learn to write and produce basic radio programming and to effectively announce over radio and television.

**JMC 312 Reporting Contemporary Issues (3)**  
Prerequisite: JMC 210 or instructor's permission. How to identify, research, analyze and report contemporary public issues of importance and interest. Emphasis on in-depth and investigative reporting.

**JMC 340 Broadcast Newswriting (3)**  
Prerequisite: JMC 210. Majors only. News for the ear and for the television camera eye; radio, television and cable newscasts.

**JMC 342 Television Production (4)**  
Consent of instructor. Majors only. Learn the terminology, procedures and skills of basic studio television production. Application of techniques to the production of programs.

**JMC 345 Broadcast Advertising and Promotion (3)**  
Majors and minors only. The skills and techniques necessary in the preparation and production of broadcast advertising and promotion developed through practical training in the writing of commercials and announcements.

**JMC 350 News Editing and Layout (3)**  
Prerequisite: JMC 210. Majors only. Copy editing, headline writing and the graphic concepts needed to produce attractive and readable designs for print media. Application of skills involved in the selection and judgment of news.

**JMC 380 Public Relations (3)**  
Majors and minors only. Consent of instructor needed for recreation majors. The concepts, procedures and theories behind public relations work. Examine current practices in business, government and other settings.

**JMC 385 Media Planning and Research (3)**  
Majors only. A managerial approach to the study of media research and media planning strategies. Methods and procedures used in the planning and evaluation of the media mix will be examined.

**JMC 387 Advertising Copywriting (3)**  
Prerequisite: JMC 210. Majors only. Advertising from the copywriter's standpoint; planning and writing creative strategies. Create copy for broadcast and print media and learn illustration and layout concepts.

**JMC 390 Impact of Mass Communications on Society (3)**  
The effects of media content and media industries on contemporary society; evaluation of current media criticism and the role of media in society.

**JMC 397 History of Mass Communication (3)**  
Survey of the cultural, technological and economic evolution of the mass media, with emphasis on issues and trends in mediated communications.

**JMC 404 Practicum (1-3)**  
By arrangement with advisor. Incorporate discipline specific skills in practical working situations on-campus. Repeatable, maximum three credits.

**JMC 408 Special Topics (3)**  
Current issues or problems in journalism and mass communications. Repeatable, under different subtitles.

**JMC 410 Advanced News and Feature Writing (3)**  
Prerequisite: JMC 210 and JMC 350. Majors and minors only. Covering news beats, C-SPAN events. Researching and writing features, editorials and columns for all media.

**JMC 422 Directed Study (1-3)**  
Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**JMC 443 Electronic Field Production (4)**  
Prerequisite: JMC 342. Consent of instructor. Majors only. Principles and techniques of videography, field reporting and video editing.

**JMC 444 Cable Television Production (3)**  
Prerequisites: JMC 342, JMC 443. Consent of instructor. Majors only. Practical application of visual communication skills in producing television news programming.

**JMC 460 Media Management (3)**  
Majors only. Procedures, issues and responsibilities that must be mastered by managers of newspapers and radio and television stations.

**JMC 481 Public Relations Techniques (3)**  
Prerequisites: JMC 210, JMC 380. Majors only. Effective tools and techniques used by the professional public relations practitioner.

**JMC 484 Advertising and Society (3)**  
Majors and minors only. A critical approach to the study of the effects, role and responsibilities of advertising in society. Historical, cultural, sociological and economic perspectives are used to examine philosophical and ethical issues.

**JMC 492 Mass Communications Internship (1-3)**  
Prerequisite: JMC 342 or JMC 350. Consent of advisor. Majors only. Off-campus work experience in a professional media enterprise specific to the student's major emphasis. Repeatable maximum three credits.

**JMC 495 Television Criticism (3)**  
Study television as an informative, persuasive, entertaining and culturally-indoctrinating medium.

**JMC 497 Mass Communications Law (3)**  
Seniors or above. Current and perennial ethical and legal issues in journalism and mass communications media that affect journalists, media management and the public.

**JMC 543 Electronic Field Production (4)**  
Majors only. The techniques of remote video production and video editing. Produce short programs or segments using these techniques.

**JMC 544 Cable Television Production (3)**  
Prerequisites: JMC 342, JMC 443. Majors only. The techniques necessary as part of a production unit for a regularly scheduled cable television program.

**JMC 580 Public Relations (3)**  
Majors only. Recreation majors can get consent of instructor. Concepts, procedures and theories behind public relations work. Examine current practices in business, government and other settings.

**JMC 581 Public Relations Techniques (3)**  
Prerequisites: JMC 210, JMC 380. Effective tools and techniques used by the professional public relations practitioner.

## LIB — UNIVERSITY LIBRARIES

**LIB 150 Introduction to Undergraduate Research (1)**  
Students will gain active learning experience in managing information in a dynamic research environment. Includes skills in identifying, retrieving, organizing, and evaluating information necessary for academic research and postgraduate careers.

**LIB 210 Internet Research and Resources (3)**

Examines the issues related to access, use, and evaluation of internet resources appropriate for academic and professional scholarship.

**LIB 250 Introduction to Information Literacy (3)**

Designed to allow students an in-depth opportunity to explore the implications of our information rich society and to learn to use critical thinking skills in evaluating this wealth of information.

**LIB 392 Internship (1-3)**

Provides opportunities for students to obtain practical experience with supervised, but self-directed, scholarly research. Repeatable, maximum of six credits.

**LIB 395 Special Topics in Information Science (1-3)**

Prerequisites: LIB 250 or consent of instructor. Opportunities to explore the knowledge base and theoretical framework (and its application) of information in specific fields of study. Repeatable, under different subtitles.

**MATH — MATHEMATICS****MATH 023 Intermediate Algebra (3)**

Elementary concepts of algebra including quadratic equations, the function concept and systems of linear equations. "This basic skills course does not count for university credit nor in the GPA."

**MATH 113 Professional Renewal (1-8)**

Concentrate on various topics in mathematics, depending on instructor conducting course. Repeatable, under different subtitles.

**MATH 120 Mathematics and Liberal Arts (3)**

Prerequisite: Minimum of one full year of high school algebra with a grade of "C" or better and score at a predetermined level on the placement exam. Non-majors only. Learn about several topics in mathematics through intuitive presentation to help those who want to know more about mathematics. Not open to mathematics majors and minors. (GenEd)

**MATH 124 College Algebra (4)**

Prerequisite: Full year of modern, second year high school algebra with the grade of "C" or better and score at a predetermined level on the placement exam. Treat quadratic, exponential and logarithmic functions. Topics from matrices and the theory of equations. (GenEd)

**MATH 125 Plane Trigonometry (3)**

Prerequisite: MATH 124 or score at a predetermined level on the placement exam. Study circular functions and their applications, inverse trigonometric functions and identities and cover complex numbers through DeMoivre's Theorem. (GenEd)

**MATH 127 Elementary Functions (4)**

Prerequisite: Full year of modern, second year high school algebra with the grade of "B" or better and score at a predetermined level on the placement exam. Develop those skills required in calculus, including polynomial functions, exponential and logarithmic functions, trigonometric functions, vectors, analytic geometry and polar coordinates. (GenEd)

**MATH 131 Calculus I (4)**

Prerequisite: MATH 124 and MATH 125, or MATH 127, or trigonometry and two years of high school algebra, with a grade of "C" or better. First course in a three course sequence in calculus. Differentiation and related concepts, applications of derivatives, including exponential, logarithmic and trigonometric functions. (GenEd)

**MATH 132 Calculus II (4)**

Prerequisite: MATH 131 with the grade of "C" or better. Second course in three course sequence in calculus. Integration and applications of integration, sequences and series. (GenEd)

**MATH 175 Topics in Finite Mathematics (3)**

Prerequisite: Two years of high school algebra with a grade of "C" or better and score at a predetermined level on the placement exam. Standard topics from finite mathematics: algebra, matrices, sets and probability. (GenEd)

**MATH 176 Topics in Calculus (3)**

Prerequisite: MATH 124 or MATH 175 or equivalent; or two years of high school algebra with a grade of "C" or better. Techniques and applications of differential and integral calculus with an emphasis on applications to economics and business.

**MATH 181 Fundamentals of Mathematics I (3)**

First a problem-solving-based 3-course sequence particularly pertinent to prospective arithmetic teachers. Conceptually understand mathematical structures, including numeration systems, natural numbers, integers, rational numbers, relations, functions, and equations. (GenEd)

**MATH 182 Fundamentals of Mathematics II (2)**

Prerequisite: MATH 181. Continuation of MATH 181. Includes probability, statistics, measurement and applications of mathematics in science. (GenEd)

**MATH 221 Elementary Linear Algebra (3)**

Prerequisite: MATH 131 with the grade of "C" or better. Vector spaces, linear transformations, matrices, determinants, eigenvalues and eigenvectors, applications.

**MATH 228 Discrete Mathematics (3)**

Prerequisite: MATH 131 with the grade of "C" or better. A survey course of non-calculus based mathematics used extensively in computer science and other disciplines. Study sets, types of proofs, logic, recursion and related topics.

**MATH 233 Calculus III (4)**

Prerequisite: MATH 132 with the grade of "C" or better. Third course in a three course sequence in calculus. Differentiation and integration of functions of several variables, vector functions, parametric equations, Green's Theorem.

**MATH 283 Informal Geometry (2)**

Prerequisites: MATH 132, MATH 181. Study informal Euclidean geometry suitable for the K-8 curriculum, employing laboratory techniques where applicable.

**MATH 305 Mathematics of Finance (3)**

Prerequisite: Ability to solve algebraic equations and use logarithms. Study simple and compound interest, bank discount, annuities, amortization and insurance. Scientific or business calculator required.

**MATH 321 Introduction to Abstract Algebra I (3)**

Prerequisites: MATH 221 and MATH 228 with the grade of "C" or better. An introduction to abstract algebra. Topics will include: basic number theory, group theory, geometrical connections and mappings.

**MATH 322 Introduction to Abstract Algebra II (3)**

Prerequisites: MATH 321 with a grade of "C" or better. A continuation of MATH 321. Topics will include: rings, integral domains, fields and Galois theory.

**MATH 335 Differential Equations I (3)**

Prerequisite: MATH 233 with the grade of "C" or better. Study the theory and solutions of ordinary differential equations including applications.

**MATH 336 Differential Equations II (3)**

Prerequisite: MATH 335 with the grade of "C" or better. Continuation of MATH 335. The existence and uniqueness theory, systems of equations, boundary value problems and an introduction to partial differential equations.

**MATH 341 Introduction to Modern Geometry I (3)**

Prerequisites: MATH 228 with the grade of "C" or better. Explores Euclidean and non-Euclidean geometry from multiple perspectives with an emphasis on the transformational perspective. Develops logical argument skills. Applications include tessellations, frieze patterns and shortest path problems.

**MATH 342 Introduction to Modern Geometry II (3)**

Prerequisites: MATH 221, MATH 228 and MATH 341 with a grade of "C" or better or consent of instructor. Builds on Euclidean geometry background by proving classical and modern Euclidean geometry theorems. Study the foundations of geometry through investigating non-Euclidean geometries such as spherical and hyperbolic geometries.

**MATH 350 Elementary Probability Theory (4)**

Prerequisite: MATH 132 with the grade of "C" or better. An introduction to probability. Topics include descriptive techniques, regression counting techniques, probability random variables, probability distributions, mathematical expectations, moment generating functions, transformations, point estimation, confidence intervals and hypothesis testing.

**MATH 351 Elementary Statistics Theory (3)**

Prerequisite: MATH 233, MATH 350 with a grade of "C" or better. A continuation of MATH 350. Learn about jointly distributed random variables, central limit theorem, sampling distributions, maximum likelihood estimation, properties of estimation, confidence intervals and tests of hypothesis.

**MATH 375 Elementary Numerical Analysis (3)**

Prerequisites: MATH 221 with the grade of "C" or better, MATH 233 and ability to program. Numerical solutions of equations and systems of equations; interpolation and approximation; numerical differentiation and integration; numerical solutions of differential equations.

**MATH 387 Mathematics in Our Technological World (4)**

The impact of technology upon classroom environment is linked to learning mathematics. An introduction to rigorous thought, contemplation of numbers and infinity, geometries, statistics, chance, and random events are addressed.

**MATH 391 Introduction to Number Theory (3)**

Prerequisites: MATH 228. Topics will include basic properties of the Natural Numbers, prime numbers, divisibility, factorization, congruences, Euler's phi function, introduction to Diophantine Equations and some group theory.

**MATH 395 Topics in Mathematics for Teachers (3)**

Prerequisites: MATH 182, MATH 228. Emphasis will be on problem solving skills, reasonableness of answers, using calculators and computers and on problem posing.

**MATH 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**MATH 431 Basic Analysis I (4)**

Prerequisite: MATH 233 with grade of "C" or better. Sequence of two courses to extend studies of calculus and analysis into the mathematical rigor and logic of analysis. Includes: real numbers, sequences, topology, limits, continuity, differentiation, series and integration.

**MATH 432 Basic Analysis II (4)**

Prerequisite: MATH 431 with grade of "C" or better. Continuation of MATH 431.

**MATH 437 Mathematical Modeling (3)**

Prerequisites: CG 120 with grade of "C" or better, MATH 221 and MATH 233. Use mathematical tools to develop models of practical problems. Emphasize development, verification and interpretation of models and communication of results.

**MATH 460 Introduction to Complex Analysis (3)**

Prerequisite: MATH 233 with a grade of "C" or better or equivalent. First course in complex variables, especially for potential calculus teachers. After preliminaries, proceed directly to power series, Laurent's series, contour integration, residue theory, polynomials and rational function.

**MATH 464 Introduction to History of Mathematics (3)**

Prerequisites: MATH 221, MATH 228, MATH 341. Junior or above in Mathematics. Survey of mathematical conceptual development and the people involved from antiquity to the present, including pedagogical applications, content connections, and use of reference resources.

**MATH 495 Topics in Mathematics (1-3)**

Consent of instructor. Surveys topics in areas such as geometry, analysis, algebra, statistics, numerical analysis, topology and number theory not in existing courses, which reflect specific interests of instructors and students. Repeatable, under different subtitles.

**MATH 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**MATH 510 Seminar in Mathematics (1)**

Study discussion and student presentation of topics in mathematics. S/U graded. Repeatable, under different subtitles.

**MATH 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**MATH 520 Functions and Equations (3)**

Graduates only. Polynomial equations including DeMoivre's Theorem, the Fundamental Theorem of Algebra, methods of root extraction (e.g. Newton, Graffe) multiplicities, symmetric functions, matrices and determinants. Elementary computer applications.

**MATH 523 Modern Algebra (3)**

A study of groups, rings and fields with a special emphasis on groups and fields.

**MATH 525 Linear Algebra I (3)**

Prerequisite: MATH 321. Vector spaces, linear transformations, matrices, eigenvalues, canonical forms, quadratic forms and other selected topics.

**MATH 528 Discrete Mathematics (3)**

Graduates only. Broad, deep, survey of topics in combinatorics, graph theory addressing existence, enumeration, optimization. Blend of mathematics, applications and development of mathematical reasoning skills, guided by the NCTM standards.

**MATH 529 Mathematical Problem Solving (3)**

Graduates only. Techniques in problem solving applied to algebra, number theory, geometry, probability, discrete mathematics, logic and calculus. A study of Polya's heuristic rules of mathematical discovery.

**MATH 534 Continuous Mathematics (3)**

Graduates only. Students will explore selected topics in mathematical analysis such as differential mappings and chaotic systems.

**MATH 537 Mathematical Modeling (3)**

Graduates only. Introduction to the process of mathematical modeling and its use in teaching secondary school mathematics. Emphasizes development and communication of models.

**MATH 540 Introduction to Topology (3)**

Point-set topology and the foundations of real analysis.

**MATH 543 Modern Geometry (3)**

A survey of both traditional Euclidean geometry and contemporary geometries, in which applications of geometry are integrated into the study of the mathematical structure of geometrical systems.

**MATH 545 Introductory Analysis (3)**

Prerequisite: MATH 540. Sequences, series, differentiation, Riemann-Stieltjes Integral, series of functions, special functions and functions of several variables.

**MATH 550 Applied Probability and Statistics (3)**

Graduates only. Concepts include history, counting techniques, distributions and inference (confidence intervals, point estimation, testing, ANOVA, regression, non-parametrics). The Context focus is secondary level mathematics.

**MATH 560 Introductory Complex Variables (3)**

Prerequisite: MATH 432 or equivalent. First course in complex variables, especially for potential calculus teachers. After preliminaries, proceed directly to power series, Laurent's series, contour integration, residue theory, polynomials and rational functions.

**MATH 564 Topics in History of Mathematics (3)**

Explore a period of time, an area of mathematics and/or a group of mathematicians. Consult instructor for emphasis. Repeatable, under different subtitles.

**MATH 591 Abstract Algebra and Number Theory (3)**

Basic methods of problem solving in abstract algebra and number theory with applications in secondary school mathematics.

**MATH 609 Abstract Algebra I (3)**

Prerequisite: MATH 523 or equivalent. Groups and rings and their structure. Sylow theorems. Modules. History and applications.

**MATH 622 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**MATH 623 Abstract Algebra II (3)**

Prerequisite: MATH 609. Polynomial Noetherian rings and ideals. Fields and Galois theory. Structure of fields. History and applications.

**MATH 632 Complex Variables (3)**

Prerequisite: A course in complex analysis. Analytic and meromorphic functions in the complex plane. Integration, conformal mapping and advanced topics.

**MATH 633 Geometric Analysis (3)**

Prerequisites: MATH 525; MATH 540 recommended. Analysis of functions of several variables, unifying and extending ideas from calculus and linear algebra. Includes the implicit function theorem and Stokes' Theorem.

**MATH 635 Real Analysis (3)**

Abstract spaces, Lebesgue measure, continuity, integration and differentiation theorems, Baire category.

**MATH 644 Differential Geometry (3)**

Prerequisite: A course in Analysis. A course in the differential geometry of curves and surfaces. Both modern and classical aspects will be covered.

**MATH 664 Difference Equations and Chaos (3)**

Applications of difference equations in problem solving and modeling, especially in the area of chaos.

**MATH 678 Mathematical Logic (3)**

The notion of proof, first order logic, set theory, ordinals, cardinals and an overview of the most important recent results in the field.

**MATH 691 Number Theory (3)**

Prerequisite: MATH 632. A survey of topics in arithmetic and analytic number theory, such as Euler's function, quadratic reciprocity, continued fractions and the distribution of prime numbers.

**MATH 695 Special Topics (3)**

Topics from various fields of mathematics, for example, algebraic topology, functional analysis, Lie groups and algebras or nonlinear analysis. Repeatable, may be taken two times, under different subtitles.

**MATH 700 Advanced Seminar (2)**

Consent of Instructor. An advanced seminar in an active area of mathematical research. Content depends upon instructor's choice. Repeatable, may be taken two times, under different subtitles.

**MATH 727 Representation Theory (3)**

Introduction to Representation Theory of various mathematical structures. Emphasis is on group representations.

**MATH 728 Topics in Discrete Mathematics (3)**

Prerequisite: MATH 678. A broad yet deep survey of current topics in combinatorics and graph theory essential for teachers K-16, including applications to probability, coding theory, sorting and matching algorithms and optimization.

**MATH 736 Real Analysis II (3)**

Prerequisite: MATH 635. Topics from real and functional analysis such as: measure theory, distributions, metric spaces and other topics of the instructor's choice.

**MATH 797 Doctoral Proposal Research (1-4)**

Required of all doctoral students. Four hours of credit for doctoral dissertation proposal research must be earned in partial fulfillment of requirements before admission to candidacy. Repeatable, maximum of four credits.

**MATH 799 Doctoral Dissertation (1-12)**

Required of all doctoral candidates. S/U grading. Repeatable, no limitations.

## MCS — MULTICULTURAL STUDIES

**MCS 101 Multiculturalism in the United States: Concepts and Issues (3)**

An introduction to concepts and issues of multicultural behavior and group dynamics in contemporary United States society. The course will focus on the experiences of ethnic minority groups and women. (GenEd)

## MED — MATHEMATICS EDUCATION

**MED 272 Mathematics Tutoring (1)**

Upon completion of 2 hours of instruction on how to tutor in mathematics, the student will complete 30 clock hours of tutoring. S/U graded. Repeatable, may be taken two times.

**MED 341 Tools and Technology of Secondary Mathematics (2)**

Prerequisite: PTEP, Phase II. Hands-on experiences with graphing calculators and computer software for teaching mathematics. Students will learn about and use appropriate tools for enhancing mathematics instruction in secondary schools.

**MED 381 Fundamental Mathematics Education Lab (2)**

Prerequisite: MATH 182 or equivalent. Students will experience fundamental mathematics content in the role of teacher assistant and peer leader. Students will discuss current issues and practical concerns about mathematics education.

**MED 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**MED 441 Methods of Teaching Mathematics (3)**

Corequisite: STEP 363. Full admittance to PTEP required. For prospective teachers seeking licensure in middle grade or secondary school mathematics. Focus on teaching lessons, curriculum overviews, and applying theories of learning and teaching mathematics. Early field experience desirable.

**MED 487 Technology, Manipulatives and NCTM Standards (3)**

Classroom use of mathematics software, calculators, pattern blocks, attribute blocks, geoboards, geometric solids, MIRA's and others presented to teach problem solving, skills and concepts. S/U graded.

**MED 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**MED 509 Advanced Placement Program AB and BC Calculus (1-3)**

Topics in calculus and pedagogical information related to establishing and maintaining a calculus advanced placement program. S/U graded. Repeatable, no limitations.

**MED 510 Advanced Placement Statistics (1-3)**

Topics in the content and pedagogy related to teaching and maintaining an Advanced Placement Statistics program. S/U graded. Repeatable, no limitations.

**MED 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**MED 528 Teaching of Discrete Mathematics (2)**

Graduates only. Methods of teaching discrete mathematics including using technology, projects, cooperative groups and the development of curriculum materials. Topics will include the teaching of existence problems, counting problems and optimization problems.

**MED 534 Teaching Algebra and Trigonometry (2)**

Graduates only. Current research on instruction in algebra/trigonometry; current curricular issues. Approach teaching of Algebra and Trigonometry from a conceptual and problem solving point of view.

**MED 543 Teaching Geometry (2)**

Graduates only. Students will develop teaching modules and models based on current theories of cognition and recommendations of professional societies.

**MED 550 Teaching Applied Probability and Statistics (2)**

Graduates only. Methods of teaching topics of probability and statistics including hands-on experience in collecting and analyzing data. Topics include descriptive techniques, random variables, curve fitting and use of technology.

**MED 587 Technology, Manipulatives and NCTM Standards (3)**

Classroom use of mathematics software, calculators, pattern blocks, attribute blocks, geoboards, geometric solids, MIRA's and others presented to teach problem solving, skills and concepts. S/U graded.

**MED 595 Teaching Advanced Topics in Secondary School Mathematics (2)**

Graduates only. Methods of teaching advanced mathematics topics in high school mathematics with emphasis on pedagogy, working cooperatively and developing curriculum materials for teaching such topics as vectors, fractals and transformations.

**MED 600 Introduction to Research in Mathematics Education (3)**

For graduate students only. Examination and critique of current research in mathematics education. A focus on research design, analysis and reporting of both qualitative and quantitative research.

**MED 610 Survey of Research in Mathematics Education (3)**

Graduates only. The goals of this course are to synthesize and re-conceptualize past research, suggest areas of research most useful to advancing the field and provide implications for classroom practice.

**MED 622 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**MED 630 Technology in Mathematics Education (2)**

Prerequisite: MED 600 or consent of instructor. Graduates only. Hands-on training in using new software tools for the instruction of mathematics. Current research and curriculum reform efforts concerning technology in teaching will be examined. Repeatable, may be taken two times.

**MED 654 Seminar in College Mathematics Teaching (1)**

Prerequisite: Graduates only. Improvement of undergraduate mathematics teaching via active student-based learning and implementation of a learning cycle of informed practice and information gathering, reflection and analysis, and planning and modified practice. S/U graded. Repeatable, no limitations.

**MED 673 Teaching and Learning Mathematics on the Elementary Level (3)**

Prerequisite: B.A. in mathematics or equivalent. To prepare elementary/middle school mathematics specialists. Includes mathematics review of number theory, geometry and other content, NCTM curriculum, professional and assessment standards, use of technology and manipulatives and research.

**MED 674 Teaching and Learning Mathematics on the Secondary Level (3)**

Prerequisite: MED 610. Graduates only. Address and evaluate specific problems in mathematics education. Allow students to examine curricular concerns, evaluation, teaching special populations and cognitive issues relating specifically to the secondary level.

**MED 675 Teaching and Learning Mathematics on the Post-Secondary Level (3)**

Prerequisite: MED 610 or consent of instructor. Graduates only. Address community college and undergraduate level mathematics education issues. Focus on current curriculum reform and research into learning and teaching on the post-secondary level.

**MED 678 Special Topics (2-3)**

No more than six hours may be applied to any one graduate degree. Prerequisites and topics announced in Schedule of Classes. Repeatable, may be taken three times, under different subtitles.

**MED 700 Cognitive Processes in Mathematics (3)**

Prerequisite: Consent of instructor. Analyze research concerning cognitive science in mathematics education. Conduct case study on cognition in mathematics.

**MED 701 Educational Mathematics Research (3)**

Learn advanced research concepts and methods that are unique in the study of educational mathematics. Includes data analysis and advanced statistical techniques.

**MED 702 Qualitative Research in Mathematics Education (3)**

Prerequisites: MED 700. A focus on paradigms, issues and methods of qualitative research in mathematics education. This includes critical analysis of literature and of data collected from mathematics learning environments.

**MED 703 Teaching and Learning K-12 Mathematics (3)**

Prerequisites: MED 610, MED 700, or consent of instructor. A focus on issues relevant to working with preservice and inservice K-12 mathematics teachers, and in promoting standards-based content, curriculum, pedagogy and assessment.

**MED 710 Seminar in Post-Secondary Mathematics Teaching (1)**

Curricular, pedagogical and ethical issues in college mathematics teaching. Students and faculty reflect on and discuss ways to improve and reform teaching. S/U graded.

**MED 750 History and Philosophy of Mathematics Education (3)**

Prerequisite: MED 700 or consent of instructor. An exploration of the underpinnings of current K-16 mathematics education by examining the historical development, perspectives and schools of thought that have influenced the teaching of mathematics.

**MET — METEOROLOGY****MET 110 Our Violent Atmosphere (3)**

Weather and climate analyzed in terms of their physical basis and historical, economic and human consequences. Emphasis placed on impacts of extreme weather hurricanes, severe thunderstorms, winter storms floods. (GenEd)

**MET 205 General Meteorology (4)**

(3 lecture, 2 laboratory) The basic course in meteorology. The atmosphere, its structure and composition. Radiation, temperature, pressure, wind, humidity, precipitation, clouds, air masses and fronts. Measurements. Weather maps. (GenEd)

**MET 260 Mesoscale Meteorology (3)**

Prerequisites: MET 205, MATH 131 or take concurrently. Study of atmospheric phenomena on medium time and space scales. Topics include mountain/valley winds, sea breeze circulations, gravity currents and waves, thunderstorms, hurricanes, and problems in mesoscale forecasting.

**MET 306 Dynamic Meteorology I (3)**

(2 lecture, 3 laboratory) Prerequisites: MET 205, MATH 132, PHYS 241. In-depth treatment of gas laws, atmosphere thermodynamics and stability, cloud dynamics and adiabatic charts.

**MET 315 Meteorological Instruments and Codes (2)**

(4 laboratory) Prerequisite: MET 205 or MET 306. Meteorological instruments and their operations; weather maps and data exchange; codes and plotting of charts.

**MET 360 Physical Meteorology (3)**

Prerequisites: MET 205, MATH 132, PHYS 241 or take concurrently. Physical structure of the atmosphere, radiation in atmosphere, radiation laws, cloud microphysics, precipitation processes.

**MET 376 Meteorological COOP Education (1-12)**

Prerequisites: MET 205, MET 306. Credit given for participation in cooperative work/study program with National Weather Service, NOAA and/or other agencies. Summary paper required for work and/or research activities. Repeatable, maximum of 24 credits.

**MET 407 Dynamic Meteorology II (4)**

(3 lecture, 2 laboratory) Prerequisite: MET 306. Atmospheric motion and laws governing it. Planetary and secondary circulations, jet streams, vorticity, cyclogenesis, air masses and fronts.



**MET 421 Climatology (3)**

Prerequisite: MET 205, STAT 150 or take concurrently. Factors of climate; analytical methods of climatology; climatic classification. Regional distribution of climates around the world. Applied climatology.

**MET 422 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**MET 441 Synoptic Meteorology (3)**

Prerequisite: MET 407/MET 507. Corequisite: MET 442/MET 542. Development and movement of air masses, fronts and associated weather systems. Synoptic weather charts and their uses.

**MET 442 Synoptic Meteorology Laboratory (3)**

Corequisite: MET 441/MET 541. Use of weather charts and data in forecasting of current weather and analysis of historical weather. Field trip to NOAA and National Weather Service Forecast Office.

**MET 465 Radar Meteorology (3)**

Prerequisites: MATH 132, MET 260, PHYS 241. Majors only. Principles of radar operation and radar remote sensing techniques. Types of radar and their applications in meteorology.

**MET 470 Satellite Meteorology (3)**

Prerequisites: MATH 132, MET 260, PHYS 241. Use of atmospheric data and cloud imagery from satellites for understanding the atmosphere and forecasting the weather.

**MET 495 Special Topics in Meteorology (1-4)**

Explore topics in meteorology beyond regular departmental offerings. Specific topics determined by student interest and instructor. Repeatable, under different subtitles.

**MET 521 Climatology (3)**

Prerequisite: MET 205, STAT 150 or take concurrently. Factors of climate; analytical methods of climatology; climatic classification. Regional distribution of climates around the world. Applied climatology.

**MET 536 Biometeorology (3)**

Prerequisite: MET 205. Relationships between living organisms and atmospheric environment. Effects of weather on human health, agriculture and animals. Soil and air temperature, radiation and energy budgets, water cycle, heat units, comfort indices.

**MET 541 Synoptic Meteorology (3)**

Prerequisite: MET 407/MET 507. Corequisite: MET 442/MET 542. Development and movement of air masses, fronts and associated weather systems. Synoptic weather charts and their uses.

**MET 542 Synoptic Meteorology Laboratory (2)**

(4 laboratory) Corequisite: MET 441/MET 541. Analysis and forecasting exercises and activities.

**MET 565 Radar Meteorology (3)**

Prerequisites: MATH 132, MET 260, PHYS 241. Majors only. Principles of radar operation and radar remote sensing techniques. Types of radar and their applications in meteorology.

**MET 595 Special Topics in Meteorology (1-4)**

Consent of instructor. Explore topics in Meteorology beyond existing departmental offerings. Specific topics determined by student interest and instructor. Repeatable, under different subtitles.

**MET 622 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**MIND — LIFE OF THE MIND PROGRAM****MIND 180 Great Ideas of the Western Tradition (3)**

An introduction to the intellectual tradition of the western world through reading and discussion of classic works. (GenEd)

**MIND 181 Great Traditions of Asia: India, China and Japan (3)**

Interdisciplinary study of the traditions of Asian countries, dealing with historical contexts and literary and artistic expressions. (GenEd)

**MIND 182 Confluence of Cultures (3)**

An exploration of African American, Asian American, Hispanic American and Native American cultures from historical, literary and artistic perspectives. (GenEd)

**MIND 286 Value Issues in Political Economy (3)**

A study of the political and economic viewpoints on key value issues in society, exploring the influence of seminal thinkers. (GenEd)

**MIND 288 Contemporary Arts Connections (3)**

Designed to involve students in synthesizing, analyzing and evaluating visual art, music, theatre, dance, and understanding its impact on, and relationship to, society. (GenEd)

**MIND 289 Coming of Age in the Twentieth Century (3)**

An investigation through primary readings into the questions: How has our century been a coming of age? Into what age have we come? (GenEd)

**MIND 290 Search for Meaning (3)**

Investigate the search for meaning by world thinkers and study the relevance of their search to our own. (GenEd)

**MIND 292 Ideas in Conflict (3)**

An examination of the conflicts between sets of ideas in modern times in both the West and the Third World. (GenEd)

**MIND 293 Play as a Route to Insight and Creation (3)**

Examine the ideas of artists, philosophers and scientists regarding the role of play in intellectual insight and artistic creation. (GenEd)

**MIND 294 Revolutions in Science (3)**

Any UNC Science laboratory course required or consent of instructor. Students engage in scientific inquiry while being introduced to principal scientific revolutions since the 16th century. (GenEd)

**MIND 295 Global Systems (3)**

Explores our global system using science and non-science disciplines. The global framework is used to study one current global issue that faces human societies. (GenEd)

**MIND 297 Creativity in the Arts (3)**

Experience, experiment with and analyze artistic creativity. The course combines readings, discussions and hands-on creative projects in the arts. (GenEd)

**MIND 299 Great Ideas in the History of the Arts (3)**

The study of great works of art in the fields of music, literature, theatre and the visual arts. Team-taught by Music, Theatre and Visual Arts.

**MS — MILITARY SCIENCE****MS 111 Introduction to Military Skills I (2)**

Basic military skills to include: rifle marksmanship, repelling, customs, traditions and organization and role of the United States Army. Physical fitness training.

**MS 121 Introduction to Military Skills II (2)**

Basic military skills to include: first aid, winter survival, compass and map reading and orienteering. Physical fitness training.

**MS 211 Contemporary Management Principles (2)**

Management Simulation Program. Development of management skills to include: delegation and control, interpersonal skills and behavioral evaluation techniques. Physical fitness training.

**MS 221 Dynamics of Military Leadership (2)**

Theories of conflict; small unit operations; troop leading procedures; observing and classifying behavior; physical fitness training.

**MS 287 Army ROTC Basic Camp (2-8)**

Prerequisite: Consent of instructor. Leadership development and management training applied to military operations in classroom and field environments. Five weeks paid ROTC Basic Camp at Fort Knox, Kentucky.

**MS 311 Leadership Assessment (3)**

Prerequisites: MS 111, MS 121, MS 211 and MS 221 or consent of instructor. Laboratory required. Leadership Development Program. Leadership style of each student assessed through simulations and role play. Physical fitness training.

**MS 321 Applied Leadership (3)**

Laboratory required. Consent of instructor. Techniques of command and staff functions. Development of operation orders and the conduct of tactical unit operations. Physical fitness training. Class includes 3-day field training exercises.

**MS 322 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**MS 387 Practicum in Leadership and Military Operations (8)**

(2 lecture, 6 laboratory) Prerequisite: MS 321 or consent of instructor. Theories and principles of leadership applied to actual field situations during 6-week paid ROTC advanced camp at Fort Lewis, Washington.

**MS 401 Staff Functions and Leadership Principles (2)**

Consent of instructor. Corequisite: HIST 250 during fall semester of MS IV year. Laboratory required. Application of military staff functions while serving in leadership roles in the Army ROTC program. Physical fitness training.

**MS 421 Role and Ethics of the Officer (3)**

Consent of instructor. Laboratory required. Role of the Army Officer. Ethics and professionalism, military justice, law of land warfare and preparation for active duty. Physical fitness training.

**MS 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**MT — MUSICAL THEATRE**

**MT 101 Musical Theatre Sight Singing and Ear Training (2)**

Musical Theatre Majors only. Basics of ear training and sight singing are covered utilizing a musical theatre repertoire. Repeatable, no limitations.

**MT 160 Class Piano for Musical Theatre (2)**

Musical Theatre Majors only. Develop basic piano skills in harmonization, sightreading, repertoire and technique. Repeatable, no limitations.

**MT 161 Introduction to Musical Theatre Performance (1)**

(2 lecture; 1 laboratory) Prerequisite: THEA 160. This class is designed to provide the beginning musical theatre student with the basic mechanical, analytical and physical skills needed to perform musical theatre.

**MT 250 Voice Class for Musical Theatre I (1)**

(2 contact hours per week). Required of all Musical Theatre majors in the dance and acting emphases. Beginning instruction in singing. Study will involve the elements of a basic technique for singing and an introduction to the anatomy and physiology of the voice.

**MT 251 Voice Class for Musical Theatre II (1)**

(2 contact hours per week). Prerequisite: MT 250. Required of all Musical Theatre majors in the dance and acting emphases. Continuation of concepts learned in MT 250 in greater depth and detail. Emphasis will be placed on developing musicianship, more independent learning and greater accuracy in singing.

**MT 260 Acting in Musical Theatre (3)**

Prerequisite: THEA 160. Musical Theatre or Voice Majors only. A step-by-step process approach to acting a song. Units will be covered connecting the actor with the event/discovery of purpose/obstacle/relationship/choices and action clarification.

**MT 261 Singing for Actors (2)**

Acting Emphasis only or consent of instructor. Basic singing technique for actors. Student will study both theory and practical application of vocal technique as it applies to musical theatre and musical theatre auditioning.

**MT 285 Performance in Musical Theatre (1-3)**

Consent of instructor. Practical experience in the production of a musical. Techniques of acting, singing, dancing, directing and other facets necessary for preparation of a show for public performance will be offered. Repeatable, no limitations.

**MT 330 History of Musical Theatre (3)**

American musical theatre and its development from the beginning of the 19th century to the present. Emphasis on research. (GenEd)

**MT 342 Workshop in Directing Musical Theatre (3)**

(2 lecture; 3 laboratory) Prerequisite: THEA 240. A study of specific techniques required for the director for production of various musical theatre styles and production problems.

**MT 343 Choreographing the Musical (2)**

(2 lecture; 2 laboratory) This course will increase awareness of period styles and staging musical theatre technique by choreographing musical theatre production numbers.

**MT 353 Musical Theatre Production (2)**

Admission by audition only. Production and presentation of musical theatre or tour format before live audiences. Repeatable, no limitations.

**MT 360 Scene Study in Musical Theatre (3)**

(2 lecture; 3 laboratory) Prerequisites: MT 260, THEA 160; two semesters of study in voice. Musical theatre literature explored through the study of period and style. The laboratory experience will include singing, dancing and acting. Laboratory section may be repeated.

**MT 369 Individual Performance in Musical Theatre Voice (2)**

Hours arranged. Required of all Musical Theatre majors. Advanced instruction in Musical Theatre vocal styles, involving technique for safe singing and basic anatomy and physiology of the voice. Repeatable, maximum of eight credits.

**MT 370 Musical Theatre Dance (2)**

Prerequisites: DNCE 166, DNCE 170, DNCE 175. Gain knowledge and skill in the techniques and styles of dance required in musical theatre. Repeatable, no limitations.

**MT 390 Advanced Musical Theatre Scene Study (2)**

(2 lecture; 3 laboratory) Prerequisites: THEA 160, MT 260, MT 360. This course will further the student's act/sing technique with a focus on advanced partnering.

**MT 465 Musical Theatre Workshop (3)**

(2 Lecture; 2 Laboratory) Consent of instructor. Study of the role preparation and styles, particularly developing the necessary skills to prepare audition materials. Repeatable, maximum of six credits.

**MT 470 Senior Project in Musical Theatre (3)**

Consent of instructor. Corequisite: MUS 407. Qualified seniors in musical theatre major only. Practical experience in the preparation and performance of a musical theatre role study.

**MT 485 Performance in Musical Theatre (1-3)**

Consent of instructor. Practical experience in the production of a musical. Techniques of acting, singing, dancing, directing and other facets in preparing a show for public performance. Repeatable, no limitations.

**MTEC — MEDICAL TECHNOLOGY**

**MTEC 410 Clinical Chemistry (3)**

Principles of instrumentation, quality control and clinical chemistry tests; meaning and use of electrolyte, blood gas, protein, liver function, renal function, lipid, carbohydrate, enzyme, endocrine, drug monitoring and other tests.

**MTEC 411 Chemistry Laboratory I (2)**  
Theoretical and technical aspects of automated, semi-automated and manual chemistry procedures, quality control requirements and test data flow in the clinical chemistry laboratory.

**MTEC 412 Chemistry Laboratory II (2)**  
Additional testing procedures with emphasis on gaining proficiency in performance of tests utilizing skills learned in MTEC 411.

**MTEC 413 Chemistry Laboratory III (1)**  
New testing procedures, methods development and more about applying quality control methods for verification of test procedures.

**MTEC 430 Immunology-Immunochemistry (2)**  
Basics of immunology and serology techniques utilized in the clinical laboratory, covering blood banking principles and methods and uses of blood transfusions and component therapy in medicine.

**MTEC 431 Immunochemistry Laboratory I (2)**  
Principles and procedures of blood banking, selection and drawing of blood donors and the processing, pretesting and cross-matching of recipient's blood for transfusion.

**MTEC 432 Immunochemistry Laboratory II (1)**  
Advanced principles of blood banking including auto-immune disorders, component usage and preparation, syphilis serology and case studies.

**MTEC 440 Medical Microbiology (3)**  
Identification of human pathogenic bacteria, fungi and parasites. The role of viruses, rickettsia, bacteria, fungi in disease, antibiotic therapy and susceptibility testing and quality control.

**MTEC 441 Microbiology Laboratory I (2)**  
Clinically significant bacteria, specimen collection, initial inoculation, organism isolation and identification, staining methods, biochemical and serological testing methods, susceptibility testing and quality control.

**MTEC 442 Microbiology Laboratory II (3)**  
Less frequently isolated and clinically significant bacteria, parasites and fungi causing disease in humans; review of MTEC 441.

**MTEC 460 Urinalysis and Clinical Microscopy (1)**  
Basic principles, interpretation and clinical significance of various tests performed on urine specimens and other body fluids.

**MTEC 490 Hematology-Coagulation (3)**  
Principles of hematology methods, blood dyscrasias and other hematologic abnormalities like anemias, leukemias, changes in hematologic tests associated with other diseases, the coagulation system and clinical coagulation testing applications.

**MTEC 491 Hematology Laboratory I (2)**  
Basic theory, techniques and skills required to perform routine analysis of patient specimens in hematology. Must be completed before MTEC 493.

**MTEC 492 Hematology Laboratory II (2)**  
Basic theory, techniques and skills required to perform routine analysis of patient specimens in urinalysis and coagulation. Must be completed before MTEC 493.

**MTEC 493 Hematology-Serology-Electrophoresis Laboratory III (1)**  
Prerequisites: MTEC 491, MTEC 492. Theory, techniques and skills required to perform serologic and immunologic assays, including electrophoresis, as well as diagnosis of blood dyscrasias in blood smears.

## MUS — MUSIC

**MUS 100 Recitals, Concerts and Productions (0)**  
Weekly departmental recitals. Convocations, plus a minimum of 12 major recitals, concerts and productions each semester in residence. S/U graded. Repeatable, no limitations.

**MUS 101 Sight-Singing and Theory I (4)**  
Sight-singing of diatonic melodies; dictation; intervals, scales triads, dominant seventh chords and non-harmonic tone; four-voice writing. Open to all students, but intended primarily for music majors/minors. Repeatable, no limitations.

**MUS 102 Sight-Singing and Theory II (4)**  
Prerequisite: MUS 101. Continuation of the ear-training and written materials of MUS 101. Harmonic progression, diatonic common chord modulation, non-harmonic tones, the Classic period, developmental techniques, and small homophonic forms.

**MUS 140 Introduction to Music (3)**  
A non-technical course on the enjoyment and appreciation of music for students with little or no background. Course will be devoted to listening and discussion of assigned listenings. (GenEd)

**MUS 141 Music Literature and Styles I (2)**  
An introduction to analysis and description of music, its elements and vocabulary. A survey of music literature in Medieval, Renaissance, Baroque and Classical styles.

**MUS 142 Music Literature and Styles II (2)**  
A continuation of MUS 141. A survey of music literature in Baroque, Classical, Romantic and 20th Century styles, including a brief survey of the diversity of American Music.

**MUS 150 History of Rock and Roll (3)**  
This course is an appreciation and social history of American popular musical culture from its beginning to the present. (GenEd)

**MUS 152 Writing and Scholarship in the Performing and Visual Arts (3)**  
Prerequisite: ENG 122 or equivalent. Majors only. A study of the basics of communication and scholarship in music, fine arts and theatre, with emphasis on problems of style, organization, logical thinking and sources. (GenEd)

**MUS 159 Class Piano for Non-Music Majors (1)**  
For non-music majors without a background in piano. Develop basic piano skills in harmonization, sightreading, repertoire and technique.

**MUS 160 Beginning Class Piano I (1)**  
For music majors only without background in piano. Corequisite: MUS 101 or equivalent knowledge of the material covered in that class. Sight reading, harmonization, and piano technique.

**MUS 161 Beginning Class Piano II (1)**  
Prerequisite: MUS 160 or consent of instructor. Majors only. For music majors continuing to develop reading skills, technique and style necessary for playing elementary piano music.

**MUS 201 Advanced Sight-Singing and Theory I (3)**  
Prerequisite: MUS 102. Diatonic seventh chords, borrowed chords, secondary dominants, augmented sixth chords, chromatic and in harmonic modulation, and forms of Classic and Romantic periods; chromatic sight-singing and dictation; early 20th century techniques.

**MUS 202 Advanced Sight-Singing and Theory II (3)**  
Prerequisite: MUS 201. Studies of 20th century techniques, with student compositions performed and evaluated in class.

**MUS 204 Music Fundamentals and Experiences (3)**  
For students with minimal musical background. Study of musical concepts and terminology through research, critical writing, music analysis, and performance. (GenEd)

**MUS 209 Introduction to MIDI and Music Software (2)**  
This project orientated course introduces the language of MIDI and the basics of music sequencing and notation software. These skills allow the production of computer playback files and engraved scores.

**MUS 210 Introduction to Music Education (1)**  
Prerequisite: MUS 102. Music majors only. For prospective teachers of music. Covers the history and present status of music in the schools, qualifications of music teachers and beginning instructional problems. Weekly observation and aiding required.

**MUS 221 Small Jazz Ensembles (1)**  
Open to any student by audition. Groups consist of rhythm section plus three or four horns. Repeatable, no limitations. Students should have an improvisation background before audition. MUS 223 is recommended.

**MUS 223 Jazz Theory and Improvisation (2)**

Prerequisite: MUS 102 or consent of instructor. Class will focus on chords, symbols and major, minor and dorian scales; will investigate chord progressions and substitutions; and will cover basic jazz piano and individual instrument techniques.

**MUS 224 Vocal Jazz Ensembles (1)**

Audition required. Each ensemble limited to 20 voices: 4 sopranos, 4 altos, 4 tenors, 4 baritones, 4 basses, plus rhythm section and horns. Sing standard jazz literature; sing scat and deal with contemporary jazz notation. Perform on and off campus. Open to any UNC student. Repeatable, no limitations.

**MUS 225 Jazz Ensemble (1)**

Audition required. For brass, woodwind and rhythm players. Concentrates on the idioms of jazz music. Get thorough preparation for teaching at both secondary and college levels. Repeatable, no limitations.

**MUS 230 String Ensemble (1)**

Small chamber groups that rehearse regularly and are coached by a faculty member. Repeatable, no limitations.

**MUS 231 Brass Ensemble (1)**

Small chamber groups that rehearse regularly and are coached by a faculty member. Repeatable, no limitations.

**MUS 232 Woodwind Ensemble (1)**

Small chamber groups that rehearse regularly and are coached by a faculty member. Repeatable, no limitations.

**MUS 233 Percussion Ensemble (1)**

Small chamber groups that rehearse regularly and are coached by a faculty member. Repeatable, no limitations.

**MUS 235 Classical Guitar Ensemble (1)**

Audition required. Perform in an ensemble in which melodic playing is stressed and deal with reading, notation problems and interpretation of all styles of music. Repeatable, no limitations.

**MUS 241 Perceiving the Arts (3)**

Develops and extends perception and understanding of music, theatre, visual arts, and dance. Varied art forms and media explored as integral parts of the processes of reading, attending arts events, and critical writing. (GenEd)

**MUS 243 History of Music I (3)**

The history of change in music from earliest times through the 16th Century to the end of the Baroque Period with emphasis on the changes in style. (GenEd)

**MUS 244 History of Music II (3)**

A study of historical changes that took place in music in the Classic and Romantic Periods and the 20th Century. (GenEd)

**MUS 246 Music in American History and Culture (3)**

The purpose of this course is to examine select areas of American music in a historical and cultural framework. Material to be discussed includes musical traditions of various ethnic groups. (GenEd)

**MUS 247 Music Cultures of the World (3)**

Increases students' understanding and appreciation of the music of other cultures through the study of folk music and the methods of ethnomusicology. (GenEd)

**MUS 260 Intermediate Class Piano I (1)**

Prerequisite: MUS 102, MUS 161 or consent of instructor. Functional piano for music majors with slight background in piano. Expand basic skills in sight-reading, harmonization and technique to early intermediate piano level.

**MUS 261 Intermediate Class Piano II (1)**

Prerequisite: MUS 260 or consent of instructor. Develop further reading skills, techniques and styles necessary to play simple accompaniments and intermediate piano music.

**MUS 265 Individual Performance in Collaborative Piano (2-4)**

Consent of instructor. In-depth study of repertoire and refinement of skills for the collaborative pianist. Repeatable, no limitations.

**MUS 266 Madrigal Singers (1)**

Membership in the Concert Choir required or by special permission. The UNC Madrigal Singers is a highly select group of 16 to 20 performers. The group performs a wide variety of choral chamber works in concerts throughout the year. Repeatable, no limitations.

**MUS 267 University Symphony Orchestra (1-3)**

Audition required. Comprised of the best string, wind, brass, and percussion players. Reads and performs standard orchestra repertoire. Performs on and off campus. Repeatable, no limitations.

**MUS 268 Chamber Orchestra (1)**

Audition required. Comprised of outstanding strings and selected winds. Performs chamber orchestra literature from Baroque to the present. Presents concerts on and off campus. Repeatable, no limitations.

**MUS 269 Individual Performance in Voice for Those with Non-Voice Emphasis (2-4)**

Consent of instructor. Instruction concentrates on fundamental principles of voice production. Development of rhythmic and melodic accuracy receives primary consideration. Repeatable, no limitations.

**MUS 270 Individual Performance in Voice (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 271 Individual Performance in Piano (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 273 Individual Performance in Strings (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 274 Individual Performance in Woodwinds (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 275 Individual Performance in Brass (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 276 Individual Performance in Percussion (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 277 Individual Instruction in Composition (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 278 Individual Performance in Harp (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 279 Individual Performance in Guitar (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 280 Mixed Concert Choir (1)**

Audition required. Open to all students. Performs literature ranging from the classics to contemporary works. Performs concerts on and off campus. Repeatable, no limitations.

**MUS 281 Women's Glee Club (1)**

Audition required. Open to all female students. Performs on campus and joins with the Concert Choir in large masterworks with orchestra. Repeatable, no limitations.

**MUS 282 University Singers (1)**

Audition required; membership in Concert Choir or consent of instructor. This select group of 25 singers performs an extremely varied repertoire, from Renaissance motets to contemporary works. Repeatable, no limitations.

**MUS 284 Men's Glee Club (1)**

Audition required. Open to all male students. Performs on campus and in the community. Sings a wide variety of literature. Repeatable, no limitations.

**MUS 285 Performance in Opera Theatre (1-3)**

Audition required. Practical experience in the production and performance of a complete operatic work. Techniques of acting, singing, character analysis and stage direction will be studied. Repeatable, no limitations.

**MUS 286 Scene Studies in Opera (1-3)**

Audition required. Studying techniques of acting, singing, character analysis and stage deportment through the staging and performing of selected opera scenes and arias. Repeatable, no limitations.

**MUS 287 Summer Symphonic Band (1-3)**

Audition required. Open to all students interested in performing the highest quality literature available. The Summer Season consists of five outdoor concerts. Repeatable, no limitations.

**MUS 288 Concert Band (1-3)**

Audition required. Comprised of music majors and students from other disciplines. Members perform a wide variety of interesting literature selected from standard and current repertoire. Repeatable, no limitations.

**MUS 289 University Brass Choir (1)**

Audition required. Select performing ensemble of 21 brass and percussion students. Concentrate on literature for brass instrumental media, development of musical sensitivity, phrasing, style and intonation. Major ensemble credit. Repeatable, no limitations.

**MUS 290 Symphonic Band (1-3)**

Audition required. Performs literature drawn from contemporary and traditional repertoire. Repeatable, no limitations.

**MUS 291 Wind Ensemble (1-3)**

Audition required. Comprised of the most outstanding wind and percussion majors in the School of Music. The ensemble performs a repertoire of works requiring from 8 to 35 performers. Repeatable, no limitations.

**MUS 292 Marching Band (1)**

Audition required. Open to all university students. To develop marching/playing skills by utilizing current practices in marching band formation design and special marching band musical arrangements. Repeatable, no limitations.

**MUS 301 18th Century Counterpoint (2)**

Prerequisite: MUS 202. A study of two- and three-voice counterpoint as found in the invention, canon, fugue and chorale prelude.

**MUS 302 Form and Analysis (2)**

Prerequisite: MUS 202. The study of homophonic forms, beginning with the motif and continuing with the analysis of the sonata, rondo and variation forms.

**MUS 303 Instrumentation (2)**

Prerequisite: MUS 202. A course planned to develop knowledge and skill in arranging and orchestrating for various combinations of instruments from a few instruments to a full symphony orchestra.

**MUS 307 History of Instruments and Instrumental Practice (3)**

A historical study of the development of musical instruments and the performance practices associated with them.

**MUS 308 Music Workshop (1-4)**

Receive information about current important ideas in many fields of knowledge from authorities nationally known in their fields of specialization. S/U graded. Repeatable, no limitations.

**MUS 309 Music for Video (2)**

Prerequisite: MUS 209. An introduction to skills needed for success in the music industry. Among the topics discussed will be creating "humanized" computer playback, and synchronizing computer playback to video and other sources.

**MUS 310 Teaching General Music in Elementary Schools (2)**

Prerequisite: MUS 210. Admission to PTEP required. A comprehensive study of the teaching of music to students in elementary school general music classes. Clinical experiences required.

**MUS 311 Teaching General Music in Secondary Schools (2)**

Prerequisite: MUS 310. Study the role and nature of required and elective general music, arts and humanities courses in junior and senior high schools.

**MUS 312 Teaching Instrumental Music in Elementary Schools (2)**

Prerequisite: MUS 210. Admission to PTEP required. Examine materials, methods and procedures for teaching instrumental music in elementary schools. In-class presentations and clinical experience required.

**MUS 313 Synthesis and Sampling (2)**

(2 hours lecture) Prerequisites: MUS 209. This project oriented course gives students a professional level familiarity with electronic musical instruments. The class will focus on the production and design of synthetic and sampled sounds.

**MUS 314 Guitar in the Classroom (1)**

Music majors only or consent of instructor. Learn to play guitar, including basic folk and classical techniques. Covers development of a guitar program in public school music curriculum.

**MUS 317 Teaching Instrumental Music in Secondary Schools (2)**

Required clinical experience arranged. Prerequisite: MUS 312. Full admittance to PTEP required. Develops understanding of skills necessary to maintain an outstanding secondary instrumental music program.

**MUS 318 Music in Early Childhood (2)**

Prerequisite: MUS 202 or MUS 206. Explore a broad range of teaching ideas that nurture musicality in children ages two to seven.

**MUS 319 Instrumental Techniques and Conducting (1)**

Prerequisite: MUS 202. Develop effective hand and baton technique; learn drill and various meter patterns, tempo, style, dynamics, musical terms; study and perform musical scores, using a laboratory band and orchestra.

**MUS 320 Wind Literature, Pedagogy and Conducting (2)**

Prerequisite: MUS 319. Designed to continue conducting instruction begun in MUS 319, with emphasis on wind literature and rehearsal techniques appropriate for elementary through high school bands.

**MUS 323 Choral Techniques and Conducting (2)**

Prerequisite: MUS 202. Develop basic conducting technique as a choral musician. Study and apply meter patterns, preparatory beats, cueing and releases. Discuss tone production, diction, blend, score preparation and rehearsal techniques.

**MUS 324 Choral Conducting and Pedagogy for Elementary and Secondary Schools (2)**

Prerequisite: MUS 323. Continuation of MUS 323, refining conducting techniques. Examines materials, methods and procedures relevant to teaching vocal music in elementary and secondary schools.

**MUS 325 Choral Methods and Literature for Elementary and Secondary Schools (1)**

Prerequisite: MUS 320 or MUS 323 or consent of instructor. Examine choral literature for use with elementary through high school choral organizations.

**MUS 328 Intermediate Jazz Improvisation (2)**

Prerequisite: MUS 223 or consent of instructor. Audition required. Further develops ability to create and perform complex jazz solos. Covers effective techniques and materials for teaching improvisation skills at secondary levels.

**MUS 330 String Techniques (1)**

The study of the problems of string playing through performance on string instruments and the study of available literature for teaching strings in preparation for establishing string classes upon graduation.

**MUS 331 String Pedagogy and Literature for the Instrumental Music Teacher (2)**

Prerequisites: MUS 319, MUS 330 or consent of instructor. Laboratory required. Full admittance to PTEP required. Additional studies in string performance and literature are presented for the instrumental B.M.E. major.

**MUS 334 Acting for Singers (2)**

Instruction in the special needs of the singer/actor: staging of arias, improvisation, freeing the voice through movement. Repeatable, may be taken two times.

**MUS 336 German Art Song (3)**

An introduction to the origins of the art song form with in-depth study of the German art song from its historical beginnings through the present day.

**MUS 338 French/Italian Art Song (2)**

Course in the performance of 19th and 20th Century French and Italian Art Song with particular emphasis upon style, technical requirements and diction.

**MUS 339 British/American Art Song (2)**

In-depth study of British and American art song. Emphasis will be on research and performance of 20th century materials.

**MUS 340 Survey of History and Literature of Jazz (3)**

An in-depth study of the history and literature of jazz from its beginnings to the present. Listening skills and critical writing skills are stressed. Open to all students. (GenEd)

**MUS 346 Jazz Arranging, Small Ensembles and Big Bands (2)**

Prerequisite: MUS 202 or consent of instructor. Learn the art of calligraphy, the basics for arranging for small jazz ensembles and work with big band scoring.

**MUS 347 Jazz Arranging, Vocal Jazz and Studio Orchestra (2)**

Prerequisite: MUS 346/MUS 546 or consent of instructor. Continuance of MUS 346 with focus on vocal jazz and studio orchestra composition. Performance of material at end of semester by studio orchestra and vocal jazz ensemble.

**MUS 348 Accompanying and Coaching I (2)**

Consent of instructor. Acquaint students with necessary skills for collaborative performance through the study of listening, rhythm, sightreading, technique and 4-hand repertoire. Class performances required. Repeatable, no limitations.

**MUS 349 Accompanying and Coaching II (2)**

Prerequisite: MUS 348/MUS 548 or consent of instructor. Acquaint students with skills needed for collaborative performance through score reduction and discussion, listening and performance of song and instrumental literature. Class performances required. Repeatable, no limitations.

**MUS 352 Principles of Piano Teaching I (2)**

Compare current piano methods. Study technical and musical problems with a beginning student. Offered every other year.

**MUS 353 Principles of Piano Teaching II (2)**

Prerequisite: MUS 352/MUS 552 or consent of instructor. A study of the methods of teaching musicianship and pianistic skills. Observe private and group lessons. Supervised teaching internship required. Offered every other year.

**MUS 356 Marching Band Techniques (1)**

Designed to develop the necessary skills and knowledge needed to organize, administer, plan and teach marching band shows. Clinical experience required.

**MUS 359 Woodwind Class (1)**

Required of all Music majors with vocal, piano and general emphasis. Cover the fundamentals of woodwind instruments and training literature for woodwinds.

**MUS 360 Voice Class (1)**

Beginning instruction in singing. Primarily for the student who is not a voice major. Study will involve the elements of a basic technique for singing and beginning solo repertoire.

**MUS 361 Clarinet and Saxophone Class (1)**

Develops a teaching knowledge of the clarinet and saxophone. Examines pedagogic and concert literature to understand tone production problems and acquire skill to demonstrate the instruments.

**MUS 362 Double Reed and Flute Class (1)**

Develop a teaching knowledge of the flute, oboe and bassoon. As a prospective teacher, learn pedagogic and concert literature and sufficient skills to demonstrate the instruments.

**MUS 364 Brass and Percussion Class (2)**

Prerequisite: MUS 102. Develop a teaching knowledge of the brass and percussion instruments. Acquire sufficient playing skill for purposes of demonstration.

**MUS 367 Materials and Techniques for Brass and Percussion (1)**

Required of all music majors with vocal, piano and general music emphasis (B.M.E.). Covers the teaching fundamentals of brass and percussion instruments.

**MUS 403 Acoustics of Music (2)**

Study of the physical properties of sound as compared with the psychoacoustical characteristics of perceived experience. Emphasis is placed on practical musical applications.

**MUS 404 Jazz Methods and Materials (1)**

Majors only. An overview of literature, methodologies, and teaching strategies for the junior high/high school music educator. Hands on experience with conducting and rehearsing literature appropriate to the age level.

**MUS 406 UNC String Project Pedagogy and Supervised Teaching Practicum (1-2)**

Consent of Director, UNC String Project. Specific, supervised string teaching assignments. Credit hours, not to exceed two per semester, dependent upon classroom/clinical experience hours assigned. Repeatable, no limitations.

**MUS 407 Individual Coaching in Musical Theatre Repertory (2)**

Consent of instructor. Qualified seniors in musical theatre major only. Corequisite: MT 470. Performance experience providing the advanced student with training in integration of music and theatre techniques. Culminates in the musical theatre major's final project.

**MUS 410 Vocal Pedagogy (2)**

An introduction to the science and teaching of singing. Study of the skeletal system, muscles involved in breathing and phonation, vocal acoustics, and learning theories, past and present.

**MUS 414 Contemporary Issues in Music Education (2)**

Prerequisite: MUS 206 or MUS 310. Full admittance to PTEP required. Includes issues such as assessment and the inclusion of students with handicapping conditions into the classroom.

**MUS 415 Keyboard Literature I (2)**

Sightreading at Level III or above required. The study of keyboard music from its earliest beginnings through the works of Frederic Chopin and Robert Schumann. Offered every other year.

**MUS 416 Keyboard Literature II (2)**

Sightreading at Level III or above required. Concentrate on keyboard works from Franz Liszt and Johannes Brahms through the Twentieth Century. Offered every other year.

**MUS 421 Small Jazz Ensembles (1)**

Open to any student by audition. Groups consist of a rhythm section plus 3 or 4 horns. Repeatable, no limitations.

**MUS 422 Directed Studies in Music (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**MUS 424 Vocal Jazz Ensembles (1)**

Audition required. Each ensemble limited to 20 voices: 4 sopranos, 4 altos, 4 tenors, 4 baritones, 4 basses, plus rhythm section and horns. Open to any UNC student. Repeatable, no limitations.

**MUS 425 Jazz Ensemble (1)**

Audition required. For brass, woodwind and rhythm players. Concentrate on jazz idiom music. Get thorough preparation for teaching at both secondary and college levels. Repeatable, no limitations.

**MUS 426 Orchestral Excerpts: Percussion (1)**

Consent of instructor. Emphasis is on professional level performance of standard orchestral literature. Repeatable, no limitations.

**MUS 427 Orchestral Excerpts: Strings (1)**

Consent of instructor. Emphasis is on professional level performance of standard orchestral literature. Separate classes in violin, viola, cello and bass, depending on need. Repeatable, no limitations.

**MUS 428 Orchestral Excerpts: Brass (1)**

Consent of instructor. Emphasis is on professional level performance of standard orchestral literature. Separate excerpts classes in trumpet, horn and low brass offered. Repeatable, no limitations.

**MUS 429 Orchestral Excerpts: Woodwind (1)**

Consent of instructor. Depending on need, separate excerpt classes in bassoon, clarinet, flute and oboe are offered. Repeatable, no limitations.

**MUS 430 String Ensemble (1)**

Small chamber groups that rehearse regularly and are coached by a faculty member. Repeatable, no limitations.

**MUS 431 Brass Ensemble (1)**

Small chamber groups that rehearse regularly and are coached by a faculty member. Repeatable, no limitations.

**MUS 432 Woodwind Ensemble (1)**

Small chamber groups that rehearse regularly and are coached by a faculty member. Repeatable, no limitations.

**MUS 433 Percussion Ensemble (1)**

Small chamber groups that rehearse regularly and are coached by a faculty member. Repeatable, no limitations.

**MUS 435 Classical Guitar Ensemble (1)**

Audition required. Perform in an ensemble in which melodic playing is stressed and deal with reading and notation problems and the interpretation of all styles of music. Repeatable, no limitations.

**MUS 444 English Diction (1)**

A course in the performance of English Song Literature with particular emphasis upon the problems of singing in one's own language.

**MUS 445 German Diction (1)**

A course in the performance of 19th and 20th century German art song, with particular emphasis upon style and diction.

**MUS 446 French Diction (1)**

A course in the performance of 19th and 20th century French art song, with particular emphasis upon style and diction.

**MUS 447 Italian Diction (1)**

A course in the performance of songs and airs written before the 19th century, with particular emphasis upon style and diction. Repeatable, no limitations.

**MUS 448 Collegium Musicum (1)**

Audition required. Examines little-performed music of all types. Gives experience in preparing and performing early music, music for unusual media, and experimental music of all types. Repeatable, no limitations.

**MUS 450 Seminar in Student Teaching for Music Educators (1)**

Full admittance to PTEP required. This seminar is designed to provide student teachers in music education with pertinent information and a support system that will aid them during their field experience.

**MUS 452 Orff Schulwerk and Kodaly Choral Method in American Schools (2)**

Prerequisite: MUS 206 or MUS 310. A comparative study of Orff and Kodaly approaches to teaching music including philosophy, instructional principles, activities and current materials.

**MUS 454 Pedagogical Approaches to Keyboard Literature (2)**

Evaluate various approaches to the study of keyboard literature through student participation in teaching and performing. Repeatable, no limitations.

**MUS 465 Individual Performance in Collaborative Piano (2-4)**

Prerequisites: MUS 348, MUS 349, MUS 265 or consent of instructor. In-depth study of repertoire and refinement of skills for the collaborative pianist. Repeatable, no limitations.

**MUS 466 Madrigal Singers (1)**

Membership in the Concert Choir required or by special permission. The UNC Madrigal Singers is a highly select group of 16 to 20 performers. The group performs a wide variety of choral chamber works in concerts throughout the year.

**MUS 467 University Symphony Orchestra (1-3)**

Audition required. Comprised of the best string, wind, brass, and percussion players. Reads and performs standard orchestra repertoire. Performs on and off campus. Repeatable, no limitations.

**MUS 468 Chamber Orchestra (1)**

Audition required. Comprised of outstanding strings and selected winds. Performs chamber orchestra literature from Baroque to the present. Presents concerts on and off campus. Repeatable, no limitations.

**MUS 469 Individual Performance in Voice for Those with Non-Voice Emphasis (2-4)**

Consent of instructor. Instruction concentrates on fundamental principles of voice production. Development of rhythmic and melodic accuracy receives primary consideration. Repeatable, no limitations.

**MUS 470 Individual Performance in Voice (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 471 Individual Performance in Piano (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 473 Individual Performance in Strings (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 474 Individual Performance in Woodwinds (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 475 Individual Performance in Brass (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 476 Individual Performance in Percussion (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 477 Individual Instruction in Composition (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 478 Individual Performance in Harp (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 479 Individual Performance in Guitar (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 480 Mixed Concert Choir (1)**

Audition required. Open to all students. Performs literature ranging from the classics to contemporary works. Performs concerts on and off campus. Repeatable, no limitations.

**MUS 481 Women's Glee Club (1)**

Audition required. Open to all female students. Performs on campus and joins with the Concert Choir in large masterworks with orchestra. Repeatable, no limitations.

**MUS 482 University Singers (1)**

Membership in Concert Choir required. Audition required. This select group of approximately 25 singers performs an extremely varied repertoire, from Renaissance motets to contemporary works. Repeatable, no limitations.

**MUS 484 Men's Glee Club (1)**

Audition required. Open to all male students. Performs on campus and in the community. Sings a wide variety of literature. Repeatable, no limitations.

**MUS 485 Performance in Opera Theatre (1-12)**

Audition required. Practical experience in the production and performance of a complete operatic work. Techniques of acting, singing, character analysis and stage direction will be studied. Repeatable, no limitations.

**MUS 486 Scene Studies in Opera (1-3)**

Audition required. Studying techniques of acting, singing, character analysis and stage department through the staging and performing of selected opera scenes and arias. Repeatable, no limitations.

**MUS 487 Summer Symphonic Band (1-3)**

Audition required. Open to all students interested in performing the highest quality literature available. The Summer Season consists of five outdoor concerts. Repeatable, no limitations.

**MUS 488 Concert Band (1-3)**

Audition required. Comprised of music majors and students from other disciplines. Members perform a wide variety of interesting literature selected from standard and current repertoire. Repeatable, no limitations.

**MUS 489 University Brass Choir (1)**

Audition required. Select performing ensemble of 21 brass and percussion students. Concentrate on literature for brass instrumental media, development of musical sensitivity, phrasing, style and intonation. Major ensemble credit. Repeatable, no limitations.

**MUS 490 Symphonic Band (1-3)**

Audition required. Performs literature drawn from contemporary and traditional repertoire. Repeatable, no limitations.

**MUS 491 Wind Ensemble (1-3)**

Audition required. Comprised of the most outstanding wind and percussion majors in the School of Music. The ensemble performs a repertoire of works requiring from 8 to 35 performers. Repeatable, no limitations.

**MUS 492 Marching Band (1)**

Audition required. Open to all university students. To develop marching/playing skills by utilizing current practices in marching band formation design and special marching band musical arrangements. Repeatable, no limitations.

**MUS 501 18th Century Counterpoint (2)**

Prerequisite: MUS 202. Study of two- and three-voice counterpoint as found in the invention, canon, fugue and chorale prelude.

**MUS 502 Harmony and Form I (3)**

Study 18th and early 19th century harmonic practice and tonality concepts.

**MUS 503 Harmony and Form II (3)**

Prerequisite: MUS 502 or consent of instructor. The study of late 19th and 20th century harmonic and formal concepts.

**MUS 505 Sixteenth Century Counterpoint (3)**

Study the style of 16th century polyphonic music, emphasizing actual period music as well as theoretical concepts. Compose two-, three- and four-voice motets.

**MUS 506 UNC String Project Pedagogy and Supervised Teaching Practicum (1-2)**

Consent of Director, UNC String Project. Specific, supervised string teaching assignments. Credit hours, not to exceed two per semester, dependent upon classroom/clinical experience hours assigned. Repeatable, no limitations.

**MUS 507 History of Instruments and Instrumental Practices (3)**

A historical study of the background and development of musical instruments, with emphasis on the related performance practices.

**MUS 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**MUS 509 Electronic Music (3)**

Describe materials used in electronic music and the techniques and equipment employed to transform and organize these into compositions. Students learn to use the synthesizer.

**MUS 510 Vocal Pedagogy (2)**

An introduction to the science and teaching of singing. Study of the skeletal system, muscles involved in breathing and phonation, vocal acoustics, and learning theories, past and present.

**MUS 511 History and Literature of the Wind Band (2)**

A survey of the origins, development and historical significance of the wind band, including an overview of its literature, instrumentation and growth in Europe and in the United States.

**MUS 512 Symphonic Repertoire (2)**

Historical overview of the symphony orchestra and its literature. Addresses questions of style, performance, practice and programming. Includes a unit of study on music for younger orchestras.

**MUS 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**MUS 515 Keyboard Literature I (2)**

Sightreading at Level III or above required. The study of keyboard music from its earliest beginnings through the works of Frederic Chopin and Robert Schumann. Offered every other year.

**MUS 516 Keyboard Literature II (2)**

Sightreading at Level III or above required. Concentrate on keyboard works from Franz Liszt and Johannes Brahms through the twentieth century. Offered every other year.

**MUS 519 Foundations of Music Education (3)**

Study historical, philosophical and psychological issues and principles that provide the context for contemporary music education.

**MUS 521 Saxophone Pedagogy (2)**

Consent of instructor. Develop teaching techniques for the saxophone in the areas of performance, style, repertoire, intonation and historical perspective.

**MUS 524 Flute Pedagogy (2)**

Consent of instructor. Majors only. Develop teaching techniques for the flute in the areas of performance, style, repertoire, intonation and historical perspective. Repeatable, no limitations.

**MUS 525 Oboe Pedagogy (2)**

Consent of instructor. Majors only. Develop teaching techniques for the oboe in the areas of performance, style, repertoire, intonation and historical perspective. Repeatable, no limitations.

**MUS 533 Curriculum Trends in Music Education (3)**

Study curriculum trends in music education, including methods of teaching, curriculum development and aesthetic education.

**MUS 534 Acting for Singers (2)**

Instruction in the special needs of the singer/actor: staging of arias, improvisation, freeing the voice through movement.

**MUS 536 German Art Song (3)**

An introduction to the origins of the art song form with in-depth study of the German art song from its historical beginnings through the present day.

**MUS 538 French/Italian Art Song (2)**

Course in the performance of 19th and 20th century French and Italian Art Song with particular emphasis upon style, technical requirements and diction.

**MUS 539 British/American Art Song (2)**

In-depth study of British and American art song. Emphasis will be on research and performance of 20th century materials.

**MUS 542 Jazz Pedagogy (2)**

Graduate and qualified senior music majors only. Takes a pedagogical approach to the analysis of jazz ensemble scores, rehearsal techniques and rhythm sections. Looks at concert planning and audience building.

**MUS 543 Jazz Program Administration, Planning and Development (2)**

Graduate students and qualified senior Music majors. Deal with public relations, grant writing, promotion, programming, recruiting and other aspects of the development of a Jazz Studies Program. Learn planning and follow-through of the annual Jazz Festival.

**MUS 546 Jazz Arranging, Small Ensembles and Big Bands (2)**

Prerequisite: MUS 202 or consent of instructor. Learn the art of calligraphy, the basics for arranging for small jazz ensembles and work with big band scoring.

**MUS 547 Jazz Arranging, Vocal Jazz and Studio Orchestra (2)**

Prerequisite: MUS 546 or consent of instructor. Continuance of MUS 546 with focus on vocal jazz and studio orchestra composition. Performance of material at end of semester by studio orchestra and vocal jazz ensemble.

**MUS 548 Accompanying and Coaching I (2)**

Consent of instructor. Acquaint students with necessary skills for collaborative performance through the study of listening, rhythm, sightreading, technique and 4-hand repertoire. Class performances required. Repeatable, no limitations.

**MUS 549 Accompanying and Coaching II (2)**

Prerequisite: MUS 348/MUS 548 or consent of instructor. Acquaint students with skills needed for collaborative performance through score reduction and discussion, listening and performance of song and instrumental literature. Class performances required. Repeatable, no limitations.

**MUS 550 Score Reading and Analysis (1)**

Analysis of wind/orchestral/choral literature. Relates analysis techniques to preparation and performance. Literature studied varies from semester to semester. Repeatable, may be taken four times.

**MUS 551 Individual Performance in Conducting (2)**

Study of advanced problems in instrumental conducting. Regular conducting experience with University ensembles is an integral part of the course. Repeatable, may be taken four times.

**MUS 552 Principles of Piano Teaching I (2)**

Compare current piano methods. Study technical and musical problems with a beginning student. Offered every other year.

**MUS 553 Principles of Piano Teaching II (2)**

Prerequisite: MUS 352/MUS 552 or consent of instructor. A study of the methods of teaching musicianship and pianistic skills. Observe private and group lessons. Supervised teaching internship required. Offered every other year.



**MUS 554 Pedagogical Approaches to Keyboard Literature I (2)**

Evaluate various approaches to the study of keyboard literature through student participation in teaching and performing. Repeatable, no limitations.

**MUS 558 Choral Masterworks (2)**

Examine selected large works for chorus and orchestra from the Baroque to the present.

**MUS 559 Opera History and Literature (2)**

Examine the historical significance and literature of the opera form from its precursors through the present time.

**MUS 560 Opera Directing Seminar (1-3)**

Prerequisites: Previous opera or music theatre performance experience. Consent of instructor. Study repertoire, floor plans, stage properties, hand properties, costume needs, make-up needs, and staging.

**MUS 564 Problems in Teaching Voice (2)**

Prerequisite: MUS 410/MUS 510 and consent of instructor. Emphasis is placed upon practical aspects of vocal pedagogy: repertoire selection, program building, learning theories and teaching concepts. Advanced studies in vocal acoustics and anatomy and vocal problems are included.

**MUS 565 Principles of Ensemble Intonation (1)**

Examine various tuning temperaments, emphasizing concepts of "just intonation" and its application to all flexible pitched ensembles. Employ electronic tuning devices with practical experience gained through small ensemble participation.

**MUS 580 String Techniques for the Conductor (2)**

The conductor will acquire the necessary skills to make musical and technical decisions based on a thorough understanding of orchestral string techniques.

**MUS 585 Advanced Jazz Improvisation (2)**

Consent of instructor. Study advanced jazz theory principles and apply to keyboard and other instrumental and vocal disciplines. Course content will change each semester. Repeatable, no limitations.

**MUS 600 Introduction to Musical Scholarship (2)**

Examines attitudes and aims of the music scholar, studies in bibliography reference materials, sources, and editions. Required of all Masters of Music candidates. Must be taken as early as possible.

**MUS 603 Analytical Studies in Music (3)**

Master of traditional harmony required. Students analyze the structure of music.

**MUS 604 Seminar in Schenker Analysis (2)**

A study of the application of the ideas of Heinrich Schenker to music analysis, performance and music theory.

**MUS 606 Graduate Seminar in Elementary School Music (3)**

Graduate standing and previous school music teaching experience. Broaden individual perspectives regarding content, materials, methodology and philosophy of teaching and learning general music in elementary schools.

**MUS 607 Graduate Seminar in Junior and Senior High School Instrumental Music (3)**

Address problems encountered by instrumental music teachers in public schools. Participate as a contributor or lecturer on topics chosen by class.

**MUS 610 Research in Music Education (3)**

Develop concepts and skills for understanding and evaluating research in music education. Study the design and techniques of empirical research in music education. Complete research study to submit for publication.

**MUS 621 Small Jazz Ensembles (1)**

Open to any student by audition. Groups consist of rhythm section plus 3 or 4 horns. Groups are listed in Music degree section of this Catalog. Repeatable, no limitations.

**MUS 622 Directed Studies in Music (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**MUS 623 Individual Studies in Effective Teaching (1-3)**

Designed according to candidate's primary emphasis and satisfies the Seminar in Teaching (discipline) required of all D.A. candidates in Music. Repeatable, maximum of three credits.

**MUS 624 Vocal Jazz Ensembles (1)**

Audition required. Graduate student only. Each ensemble limited to 20 voices: 4 sopranos, 4 altos, 4 tenors, 4 baritones, 4 basses, plus rhythm section and horns. Repeatable, no limitations.

**MUS 625 Jazz Ensembles (1)**

Audition required. Instrumentation is brass, woodwind and rhythm. Concentrate on jazz idiom music: show and dance music and concert jazz. Receive thorough preparation for teaching at both secondary and college levels. Repeatable, no limitations.

**MUS 628 Collegium Musicum (1)**

Audition required. Majors only. This performing group specializes in historically informed performance of early music. Historical treatises, appropriate ornamentation and improvisation and pre-19th century styles are the focus of the class. Repeatable, no limitations.

**MUS 630 String Ensemble (1)**

Small chamber groups that rehearse regularly and are coached by a faculty member. Repeatable, no limitations.

**MUS 631 Brass Ensemble (1)**

Small chamber groups that rehearse regularly and are coached by a faculty member. Repeatable, no limitations.

**MUS 632 Woodwind Ensemble (1)**

Small chamber groups that rehearse regularly and are coached by a faculty member. Repeatable, no limitations.

**MUS 633 Percussion Ensemble (1)**

Small chamber groups that rehearse regularly and are coached by a faculty member. Repeatable, no limitations.

**MUS 635 Classical Guitar Ensemble (1)**

Audition required. Perform in an ensemble in which melodic playing is stressed, deal with reading and notation problems and the interpretation of all styles of music. Repeatable, no limitations.

**MUS 643 Seminar: Medieval Music (3)**

A study of musical style in its historical, theoretical and practical aspects during the Middle Ages.

**MUS 644 Seminar: Music in the Renaissance (3)**

A cultural and historical examination of music and musical style during the 15th and 16th centuries. Flemish composers, the Madrigal, the Venetian School and similar subjects will receive special attention.

**MUS 645 Seminar: The Baroque Period (3)**

Music from 1600 to 1750. Investigates opera from Florentine beginnings through Venetian, Neapolitan and French styles to 1750; growth of chamber, orchestral and solo instrumental music, and religious vocal music.

**MUS 646 Seminar: The Classic Period (3)**

Historical and cultural influences bearing upon emergence of 18th century classicism in music. The composers, representative works, forms, styles and media of the Classic era.

**MUS 647 Seminar: The Romantic Period (3)**

Representative composers, musical styles, works, related literary movements, aesthetic theories and musical criticism of the period will be researched and discussed.

**MUS 648 Seminar: Music in the Twentieth Century (3)**

Study of major trends in this music, accompanied by investigation into their social and cultural bases. Technical aspects of this music are more thoroughly investigated in the course, MUS 503.

**MUS 650 Seminar: Choral Music (2)**

A seminar to allow discussion of a variety of subjects related to choral literature. Individual projects will be assigned, calling for creative research.

**MUS 653 Vocal Literature and Styles (3)**

A study of the stylistic, aesthetic and repertorial aspects of vocal music, including opera and choral music, through the various historical periods in music.

**MUS 657 Instrumental Literature and Styles (3)**

A study of the stylistic, aesthetic and repertorial aspects of instrumental music, including orchestral and chamber music, through the various historical periods in music.

**MUS 658 Brass Pedagogy (3)**

Prerequisite: MUS 364 or consent of instructor. In-depth study of brass materials and performance techniques. Examines brass teaching problems encountered by teachers at the K-12 and college levels.

**MUS 661 Percussion Pedagogy (2)**

Prerequisite: MUS 364 or consent of instructor. Explore advanced techniques, methods and materials related to all the percussion instruments.

**MUS 662 Woodwind Pedagogy (2)**

Prerequisites: MUS 361, MUS 362 or consent of instructor. Majors only. In-depth study of teaching material and techniques related to the flute, clarinet, saxophone, oboe and bassoon.

**MUS 665 Individual Performance in Collaborative Piano (2-4)**

Prerequisites: MUS 348, MUS 349 and MUS 465 or consent of instructor. In-depth study of repertoire and refinement of skills for the collaborative pianist. Repeatable, no limitations.

**MUS 666 Madrigal Singers (1)**

Membership in the Concert Choir required or by special permission. The UNC Madrigal Singers is a highly select group of 16 to 20 performers. The group performs a wide variety of choral chamber works in concerts throughout the year. Repeatable, no limitations.

**MUS 667 University Symphony Orchestra (1-3)**

Audition required. Comprised of the best string, wind, brass, and percussion players. Reads and performs standard orchestra repertoire. Performs on and off campus. Repeatable, no limitations.

**MUS 668 Chamber Orchestra (1)**

Audition required. Comprised of outstanding strings and selected winds. Performs chamber orchestra literature from Baroque to the present. Presents concerts on and off campus. Repeatable, no limitations.

**MUS 669 Individual Performance in Voice for Those with Non-Voice Emphasis (2-4)**

Consent of instructor. Instruction concentrates on fundamental principles of voice production. Development of rhythmic and melodic accuracy receives primary consideration. Repeatable, no limitations.

**MUS 670 Individual Performance in Voice (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 671 Individual Performance in Piano (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 673 Individual Performance in Strings (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 674 Individual Performance in Woodwinds (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 675 Individual Performance in Brass (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 676 Individual Performance in Percussion (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 677 Individual Instruction in Composition (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 678 Individual Performance in Harp (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 679 Individual Performance in Guitar (2-4)**

Consent of instructor. Repeatable, no limitations.

**MUS 680 Mixed Concert Choir (1)**

Audition required. Limited to approximately 60-65 singers. Open to all students. The Choir performs a wide range of literature: classics to contemporary works. Widely recognized for its excellence, the Concert Choir performs concerts on campus and tours annually. Repeatable, no limitations.

**MUS 681 Women's Glee Club (1)**

Audition required. Open to all female students. Performs on campus and joins with the Concert Choir in large masterworks with orchestra. Repeatable, no limitations.

**MUS 682 University Singers (1)**

Audition required. Membership in Concert Choir required or consent of instructor. This select group of 25 singers performs an extremely varied repertoire from Renaissance motets to contemporary works. Repeatable, no limitations.

**MUS 684 Men's Glee Club (1)**

Audition required. Open to all male students. Performs on campus and in the community. Sings a wide variety of literature. Repeatable, no limitations.

**MUS 685 Performance in Opera Theatre (1-12)**

Audition required. Practical experience in the production and performance of a complete operatic work. Techniques of acting, singing, character analysis and stage direction will be studied. Repeatable, no limitations.

**MUS 686 Scene Studies in Opera (1-3)**

Audition required. Studying techniques of acting, singing, character analysis and stage deportment through the staging and performing of selected opera scenes and arias. Repeatable, no limitations.

**MUS 687 Summer Symphonic Band (1-3)**

Audition required. Open to all students interested in performing the highest quality literature available. The Summer Season consists of five outdoor concerts. Repeatable, no limitations.

**MUS 688 Concert Band (1-3)**

Audition required. Comprised of music majors and students from other disciplines. Members perform a wide variety of interesting literature selected from standard and current repertoire. Repeatable, no limitations.

**MUS 689 University Brass Choir (1)**

Select performing ensemble of 21 brass and percussion students. Concentrate on literature from brass instrumental media. Develop musical sensitivity, phrasing, style and intonation. Major ensemble credit. Repeatable, no limitations.

**MUS 690 Symphonic Band (1-3)**

Audition required. Selected from the finest performers on campus. Although most members are music majors, students specializing in other fields often qualify for this ensemble. Literature is drawn from contemporary and traditional repertoire. Repeatable, no limitations.

**MUS 691 Wind Ensemble (1-3)**

Audition required. Comprised of the most outstanding wind and percussion majors in the School of Music. The ensemble performs a repertoire of works requiring from 8 to 35 performers. Repeatable, no limitations.

**MUS 693 Practicum in Music (1-4)**

Open only by invitation to resident graduate students. Supervised professional activity in the major field, approximately two hours per day. Two copies of a well-written paper must be filed with instructor before credit is given. Repeatable, no limitations.

**MUS 695 Special Topics in Music (1-4)**

A seminar covering areas in performance, research, education, history and theory that are of concern to the contemporary graduate student. Topics will vary according to student interest and needs. Repeatable, under different subtitles.

**MUS 699 Thesis (1-6)**

Required of Master of Music Education students pursuing Track IV and Master of Music students majoring in Theory and Composition. Consult respective department for specific requirements. S/U graded. Repeatable, no limitations.

**MUS 700 Introduction to Doctoral Research (3)**

Analytical studies in music writing and research techniques for dissertation and field studies; survey critical problems in music; prepare research and proposal outlines.

**MUS 794 Supervised Practicum in College Teaching (2)**

Observe and practice college teaching under supervision and as a basis for analysis of learning experiences. Repeatable, maximum six credits.

**MUS 797 Doctoral Proposal Research (1-4)**

Required of all doctoral students. Repeatable, maximum of four credits.

**MUS 799 Doctoral Dissertation (1-12)**

Required of all doctoral candidates. Repeatable, no limitations.

**NURS — NURSING****NURS 200 Women's Health Care (3)**

For students of any major. Examines women's health care concerns over the adult life span and the accompanying psychological, sociological and cultural implications. Includes an historical perspective. (GenEd)

**NURS 310 Foundations of Professional Practice I (3)**

Majors only. Admission into clinical program. Explores the roles of the professional nurse in multidimensional health care settings. Concepts of professionalism, accountability and theory-based practice are introduced.

**NURS 312 Health Assessment (3)**

Corequisite: NURS 314. Majors only. Admission into clinical program. A theoretical health assessment course for healthy individuals and their families. It focuses on physical, mental, developmental and cultural appraisals.

**NURS 314 Health Assessment Practicum (1)**

Corequisite: NURS 312. Majors only. Application of health assessment techniques for individuals and their families. Involves skills lab practice.

**NURS 317 HIV/AIDS Issues in Health Care (1)**

Clinical level nursing student, RN, LPN or other health care professionals. Emphasizes psychosocial, ethical, legal and policy issues related to HIV/AIDS. Public health interventions will be explored and evaluated and the role of the health care professional. S/U graded.

**NURS 318 Health Care Systems (3)**

For students of any major. Introduces the concepts of health and health care systems: explores philosophical, historical, political and professional relationships that exist in health care delivery. (GenEd)

**NURS 320 Basic EKG Interpretation (2)**

Prerequisites: BIO 341, BIO 350. Clinical level nursing student or RN. An introduction to the basic concepts of EKG and arrhythmias recognition. S/U or letter graded.

**NURS 321 Interpretation of Laboratory Data (1)**

Clinical majors or consent of instructor. Designed to assist the nurse in understanding laboratory data. Emphasis is placed on those tests utilized for health promotion, maintenance and monitoring of disease progress.

**NURS 324 Therapeutic Interventions (4)**

Clinical nursing majors only. Emphasis is on therapeutic interventions appropriate for individuals, families and communities across the life span in a variety of settings, focusing on psychomotor and communication skills. S/U graded.

**NURS 326 Pathophysiology (3)**

Prerequisite: A previous basic anatomy and physiology course. A systems approach to alteration and disruption of physiologic functions. Focus on differentiation of pathophysiologic findings and identification of treatment modalities.

**NURS 328 Health Assessment (for RNs only) (4)**

Consent of instructor. Health assessment course for RNs designed to provide cognitive and technical skills in history taking and physical examination across the lifespan.

**NURS 335 Foundations of Professional Practice II (3)**

Prerequisites: STAT 250, ENG 123. Majors only. Develops beginning research skills in relationship to the health outcomes throughout the lifespan. The emphasis will be on research, education and culture.

**NURS 344 Health Promotion Practicum (2)**

Completion of Semester 1 courses. Take concurrently with NURS 345. Majors only. Provides clinical opportunities for health promotion, disease prevention, and therapeutic interventions for healthy individuals across the lifespan and their families within their communities. S/U graded.

**NURS 345 Health Promotion of Individuals and Families Across the Lifespan (2)**

Completion of Semester 1 courses. Corequisite NURS 344. Majors only. Explores the role of nursing in health promotion, disease prevention and the implementation of the objectives of Healthy People 2010 for individuals and families across the lifespan.

**NURS 364 Childbearing Families Practicum (4)**

Completion of Semester 1 courses. Corequisite NURS 365. Majors only. Provides clinical opportunities for health promotion, disease prevention and therapeutic interventions for childbearing families in the hospital and within their communities. S/U graded.

**NURS 365 Childbearing Families (3)**

Completion of Semester 1 courses. Corequisite NURS 364. Majors only. Explores the role of nursing in health promotion, disease prevention, and therapeutic interventions for childbearing women and families in various settings. Includes care of women with gynecological problems.

**NURS 384 Episodic Alterations in Adult/Child Health Practicum (7)**

Corequisite: NURS 385, NURS 386. Majors only. This course focuses on the application of therapeutic intervention guided by application of the nursing process in the acute, episodic care of individuals and their families across the lifespan. S/U graded.

**NURS 385 Episodic Alterations in Adult/Child Health I (4)**

Corequisite: NURS 384, NURS 386. Majors only. Completion of Semester II courses. Emphasis is on understanding of therapeutic interventions guided by the nursing process to maximize self-care capabilities in the episodic care of children, adults and their families.

**NURS 386 Episodic Alterations in Adult/Child Health II (4)**

Corequisite: NURS 384, NURS 385. Majors only. Completion of Semester 1 and 2 courses. Emphasis is on further understanding of therapeutic interventions guided by the nursing process to maximize self-care capabilities in the episodic care of children, adults and their families.

**NURS 391 Standards and Practice of Intravenous Therapy (1)**

Prerequisites: completion of Semester III/ RN. Theory and practice related to peripheral and central intravenous therapy for the professional RN student/ RN. IV medication administration and current standard of care in IV therapy will be addressed. S/U graded.

**NURS 404 Community and Public Health Nursing Practicum (3)**

Corequisite: NURS 405. Majors only. Therapeutic nursing interventions applied to community and public health nursing for families, communities and populations. Emphasis on application of concepts of health maintenance, health promotion and disease prevention.

**NURS 405 Community and Public Health Nursing (3)**

Corequisite: NURS 404. Majors only. Completion of Semester III courses. Nursing theory applied to community and public health concepts. Focuses on principles of health maintenance, health promotion and disease prevention for families, communities and populations.

**NURS 408 Nursing Workshop (1-3)**

Offers undergraduate students an opportunity to increase nursing knowledge and skills. Repeatable, under different subtitles.

**NURS 410 Foundations of Professional Practice III (3)**

Majors only. Completion of Semester II courses. This course emphasizes issues in professional nursing as they relate to the changing health care environment. Students will utilize principles of change, qualitative research, policy and politics.

**NURS 414 Psychiatric Mental Health Nursing Practicum (3)**

Corequisite: NURS 415. Majors only. Nursing intervention for clients with psychiatric disorders. Emphasis is on nursing process for continued development of therapeutic skills in caring for acute and chronic psychiatric disorders. S/U Graded.

**NURS 415 Psychiatric Mental Health Nursing (3)**

Corequisite: NURS 414. Majors only. Completion of Semester III courses. Nursing theory applied to biological, psychological and sociocultural dimensions of mental health care. Concepts of chronic illness are introduced and applied to select care problems.

**NURS 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**NURS 435 Foundations of Professional Practice IV (3)**

Majors only. Completion of Semester III courses. The emphasis of this course is on the nurse as leader/manager in society with respect to current issues and trends.

**NURS 453 Community Health Nursing for RNs (4)**

Majors only. Admission into clinical nursing program. Nursing theory applied to chronic illness and community health concepts. A focus will be placed on nursing management and facilitation of optimal health for individuals, families and communities.

**NURS 454 Community Health Nursing Practicum for RNs (4)**

Majors only. Admission into clinical program. Focus on therapeutic nursing interventions applied to chronic illness management and community health nursing. Emphasis will be placed on case management of complex and chronic health problems in community settings. S/U graded.

**NURS 464 Professional Roles for RNs (5)**

Majors only. Admission into clinical program. A combination of seminar and preceptored practicum that provides socialization into the role set of the professional nurse with an emphasis on leadership and management. S/U graded.

**NURS 465 Professional Roles with Individuals, Families and Communities (10)**

Majors only. Completion of Semester IV courses. A combination of seminar and preceptored practicum that provides socialization into the role set of the professional nurse with an emphasis on leadership and management. S/U graded

**NURS 471 Care of the Terminally Ill (1)**

Admission to Clinical Level III required. Discuss historical and contemporary attitudes toward death and dying. Examines clinical management techniques used in symptom control. Explore emotional and spiritual concerns. Analyze professional, organizational and societal factors. S/U graded.

**NURS 505 Nursing Research (3)**

Introduction of advanced research and methodology. Critique of selected nursing research projects to determine cost effective outcome, relevance to nursing practice, contribution to theory development.

**NURS 507 Leadership and Nursing Issues (3)**

Involves comprehensive investigation and analysis of health care issues and leadership theory and skills which are imperative in today's health care environment.

**NURS 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**NURS 510 Concepts in Transcultural Nursing (3)**

For seniors, post-B.S. or M.S. in nursing students. Summers only. Focus on transcultural nursing and cultural assessment for the purpose of providing culturally congruent and competent nursing care. Describes culture care beliefs, values and practices of specific cultures.

**NURS 511 Advanced Transcultural Nursing and Research (2)**

Prerequisites: NURS 510 and a graduate elective; SRM 680 or others with instructor approval. Summers only. The use of ethnonursing, ethnography and other qualitative research methods to generate and analyze cultural differences and similarities in care, health beliefs, values and practice of various cultures.

**NURS 512 Transcultural Nursing Field Experience (2-3)**

Pre or Co-requisite: NURS 511. Summers only. The application of the ethnonursing research methodology to analyze differences and similarities within a cultural experience as determined by the student and faculty. S/U graded.

**NURS 600 Nursing Theory (3)**

Admission to Master's Program required. Introduction to theoretical foundations for advanced nursing practice. Application of theory to clinical nursing practice and to nursing education. Emphasis on the development, application and critique of nursing models.

**NURS 602 Concepts in Chronic Illness (4)**

Admission to master's program required. Required laboratory arranged. The impact of chronic illness across the lifespan is examined using a conceptual approach. Health promotion and illness management are emphasized through case management care delivery.

**NURS 604 Care of Chronically Ill Adult and Child (4)**

Prerequisites: NURS 600, NURS 602; NURS 505 or take concurrently. Required laboratory arranged. Application of the nursing process and case management is examined in the development of health promotion and illness management strategies for the chronically ill adult and child.

**NURS 610 Health Assessment (3)**

Majors only. Required laboratory arranged. Emphasis in health history taking, physical assessment and interviewing of individuals across the life span. Spends 45 hours with an MD or NP in clinical application.

**NURS 612 Advanced Pharmacology (4)**

Examine clinical pharmacokinetics and pharmacotherapeutics. Focus on selected drug groups and their safe and appropriate utilization in primary care practice.

**NURS 614 Advanced Pathophysiology (3)**

Focus on pathophysiology, symptomology and etiology of commonly encountered acute and chronic clinical entities of children and adults.

**NURS 622 Directed Studies (1-3)**

Graduate students only. Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**NURS 630 Teaching Strategies in Nursing (3)**

Prerequisites: EPSY 540, EPSY 674 or permission of instructor. Practice teaching of nursing students, practicing nurses and/or clients. Analyze teaching strategies in academic and clinical settings.

**NURS 640 Health Care of Families I (4)**

Majors only. Required laboratory arranged. Prerequisites: NURS 600, NURS 610, NURS 612 and NURS 614. Application of theoretical and research based developmental approaches to primary health care of families with particular emphasis on childhood/adolescence.

**NURS 645 Health Care of Families II (4)**

Majors only. Required laboratory arranged. Prerequisites: NURS 600, NURS 612 and NURS 614. Application of theoretical and research based developmental approaches to primary care of families with particular emphasis on women's health and adult episodic care.

**NURS 650 Health Care of Families III (4)**

Prerequisites or Corequisites: NURS 505, NURS 507. Majors only. Required laboratory arranged. Application of theoretical and research based developmental approaches to primary care of families with particular emphasis on chronically ill and older adults and psychosocial adjustment disorders.

**NURS 660 Nursing Education Seminar (4)**

Synthesis of concepts from nursing theory, research and education courses. Experience with curriculum development and analysis.

**NURS 680 Advanced Practice Role Practicum (1-9)**

Graduates and Majors only. Final clinical experience provides students an opportunity to practice advanced roles intervention in underserved and/or rural areas. S/U graded.

**NURS 690 Advanced Professional Role (2)**

Prerequisites: NURS 602, NURS 604, NURS 650. Majors only. Advanced practice role development in health maintenance and illness management is examined from several perspectives.

**NURS 691 Applied Nursing Research (3)**

Majors only. Application of concepts from graduate research in a completed scholarly project, under direction of a graduate faculty member.

**NURS 695 Advanced Academic Nursing Roles (2-3)**

The emphasis of this course is on direct responsibility/accountability for experience in the role of academic clinical and didactic teaching or administrative roles.

**NURS 699 Thesis (1-6)**

Terminal program course. All other courses should be taken before or concurrently. Guided research project that demonstrates evidence of original thought as well as advanced knowledge of the research process. S/U graded. Repeatable, no limitations.

**NURS 780 The Professorial Role in Nursing Education (3)**

Prerequisite: Licensed RN and accepted into doctoral program. Involves comprehensive investigation of the academic nursing role in higher education relative to administration, student issues, program requirements and faculty expectations.

**OCN — OCEANOGRAPHY****OCN 110 Our Ocean Systems (3)**

Examine ocean environment and its human impact. Topics include description of ocean systems, marine exploration, international issues, food and mineral resources, coastal erosion, pollution and technological developments. (GenEd)

**OCN 200 General Oceanography (4)**

(3 lecture, 2 laboratory) For non-science majors only. Geological, physical, chemical and biological aspects of oceans and ocean basins. Field trip required. (GenEd)

**OCN 301 Physical and Chemical Oceanography (4)**

(3 lecture, 2 laboratory) Historical, physical and chemical aspects of oceanography including general character of water masses, ocean circulation and currents, waves, tides, ocean-atmosphere interactions and chemical oceanography.

**OCN 302 Geological and Biological Oceanography (4)**

(3 lecture, 2 laboratory) Geological and biological aspects of the ocean including origin of oceans and ocean floors, marine sediments and geomorphology, distribution and ecology of marine organisms and ocean productivity. Required field trip.

**OCN 422 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**OCN 622 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**PHIL — PHILOSOPHY****PHIL 100 Introduction to Philosophy (3)**

An examination of issues pertaining to knowledge, reality and morality. Issues examined might include the following: Can we know anything? Does God exist? Is morality merely personal opinion? (GenEd)

**PHIL 101 Critical Thinking and Writing (3)**

Prerequisite: ENG 122. Introduction to methods of critical thinking as required for critical and evaluative writing. (GenEd)

**PHIL 105 Philosophical Perspectives on Current Issues (3)**

Offerings under this heading will examine the philosophical dimensions of specific issues of lively current interest.

**PHIL 110 Figures in Western Philosophy (3)**

Figures studied will include three to five of the following: Plato, Aristotle, Aquinas, Descartes, Hobbes, Leibniz, Berkeley, Hume, Kant, James, Sartre. (GenEd)

**PHIL 220 The Nature of Legal Reasoning (3)**

No background in philosophy is required. A study of the reasoning involved in the law. Students will read cases, write legal briefs and argue their cases orally.

**PHIL 240 Formal Logic I (3)**

A first course in mathematical logic. Topics include calculi and artificial languages, the logistic method, truth functions, propositional calculi, and a language adequate for first order logic.

**PHIL 241 Formal Logic II (3)**

Prerequisite: PHIL 240. Topics include inference rules for first order logic, logical metatheory (including proofs of the soundness and completeness of a first order predicate calculus). Identity and terms, and formalized theories.

**PHIL 260 History of Ancient Philosophy (3)**

A study of the major figures in the history of Western philosophy from the pre-Socratics to Plotinus.

**PHIL 261 History of Modern Philosophy (3)**

A study of the major figures in Western philosophy from Descartes through Kant.

**PHIL 300 Topics in Philosophy (3)**

Offerings under this heading will focus on areas of philosophical interest not regularly covered at the 300 level (e.g., Philosophy of Mind). Repeatable, under different subtitles.

**PHIL 305 Ethics in Theory and Practice (3)**

Acquaint students with the history of ethical theories and enable students to apply the theories to contemporary ethical problems. (GenEd)

**PHIL 350 Ethics (3)**

In-depth examination of selected topics in ethics (e.g. ethical relativism and subjectivism, the possibility of moral knowledge, the structure of moral reasoning, freedom and responsibility).

**PHIL 355 Social and Political Philosophy (3)**

In-depth examination of selected topics in social and political philosophy (e.g. the concept of political obligation, freedom and dissent, equality and justice, human rights).

**PHIL 370 Philosophy of Religion (3)**

In-depth examination of selected topics in philosophy of religion (e.g. the nature and justification of religious belief, freedom and sin, arguments for and against God's existence).

**PHIL 385 Epistemology (3)**

In-depth examination of selected topics in theory of knowledge (e.g. the nature and limits of human knowledge, knowledge and belief, doubt and certainty, perception and intuition, faith and justification).

**PHIL 390 Metaphysics (3)**

In-depth examination of selected topics in metaphysics (e.g. the nature of space and time, particulars and universals, the different senses of 'being,' substance, causality, identity and difference).

**PHIL 422 Directed Study (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**PHIL 495 Advanced Seminar (3)**

Detailed investigation of a specific philosophical issue. Substantial independent research and at least one oral presentation required. Repeatable, no limitations.

**PHIL 497 Student Internship (1-3)**

Consent of instructor. Practical training in one or more areas of the profession. Only six credits counted for major and 3 for minor. S/U graded. Repeatable, no limitations.

**PHYS — PHYSICS****PHYS 220 Introductory Physics I (5)**

(4 lecture, 3 laboratory) Prerequisite: MATH 124 or high school algebra. First semester of algebra-based physics. Areas covered are classical mechanics and heat. (GenEd)

**PHYS 221 Introductory Physics II (5)**

(4 lecture, 3 laboratory) Prerequisite: PHYS 220. Second semester of algebra-based physics. Areas covered are waves, sound, light, electricity, magnetism and modern physics.

**PHYS 240 General Physics I (5)**

(4 lecture, 3 laboratory) Prerequisite: MATH 131 or take concurrently. First semester of calculus-based introductory physics. Kinematics, Newton's laws, momentum, work, energy, gravity, oscillatory systems, heat and thermodynamics. (GenEd)

**PHYS 241 General Physics II (5)**

(4 lecture, 3 laboratory) Prerequisites: PHYS 240, MATH 132 or take concurrently. Second semester of calculus-based introductory physics. Electricity, magnetism, electromagnetic radiation, wave motion, sound, light, geometric and physical optics.

**PHYS 301 Seminar in Physics (1)**

Focus on current topics in physics not covered in existing departmental offerings. Oral report required. Repeatable, maximum of two credits.

**PHYS 310 Machining Skills (2)**

(4 laboratory) Scheduled individually on consent of Physics Department. Methods of using machine tools, specifications, reading and using engineering drawings, shop safety.

**PHYS 320 Mathematical Applications (3)**

Prerequisites: MATH 132, PHYS 241 or take concurrently. Survey of mathematical applications in advanced physical sciences, including vector calculus, integration techniques, complex variables, Laplace and Fourier transforms and matrix algebra.

**PHYS 321 Elementary Modern Physics (3)**

Prerequisites: PHYS 221 or PHYS 241. PHYS 241 may be taken concurrently. Important topics in physics of 20th century, including relativity, atomic, nuclear, quantum concepts, uncertainty, lasers.

**PHYS 325 Graphics and Modeling for Engineering and Physics (3)**

Prerequisite: PHYS 241 or consent of instructor. An introductory course in the techniques of engineering design and computer modeling. Automated computer programs in engineering design, mathematics, data visualization and graphics will be used.

**PHYS 340 Mechanics I (3)**

Prerequisite: PHYS 241. First of a sequence of two courses. Newton's Laws, particle and rigid body statics, work and energy, particle motion in a constant field and one-dimensional oscillatory motion.

**PHYS 341 Electricity and Magnetism I (3)**

Prerequisite: PHYS 241. First of a sequence of two courses. Intermediate study of electric fields, electric potential, magnetic fields and induced electromotive force.

**PHYS 343 Digital and Analog Electronics (4)**

(3 lecture, 3 laboratory) Prerequisites: PHYS 241 and MATH 132. DC and AC circuits. Theory and use of electronic devices and circuits including analog and digital electronics, D/A and A/D conversion and computer interfacing. Structure of solid state devices.

**PHYS 345 Atomic and Quantum Physics (5)**

(4 lecture, 3 laboratory) Prerequisites: PHYS 241, PHYS 321. Relativity, quantum mechanics of the atom, the Schrodinger equation in one and three dimensions, justification of the periodic chart, uncertainty, the nature of quantum theory.

**PHYS 347 Optics (4)**

(3 lecture, 3 laboratory) Prerequisites: PHYS 241, MATH 132. Geometric and physical optics, instrumentation, wave theory, light sources and lasers.

**PHYS 420 Thermodynamics and Statistical Physics (3)**

Prerequisites: PHYS 241, MATH 233 (prerequisite or concurrent). Introduction to kinetic theory and statistical mechanics, thermodynamic systems, equations of state and laws of thermodynamics.

**PHYS 421 Mathematical Applications in Physics II (3)**

Prerequisite: PHYS 320. Continuation of PHYS 320. Boundary value problems, partial differential equation, numerical integration, numerical solutions to differential equations, contour integration, probability and statistics. Emphasis on applications to physics and engineering.

**PHYS 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**PHYS 440 Mechanics II (2)**

Prerequisites: PHYS 340, MATH 233. Second course in two course sequence. Motion of systems of particles, rigid body motion in a plane and in three dimensions, central field motion and accelerated reference systems.

**PHYS 441 Electricity and Magnetism II (2)**

Prerequisites: PHYS 341, MATH 233. Second in a two course sequence. Theory of dielectrics, magnetic properties of matter, electromagnetic wave theory.

**PHYS 443 Electronic Systems and Controls (4)**

(3 lecture, 3 laboratory) Prerequisites: PHYS 343 and MATH 233. Analysis and design of electronic systems for collecting and processing signals, controls and automation. D/A and A/D conversion, solid state devices, computer interfacing and algorithms for signal processing and controls.

**PHYS 445 Nuclear and Condensed Matter Physics (5)**

(4 lecture, 3 laboratory) Prerequisites: PHYS 345, MATH 233. Nuclear reactions, decay schemes, nuclear models, detection and evaluation of radiation, fundamental particles, molecular binding, stimulated emission, electron statistics, properties of solids, junction theory, superconductivity.

**PHYS 447 Electro-optics (4)**

(3 lecture, 3 laboratory) Prerequisite: PHYS 347. Lasers, holography and holographic interferometry, fiber optics (including fiber optic communications) and electro-optic devices.

**PHYS 449 Advanced Quantum Mechanics (3)**

Prerequisites: PHYS 340, PHYS 345. Advanced undergraduate quantum mechanics including mathematical support for atomic theory, scattering, spin-orbital interactions, perturbation theory and many-particle systems.

**PHYS 470 Senior Research (1-3)**

Prerequisite: Two years of physics courses that apply to major. Independent experimental or theoretic research project in physics. Weekly conferences with research advisor. A well-written paper or oral presentation is required. Repeatable, maximum of 12 credits.

**PHYS 475 Seminar in Teaching Physics (2)**

Teaching physics and physical science at elementary and secondary levels. Professional responsibilities of teaching science. Entry level operational knowledge of strategies and available materials.

**PHYS 495 Special Topics in Physics (1-3)**

Prerequisites: PHYS 221 or PHYS 241. Consent of instructor. Topics of special interest in areas of physics not covered by other courses. Repeatable, under different subtitles.

## PLP — PRESIDENTIAL LEADERSHIP PROGRAM

### PLP 100 Foundations of Leadership (3)

This course traces the theory and role of leaders and leadership. A program journal is begun, and understanding of leadership is further developed through readings, guest lecturers and field experiences.

### PLP 200 The Entrepreneur in America (2)

Prerequisites: PLP 100. The entrepreneur, the self-made individual who triumphs in the marketplace, is an American archetype. This course explores the careers of representative American entrepreneurs from Ben Franklin to Bill Gates.

### PLP 492 Internship in PLP (1-3)

Prerequisites: PLP 100. This course offers variable credit to PLP students for approved internships. This required internship will be developed in conjunction with PLP staff.

### PLP 499 Capstone Course/Project (2)

This course is the final experience/capstone course in the Presidential Leadership Program. It is to be taken during the student's final semester.

## PPSY — PROFESSIONAL PSYCHOLOGY

### PPSY 468 Psychology of Women (2)

Theory and psychological issues influencing gender identity such as definitions of abnormality, achievement and interactional influences upon development.

### PPSY 508 Workshop (1-3)

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

### PPSY 513 Professional Renewal (1-3)

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

### PPSY 558 Abnormal Psychology (3)

Graduate students only. Study of abnormal behavior, causes, symptoms, characteristics, classifications, prevention and treatment.

### PPSY 559 Introduction to Clinical Hypnosis (2)

Prerequisites: PPSY 612 or equivalent. Consent of instructor. Graduate students only. Introduction to techniques and applications of hypnosis in academic and mental health settings. Achievement of competence with basic hypnotic techniques and their appropriate utilization in psychotherapeutic processes.

### PPSY 565 Psychology of Prejudice (3)

Graduate students only. Understand the nature of prejudice, including origins, causes, consequences and dynamics; increase understanding of others and diminish prejudice; develop and enhance cultural competencies for persons in the helping professions.

### PPSY 566 At Risk Students: Opportunities and Strategies (3)

Gain knowledge and understanding of "high risk students" and expand the teachers' repertoire of skills when educating at risk students. Prevalence, family characteristics and systems, and successful strategies will be studied.

### PPSY 568 Psychology of Women (2)

Graduate students only. Theory and psychological issues influencing gender identity such as definitions of abnormality, achievement and interactional influences upon development.

### PPSY 569 Violence Against Women and Children (2)

Seniors or above. Explores causes of interpersonal violence, societal conditions supporting such violence, intervention methodologies and treatment strategies for female and child victims of abuse and abusers.

### PPSY 580 Computer Applications to Professional Psychology (2)

Graduate students only. Overview of effective applications of computers in professional psychological environments. Learn how to select, use, modify relevant software, legal and ethical limitations and their implications.

### PPSY 585 Family Counseling and Education in School Settings (2)

Introduction to family systems and the incorporation of this knowledge into schools. A three-level program of counseling and education in schools will be presented.

### PPSY 601 Practicum (1-3)

Consent of instructor. Majors only. Open by invitation to graduate students. Supervised professional activity in student's major field; approximately 25 clock hours of work per credit. S/U graded. Repeatable, maximum of three credits.

### PPSY 602 Foundations of School Guidance (3)

Study principles of school guidance, its application, functions of counselors, administrators, teachers and parents in meeting student needs. Focus on elementary, secondary and post-secondary school guidance.

### PPSY 603 Counseling Children and Adolescents (3)

A comprehensive study of therapeutic approaches and techniques for children and adolescents. The course focuses on the therapeutic involvement of significant others with children in a variety of settings.

### PPSY 604 Career Development and Occupational Systems (3)

Analyze career development theories, society/changing values, career development, world of work classification, labor force/employment trends and educational-vocational planning principles.

### PPSY 605 Group Laboratory Experience (1)

Corequisite: PPSY 606 or PPSY 662. Consent of practicum coordinator. Provides an opportunity to participate in a group experience facilitated by an advanced doctoral student or faculty member. S/U graded.

### PPSY 606 Theories and Practices in Group Guidance (3)

Prerequisite: PPSY 607. Corequisite: PPSY 605. Study theories and methods of group counseling including applications in school settings for educational planning, career decisions and interpersonal relations, and forming and facilitating guidance groups in educational settings.

### PPSY 607 Theories of Counseling (3)

Majors only. The study and critical analysis of the major counseling theories and elements of effective psychotherapy as they apply to the counseling process.

### PPSY 608 Organization, Administration and Consultation in Guidance Services (3)

Prerequisite: PPSY 602. Organization, administration and consultation in guidance services within institutions and agencies with emphasis being placed on the use of personnel services, effective utilization of leadership skills, consultation and management techniques.

### PPSY 610 Theories of Personality (2)

An overview of the psychological factors underlying personality and its development. Theories, critical periods, applications to counseling and education are addressed.

### PPSY 612 Practicum in Individual Counseling (5)

Prerequisites: PPSY 607 and consent of practicum coordinator. Requires 15 hours per week minimum. Majors only. Receive supervised experience in counseling and interview analysis, including use of audio and video tapes, client and supervisor feedback and weekly seminar. S/U graded. Repeatable, maximum of 10 credits.

### PPSY 613 Internship: Guidance and Counseling with Children (5)

Consent of instructor. Minimum of 300 on site hours required. Majors only. A culminating field experience for counseling students engaged in counseling elementary school children under supervision. Permission must be obtained by the end of the seventh week of the preceding semester. S/U graded.

**PPSY 614 Internship in School Counseling and Guidance (1-9)**

Prerequisites: PPSY 605, PPSY 606, PPSY 608, PPSY 612, PPSY 657 and consent of instructor by the end of the fifth week of preceding semester. A culminating field experience for counseling students engaged in counseling and guidance activities in elementary, middle, and high school settings under the supervision of one or more licensed school counselors.  
S/U graded. Repeatable, maximum of 18 credits.

**PPSY 615 Supervision in Agencies and Schools (1)**

Prerequisite: PPSY 612 and consent of instructor. Provides an overview of the supervision process and the theoretical orientation and practical skills necessary to function effectively as a supervisor of counselors.

**PPSY 616 Career Theory, Counseling and Assessment (3)**

Study theory and methods of career counseling, introduce and become familiar with career assessment instruments, and discuss current issues in the field of career counseling.

**PPSY 617 Play Therapy: Theory and Practicum (3)**

Prerequisites: PPSY 612 and consent of instructor. Study theoretical bases for play therapy and conduct play therapy under faculty supervision.

**PPSY 618 Practicum in Child, Adolescent, and Family Interventions (5)**

Prerequisites: PPSY 603, PPSY 607 and consent of instructor. Supervised experience in interventions with children, adolescents, and families; including counseling and interview analysis, the use of audio and video tapes, client and supervisor feedback, and weekly seminars.

**PPSY 622 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**PPSY 623 Counseling Diverse Populations (3)**

Majors only. An examination of counselor training issues and skills relevant to working with diverse cultural backgrounds. Emphasis on American minorities; other groups discussed. Sensitizes students to concerns of various cultural groups.

**PPSY 624 Assessment and Treatment of Substance Abuse (3)**

Majors only. Examination of major treatment approaches to substance abuse and theories of etiology. Investigation of pharmacological and medical aspects of commonly used substances. Explore addiction and abuse in related compulsive behaviors.

**PPSY 627 Counseling Interventions and Techniques for Talented and Gifted Students (2)**

Study counseling interventions and techniques appropriate for talented and gifted students, their parents, siblings, peers, teachers and other school personnel.

**PPSY 638 Behavioral Approaches to Professional Psychology (3)**

Overview of applied behavioral psychology. Review and examination of applications of major theories to the etiology and treatment of psychopathology.

**PPSY 650 Orientation to Community Counseling (3)**

Provides conceptual foundation for the counseling profession with emphasis on community counseling. Places the profession in a historical context; introduces associations, licensure, certification, accreditation, codes of ethics, and practice settings.

**PPSY 654 Child Abuse and Neglect (3)**

Introduction to major issues in the child abuse field, including definitions, causes, effects, assessment, prevention, treatment, and legal issues. Secondary traumatic stress and self-care will be emphasized.

**PPSY 655 Community Psychology and Social Systems (3)**

Graduate students only. Examine psychological (emphasis on social psychology) principles, theories and practices as applied to individual, family and community mental health problems.

**PPSY 657 Legal and Ethical Aspects of Counseling and Psychology (3)**

Covers the interrelationship of ethical standards and legal regulation in professional counseling, education and psychology. Ethical standards, litigation and legal regulation are examined in regard to professional practice.

**PPSY 658 Ethics and Law in Schools for Psychologists and Counselors (3)**

Considers legal and ethical issues affecting professional practice in public school and higher education settings. State and federal legislation, special and regular education law, psychological practice law, ethical codes and professional standards are considered.

**PPSY 660 Psychological Consultation: Theory and Practice (3)**

Overview of consultation theory and practice. Mental health, expert, collaborative, behavioral and organizational models will be discussed and applied to problems in school and agency settings.

**PPSY 662 Group Dynamics and Facilitation (3)**

Corequisite: PPSY 605. Consent of practicum coordinator. Majors only. Course features an examination of theoretical bases of group counseling including group types, group development, leadership styles and skills, and application to various populations. Ethical group leadership is emphasized.

**PPSY 663 Research Apprenticeship: School Psychology (1-2)**

Consent of instructor. Serve as research apprentice to faculty member; must complete minimum of 2 semester credits, 75 clock hours each. Repeatable, maximum of two credits.

**PPSY 664 Therapeutic Parenting (2)**

The application and appropriate utilization of therapeutic parenting techniques in academic and mental health settings.

**PPSY 665 Family Systems (3)**

Study general systems theory of family development and interactions. Structural, communication and behavioral approaches to family therapy will be examined as well as ethics, legal issues and current research.

**PPSY 666 Couples and Marriage Therapy (2)**

Prerequisite: PPSY 665. Majors only. Study basic theories of relationship therapy and technical interventions utilized within the major approaches to couple/marital therapy. Also includes spouse abuse, divorce mediation and adjustment and ethical considerations.

**PPSY 667 Crisis Intervention in the Schools (2)**

Examination of crisis intervention theory and strategies in school settings. Emphasis on application to child-centered crises such as abuse, divorce, family violence, loss, school-based violence and suicide.

**PPSY 668 Sexuality Counseling (3)**

Counselors explore the treatment of various sexual issues. Topics covered: male and female sexual systems, sexual myths, variations in sexual behavior and common sexual concerns. Various therapeutic approaches are presented.

**PPSY 669 Advanced Methods: Couples and Family Therapy (3)**

Prerequisites: PPSY 612, PPSY 662 and PPSY 665. Course expands on family therapy models presented in PPSY 665 and includes other significant models. Training activities include diagnosis, assessment, case presentations, enactments, video use and case analysis.

**PPSY 670 Psychological Testing and Measurement (2)**

Understanding psychological testing through an overview of measurement principles, the psychological assessment process, test construction and development and the use of test results in individual psychological evaluations.

**PPSY 671 Appraisal and Assessment: School Counseling (3)**

Investigate standardized and non-standardized psychological instruments, including aptitude, achievement, interest, intelligence and personality tests and analyze them in terms of use, interpretation, ethics, testing programs and case studies.



**PPSY 672 Neuropsychology of Learning Disabilities and Traumatic Brain Injuries (3)**

Prerequisite: PPSY 670. Theoretical and evaluative strategies for understanding learning disabilities and traumatic brain injuries. Covers dysfunctions of neuropsychological processes including perceptual, expressive, attentional, emotional and integrative manifestations; emphasizes remedial and compensatory rehabilitation.

**PPSY 673 Appraisal and Assessment: Community Counseling (3)**

Prerequisite: PPSY 670. Survey course of major intelligence and personality tests used by professional counselors. Test interpretation and utilization of reports are addressed. Some test administration is taught within established eligibility guidelines.

**PPSY 674 Assessment for Intervention: Cognitive and Academic (5)**

Prerequisites: PPSY 670 and consent of instructor. Covers the historical and theoretical bases of psychological and educational assessment concentrating primarily in the areas of cognitive abilities and academic achievement and their relation to interventions.

**PPSY 676 Assessment for Intervention: Infant and Toddler (3)**

Prerequisites: PPSY 660, PPSY 674 and consent of instructor. Covers psychological services for infants and toddlers. Includes law, typical and atypical development, multicultural issues, and intervention services. Provides practice in assessment, with an emphasis on nontraditional methods.

**PPSY 678 Assessment for Intervention: Personality and Behavior (5)**

Prerequisites: PPSY 674 and consent of instructor. Supervised experience in administration and interpretation of ecologically valid psychological data including personality, behavioral, cognitive and academic. Emphasis on designing, implementing and evaluating ecologically-based interventions.

**PPSY 680 Special Populations Practicum (1-3)**

Prerequisite: PPSY 678. School psychology students explore in depth a special population including those with handicaps that interfere with learning. Instructor arranges research and involvement with a population not included in PPSY 678. S/U graded. Repeatable, maximum of three credits.

**PPSY 681 Practicum in Consultation (3)**

Prerequisite: PPSY 660. Supervised field experience concurrent with professional seminar. Application of case and/or systemic consultation strategies to problems/challenges in the schools or social service agencies.

**PPSY 691 Internship in Community Counseling: Marriage and Family Therapy (1-9)**

Prerequisites: Consent of practicum coordinator. Majors only. Permission of instructor must be obtained by the end of the seventh week of the preceding semester. Minimum of 600 hours on-site required. A culminating field experience for qualified students in the area of community counseling: marriage and family therapy. S/U graded. Repeatable, maximum 18 credits.

**PPSY 692 Internship in Community Counseling (1-9)**

Prerequisites: Consent of practicum coordinator required by the seventh week of the preceding semester. Majors only. Minimum of 600 total on-site hours required. A culminating field experience for qualified community counseling students in areas of specialty. S/U graded. Repeatable, maximum of 18 credits.

**PPSY 694 Practicum in Family Therapy (4)**

Prerequisites: PPSY 612, or PPSY 712, PPSY 666. Consent of practicum coordinator. Majors only. Receive supervised experiential training in counseling with families. Develop diagnostic and therapeutic skills in systemic approaches. Master's level students must also have completed PPSY 669. S/U graded.

**PPSY 695 Seminar: Contemporary Issues in Couples and Family Therapy (3)**

Prerequisites: PPSY 665. Majors only. Study of interventions utilized within the major approaches to couple and marital therapy. Covers current issues and research in family therapy.

**PPSY 701 Professional Development Seminar in Counseling Psychology (1)**

Majors only. An overview of current issues in the discipline of counseling psychology, as well as an introduction to the program and the faculty in the division.

**PPSY 702 Practicum in Counseling (4)**

Consent of practicum coordinator. Requires 12 hours per week minimum. Majors only. Supervised individual counseling experiences in a laboratory setting. Supervision will be directed toward improvement of counseling skills and case management. S/U graded.

**PPSY 703 Professional Development Seminar in Counselor Education (1)**

Majors only. An overview of current professional issues in Counselor Education with special focus on understanding and developing a professional identity in the field. Research will be strongly emphasized. Repeatable, maximum of three credits.

**PPSY 707 Seminar in Personality and Counseling Theories (3)**

Majors only. A comparative and critical in-depth analysis of personality and counseling theories including the interrelationship, philosophical foundations and practical applications.

**PPSY 712 Advanced Practicum in Individual Counseling (4)**

Prerequisites: PPSY 702, PPSY 707 and consent of practicum coordinator. Majors only. For the student with prior counseling experience, this course offers opportunity to develop counseling skills and philosophy in depth with clients in an individual counseling situation. S/U graded.

**PPSY 713 Practicum in Supervision of Play Therapy (3)**

Prerequisite: PPSY 617. Consent of practicum coordinator. Majors only. Doctoral candidates receive experience in supervising child psychotherapy training through working with a staff member.

**PPSY 714 Practicum in Supervision of Counseling (3-6)**

Prerequisites: PPSY 702, PPSY 712 and consent of practicum coordinator. Majors only. Students gain experience with a faculty member in supervising counseling practice. Repeatable, maximum of six credits.

**PPSY 715 Seminar in Counselor Supervision and Theory (2)**

Prerequisites: PPSY 702, PPSY 707, PPSY 712 and consent of practicum coordinator. Corequisite: PPSY 714. Majors only. Study problems involved in training individuals to engage in the therapeutic process.

**PPSY 716 Research Seminar in Counselor Education (3)**

Majors only. Review and analysis of reported research in counselor education with special emphasis on research published during the last ten years in the professional journals.

**PPSY 733 Research Apprenticeship (1)**

Consent of instructor. Majors only. Requires approximately 3-5 hours per week. Serve as an apprentice to a chosen faculty member and work on professional endeavors such as course planning, writing and research, library searches. S/U graded. Repeatable, maximum of two credits.

**PPSY 738 Practicum in Evidenced-Based Interventions (3)**

Prerequisites: PPSY 607, PPSY 638, and consent of practicum coordinator. Practice implementing interventions with children and adolescents with a variety of behavioral and emotional problems, with special emphasis on identifying and implementing evidenced-based interventions.

**PPSY 746 Seminar: Advanced Career Counseling, Theory and Assessment (3)**

Prerequisite: PPSY 616. This advanced seminar course provides in-depth study of career guidance and counseling over the life span. Career theory, resources, assessment, technology, and ethical and legal considerations will be discussed.

**PPSY 748 Instruction, Supervision and Leadership in School Counseling (3)**

Prerequisites: PPSY 602, PPSY 608. An advanced examination of issues and trends in professional school counseling with an emphasis on preparation and supervision of school counselors and leadership in implementation of school counseling programs.

**PPSY 755 Supervised Practicum in College Teaching (1-6)**

Consent of instructor. Majors only. Doctoral students receive experience in observation and supervised practice in college teaching. Repeatable, maximum of six credits.

**PPSY 758 Advanced Psychopathology (3)**

Prerequisite: PSY 355 or PPSY 558. Consent of instructor. Acquire understanding of developmental and behavioral disorders of childhood through adulthood. Thorough knowledge of specific pathologies and conditions through intensive reading, research or practical experience.

**PPSY 762 Practicum in Group Facilitation (4)**

Prerequisites: PPSY 605 and PPSY 662 or equivalent, PPSY 702, PPSY 712. Consent of instructor. Requires a minimum of 12 hours per week. Majors only. Receive supervised experience in the role of group facilitator, including feedback on group process, leadership and intervention skills and problem areas. S/U graded.

**PPSY 763 Seminar in School Psychology (3)**

Admission to graduate school psychology program required. Professional issues and problems concerning the school psychologist, including certification and licensure requirements, confidentiality, legal and ethical issues, roles and responsibilities. Observations in schools.

**PPSY 773 Practicum in Supervision of Group Facilitation (3)**

Prerequisite: PPSY 762 and consent of practicum coordinator. Majors only. Doctoral candidates receive experience in supervision of group facilitator training. Work with regular staff member supervising group practicum, observe techniques and processes and receive feedback on progress.

**PPSY 774 Practicum in Supervision of Family Therapy (3)**

Prerequisites: PPSY 694 and consent of practicum coordinator. Majors only. Doctoral candidates receive experience in supervision of family therapist training. Work with regular staff member in supervising family therapy practicum, observe techniques and processes, receive feedback on progress.

**PPSY 775 Supervision of Psychological Testing (3-9)**

Consent of instructor. Under faculty supervision, participate in instruction and supervision of students in testing courses from test administration to the final reporting of test findings.

**PPSY 777 Applied Neuropsychology (4)**

Prerequisites: PPSY 612 or PPSY 702; PPSY 674 and PPSY 678. Study of brain-behavior relationships with emphasis on procedures for diagnosing brain dysfunction and developing appropriate neuropsychological interventions. Study of assessment techniques and professional practice issues from conception to adulthood.

**PPSY 778 Clinical Neuropsychology Practicum (2)**

Prerequisites: PPSY 612, PPSY 672, PPSY 678, PPSY 777 or consent of instructor. Supervised practice in administering and interpreting neuropsychological tests and procedures for children, adolescents, and adults. Emphasizes rehabilitation, intervention development, neuropsychological report writing and use of the Halstead-Reitan Batteries.

**PPSY 779 Practicum in School Psychology (3)**

Prerequisites: PPSY 674, PPSY 678 and consent of instructor. Provide opportunity to experience various roles frequently expected of school psychologists. Experience takes place in public schools or affiliated agencies with supervision by practicing licensed school psychologists.

**PPSY 781 Evaluation of Psychological Services (3)**

Prerequisite: SRM 602. Learn the theory and practice of psychological program evaluation, and monitoring of treatment outcomes for individuals and groups.

**PPSY 782 Introduction to Rorschach Administration and Scoring (2)**

Prerequisites: PPSY 558, PPSY 674 and PPSY 678. Learn conceptual basis for comparing projective with traditional psychometric procedures and begin skills in administration and scoring of Rorschach test.

**PPSY 789 Internship in School Psychology (2-10)**

Prerequisites: PPSY 674, PPSY 678, PPSY 779 or consent of instructor. A minimum of 12 hours credit required. Full-time field experience in school psychology under qualified supervisors in selected settings; taken at end of program. S/U graded. Repeatable, maximum of 20 credits.

**PPSY 791 Internship in Counseling Psychology (1-5)**

Consent of instructor. Majors only. 2,000-hour predoctoral internship at a site meeting APPIC and or APA training standards to be completed in 3-6 consecutive semesters after completion of all Psy.D. course work. Repeatable, maximum of 18 credits.

**PPSY 792 Internship in Counselor Education and Supervision (2-6)**

Consent of instructor. For the doctoral student in Counselor Education and Supervision. Must complete a total of 1200 on-site hours in an approved setting. Repeatable, maximum of 20 credits.

**PPSY 793 Psychological Services Clinic I (1)**

Prerequisites: PPSY 702, PPSY 712, and either PPSY 694 or PPSY 617, and consent of practicum coordinator. Majors only. An introduction for students to gain experience as staff clinicians, conducting intake sessions, making recommendations for treatment, participating in clinic administrative duties and providing therapeutic services to clients. S/U graded.

**PPSY 794 Psychological Services Clinic II (2)**

Prerequisites: PPSY 702, PPSY 712, PPSY 793 and consent of practicum coordinator. Majors only. This course offers the opportunity to refine assessment and therapeutic skills with children, adolescents and adults, couples or families, and refine administrative skills including outreach to community agencies. S/U graded. Repeatable, maximum of four credits.

**PPSY 797 Doctoral Proposal Research (1-4)**

Consent of instructor. Majors only. Required for all doctoral students. Student must earn a maximum of 4 hours of credit in this course in partial fulfillment of requirements for all doctoral degrees, before admission to candidacy. S/U graded. Repeatable, maximum of four credits.

**PPSY 799 Doctoral Dissertation (1-12)**

Consent of instructor. Majors only and admission to candidacy. Required of all doctoral candidates. A student must earn a minimum of 12 hours of credit for the dissertation in partial fulfillment of requirements for all doctoral degrees. S/U graded. Repeatable, no limitations.

**PPSY 999 Graduate School Continuous Registration (1)**

To permit a graduate student to continue making progress in a degree program. S/U graded. Repeatable, no limitations.

## PSCI — POLITICAL SCIENCE

**PSCI 100 United States National Government (3)**

Identification and analysis of the principal rules, actors and institutions of national politics and explanation of their development. Required of all PSCI majors and minors. (GenEd)

**PSCI 105 Fundamentals of Politics (3)**

A comparative survey of political institutions and processes and of the various approaches to the explanation of politics. Required of all PSCI majors and minors. (GenEd)

**PSCI 203 Colorado Politics (3)**

Examination of Colorado state and local politics including the institutions and processes of policy making from a comparative perspective. (GenEd)

**PSCI 207 Women and Politics (3)**

Examination of the women's movement and its development including the strategies and tactics employed and the ends sought.

**PSCI 208 Introduction to Public Administration (3)**

Learn history and theory of public administration. Public policy process, administrative execution, organizational mission and external pressures on administrators analyzed. Emphasize case studies, decisions and impact on citizens.

**PSCI 210 Politics in the European Community (3)**

Prerequisite: PSCI 105. Sophomores or above. An examination of the relations among European-community states and the domestic politics of select members with emphasis on Great Britain, France and Germany.

**PSCI 220 Introduction to International Relations (3)**

Learn the basic principles, processes and problems of the international political system. (GenEd)

**PSCI 230 The Evolution of the Modern State (3)**

An examination of the historical development of the modern state, its accompanying social structures and intellectual foundations, from the Renaissance to the late-twentieth century.

**PSCI 301 Electoral Politics in the United States (3)**

Prerequisite: PSCI 100. Sophomores or above. An examination of the process for the nomination and election of national officials. What are the roles of the electorate, interest groups, political parties and the media.

**PSCI 302 Power in America (3)**

Prerequisite: PSCI 100. Sophomores or above. An examination of different theories of political and economic power and their applications to the national arena with special emphasis on corporate power and policy making.

**PSCI 303 Public Policy in the United States (3)**

Prerequisite: PSCI 100. Sophomores or above. American public policy in the areas of health care, transportation, education, housing, labor-management relations, income maintenance and taxation.

**PSCI 305 Politics of Education (3)**

Prerequisite: One Social Science Course. An examination of the policies adopted by the states and the national government and the roles played by interest groups and formal institutions in their formation.

**PSCI 306 Constitutional Law (3)**

Prerequisite: PSCI 100. Sophomores or above. An analysis of Supreme Court decisions regarding civil liberties and relations among the branches of the national government and between the national and state governments.

**PSCI 310 Politics of Central and East European States (3)**

Prerequisite: PSCI 105. Sophomores or above. An examination of the politics of the former Communist states in the area including Russia and of relations among the members of the Commonwealth of Independent States.

**PSCI 315 Comparative Public Policy (3)**

Prerequisites: PSCI 100, PSCI 105. Sophomores or above. Cross-nationally compare public policy in such areas as education, transportation, taxation, population and income maintenance. Identify and explain differences and similarities across policy areas within one country and cross-nationally.

**PSCI 318 The Politics of the Developing States (3)**

Prerequisite: PSCI 105. Sophomores or above. Analysis of the politics of the developing states from a comparative and historical perspective. Emergence of a Third World and domestic politics of selected states will be examined.

**PSCI 319 Pacific Rim Politics (3)**

An examination of the politics, public policies and economic development of Pacific Rim countries (with emphasis on China and Japan).

**PSCI 320 American Foreign Policy (3)**

Prerequisites: PSCI 100, PSCI 105. Sophomores or above. Analysis of American foreign policy with emphasis on the Twentieth Century and of the process by which policy is made.

**PSCI 321 War and Peace (3)**

Sophomores or above. Examination of the causes and occasions of wars and of the peaceful resolution of international disputes.

**PSCI 325 Conflict in the Middle East (3)**

Sophomores or above. Examination of the principal governmental and non-governmental actors and their policies in the Middle East and relations among them.

**PSCI 328 International Law and Organizations (3)**

Prerequisites: PSCI 105, PSCI 220. Sophomores or above. An examination of international organizations, e.g. U.N. and O.A.S. and international agreements concerning the environment, health, finance, trade, etc.

**PSCI 331 Political Philosophy I (3)**

Juniors or above. Analysis and evaluation of the principles and institutions proposed by major philosophers from Plato to Locke.

**PSCI 332 Political Philosophy II (3)**

Juniors or above. Analysis and evaluation of the principles and institutions proposed by major philosophers from Rousseau to Mill.

**PSCI 335 American Political Philosophy (3)**

Juniors or above. Analysis and evaluation of the principles and institutions proposed by major American philosophers from Madison to Dewey.

**PSCI 392 Internship (3-10)**

Prerequisite: Applicants must have 12 semester hours in political science. Provides opportunity for field experience as an observer and assistant to a public policymaker with supervised but self-directed research. Repeatable, maximum of 10 credits.

**PSCI 405 Problems in American Politics (3)**

Prerequisites: PSCI 100, PSCI 105 and a course in Group A. Seniors only. Select problems in American politics will be examined.

**PSCI 415 Problems in Comparative Politics (3)**

Prerequisites: PSCI 100, PSCI 105 and a course in Group D. Seniors only. Topics of current interest or controversy in comparative politics.

**PSCI 422 Directed Studies (1-3)**

Juniors and seniors only. Credit counts toward major, students must have taken two courses in the elective group of proposed directed study.

**PSCI 425 Problems in International Relations (3)**

Prerequisites: PSCI 100, PSCI 105 and a course in Group B. Seniors only. Select problems and theories for close and lengthy examination.

**PSCI 435 Problems in Political Philosophy (3)**

Prerequisites: PSCI 100, PSCI 105 and a course in Group C. Seniors only. Select problems or philosophies for close and lengthy attention.

**PSY — PSYCHOLOGY****PSY 120 Principles of Psychology (4)**

Surveys psychology as a science and applied discipline, including research methods, statistics, learning, motivation, sensation, perception, intelligence, personality and physiological, developmental, social and abnormal psychology. (GenEd)

**PSY 200 Psychological Statistics and Design (3)**

(2 lecture, 2 laboratory) Prerequisite: PSY 120. Required laboratory arranged. Basic scientific methods and statistical analysis procedures; emphasizing probability distribution statistics, hypothesis testing, computer applications for data manipulation and report writing.

**PSY 230 Human Growth and Development (3)**

Introduction to the science of developmental psychology. Study basic concepts and issues related to cognitive, socioemotional and physical development from conception through senescence. (GenEd)

**PSY 265 Social Psychology (3)**

Survey major areas of social psychology, discussing nature of and factors involved in human social behavior, impression management, prosocial behavior, aggression, conformity, obedience to authority, attitude change and interpersonal attraction. (GenEd)

**PSY 271 Psychological Testing and Measurements (3)**

Receive an introduction to psychological test theory, interpretation of results, group and individual tests (cognitive, affective and psychomotor), reliability, validity and standardization procedures.

**PSY 323 Health Psychology (3)**

Prerequisite: PSY 120. Explore psychological factors in maintenance of wellness, treatment of illnesses and recovery from or adjustment to ongoing health problems. Study theory, research methods and clinical applications in health psychology.

**PSY 330 Child and Adolescent Psychology (3)**

Prerequisite: PSY 230. Focus on human development from conception through adolescence, particularly physical, cognitive and socioemotional development. Learn research methods for studying developmental processes.

**PSY 331 Maturity and Aging (3)**

Prerequisite: PSY 230. Explore physical, cognitive and socioemotional variables related to adult development encompassing an age range from 20 to over 100. Emphasis in learning various research methods.

**PSY 341 Principles of Learning (3)**

Prerequisite: PSY 120. Explore principles of classical and operant conditioning. Understand principles as the basis for concept learning, problem-solving, information processing and memory. Emphasis on human behavior in everyday life.

**PSY 342 Cognitive and Behavioral Change: Theory, Assessment and Application (3)**

Prerequisite: PSY 341. Examine various behavioral and cognitive change procedures in terms of their theoretical basis, assessment procedures and applied strategies. Includes operant, respondent and social learning and cognitive procedures.

**PSY 344 Group Processes and Roles (3)**

Majors only. Examine human interactions, communication and group dynamics. Practice effective group membership and leadership roles for different types of groups. Students may be asked to participate in personal growth groups.

**PSY 350 Theories of Personality (3)**

Prerequisite: PSY 120. Study psychological theories and research methods used to explain personality development and functioning including psychoanalytic, neopsychoanalytic, cognitive, behavioral, humanistic and type-trait theories.

**PSY 365 Psychology and the Law (3)**

Prerequisite: PSY 265 or SOC 332. Examine social psychological theories and methods related to the legal system issues e.g., jury selection, eyewitness testimony, and death penalty cases.

**PSY 366 Industrial Psychology (3)**

Discover basic methods employed by psychologists in selection, placement, training and motivation of industrial personnel. Examine psychological factors influencing morale, production and job satisfaction.

**PSY 375 Sensation and Perception (3)**

Prerequisite: PSY 120. Laboratory arranged. Survey of how humans perceive the world through vision, hearing, touch, taste and smell. Examine physiological mechanisms, sensory processes, development, and theories of perception for each sensory modality.

**PSY 400 Research Design and Analysis (5)**

(4 lecture, 2 laboratory) Prerequisites: PSY 120, PSY 200. Laboratory required. Majors only. Advanced research methods and statistical analysis including ANOVA, regression, survey, factor analytic and qualitative research designs. Computer applications for research report writing, data gathering and analysis.

**PSY 407 Introduction to Counseling Theories (3)**

Prerequisite: PSY 350. Survey current theoretical approaches with individuals and groups. Not intended as training in counseling approaches, but as basis for future study.

**PSY 422 Directed Studies (1-3)**

Credit counts toward major, students must have taken two courses in the elective group of proposed directed study. A plan should be submitted and approved by all computer science faculty. Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**PSY 440 Cognition (3)**

Prerequisite: PSY 120. Explore human cognition by examining perception, attention, memory, intelligence, problem and cognitive development. Become familiar with neural bases of cognition, theoretical perspectives and research methods.

**PSY 443 Motivation (3)**

Prerequisite: PSY 120. Investigate motivational concepts and related research: drive, goals, direction, incentive, reinforcement, external stimulation, emotion, homeostasis, biological aspects, instinct and self-actualization.

**PSY 455 Abnormal Psychology (3)**

Prerequisite: PSY 120. Juniors or above. Study abnormal behavior: causes, symptoms, characteristics, classification, prevention and treatment.

**PSY 467 Psychology of Prejudice (3)**

Understand basic causes of prejudice and how prejudicial behavior is learned and diminished. Experience increased understanding of others.

**PSY 480 Physiological Psychology (5)**

(4 lecture, 2 laboratory) Prerequisites: PSY 120, introduction to BIO/ZOO or equivalent. Required laboratory. Survey neuroanatomy and neurophysiology, functional relationship between nervous system and behavior. Review sensory and motor processes and investigative procedures. Consider biochemical correlates of learning and other behaviors.

**PSY 482 Behavioral Genetics (3)**

Prerequisite: PSY 120. Introductory genetics course recommended. Consider genetic basis of behavior in humans and animals, contemporary issues, including genetic counseling, eugenics, intelligence and genetic correlates of psychopathology.

**PSY 490 History and Systems in Psychology (3)**

Prerequisite: PSY 120. Examine philosophy of science and psychological ideas, systems, goals, laws and paradigms. Study the evolution of the science of psychology. Recommended for students considering graduate school in psychology.

**PSY 491 Psychology Field Experience (1-6)**

Junior and above. Majors only and consent of instructor. Get full or part-time experience working with professionals in psychology, for one or more semesters. Make arrangements with instructor and supervisor during semester before registration. S/U graded. Repeatable, maximum of six credits.

**PSY 493 Practicum in Psychology (1-3)**

Prerequisite: Consent of instructor and department chairperson. Assist psychology faculty with research or laboratory; 38 clock hours per credit hour. Maximum of four (4) credits apply to psychology major. S/U graded. Repeatable, maximum of six credits.

**PSY 495 Special Topics in Psychology (1-5)**

Scheduled on irregular basis. Repeatable, under different subtitles.

**PSY 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**PSY 550 Cognitive Development (3)**

Examine classic and contemporary research and theory on cognitive development of children, and specific topics such as attention, memory, and intelligence. Undergraduates may not register without permission of instructor

**PSY 590 Seminar in History and Systems (3)**

Philosophical perspectives and major theories and systems are reviewed as they contributed to the development of contemporary psychology. Course required for state psychology board licensing eligibility.

**PSY 595 Special Topics in Psychology (1-5)**

Scheduled on an irregular basis to explore special areas in psychology and carries a subtitle for each offering. Check department office for topics currently planned. Repeatable, under different subtitles.

**PSY 600 Graduate Research Methodology (3)**

Graduates only. Majors only. Introduction to basic concepts in psychology research, including experimental design, nonexperimental methods, statistical analysis and researchers' ethical responsibilities. Overview of ongoing research in Psychology Department.

**PSY 620 Assessment and Interviewing (2)**

Develop verbal and written skills in interview and assessment procedures; study related ethical and legal issues.

**PSY 621 Practicum in College Teaching of Psychology (2)**

Master's students arrange with individual faculty to receive experience in observation and supervised practice. S/U graded. Repeatable, maximum of four credits.

**PSY 622 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**PSY 625 Principles of Neuropsychology (3)**

Survey of functional neuroanatomy and neurophysiology related to human psychological processes. Discussion of theories of neuropsychology and their experimental and clinical applications. Introduction to neuropsychological disorders and their assessment/treatment.

**PSY 626 Introduction to Neuropsychological Assessment (3)**

Prerequisite: PSY 625. Principles of behavioral and neurophysiological assessment. Standards of practice. Practice experience with behavioral/neurophysiological measurement, development of problem-lists and report writing.

**PSY 627 Psychometrics (3)**

Survey of psychometric considerations within areas of personality, psychopathology, intelligence, neuropsychology. Topics include: domain theory test construction, test operating characteristics, multivariate methods within psychometrics, exemplars across major areas.

**PSY 643 Theories of Motivation (3)**

Biological, learned, social, cognitive, operational and stimulus-based approaches to motivation; emphasis on implications for study of human behavior.

**PSY 664 Advanced Social Psychology (3)**

Examine major areas of social psychology e.g., aggression, altruism, cooperation, attitude change, and impression management; learn about observation and other data-collection techniques. Possible laboratory observations.

**PSY 680 Neuroscience Seminar (3)**

Graduates only. Reviews current theories and research regarding neurophysiological underpinnings of typical and atypical human behavior. Topics include: neuroscientific investigation of behavioral domains, cognitive models, genetic contributions, and developmental influences.

**PSY 693 Research Practicum (1-3)**

Each student will collaborate in research with a psychology professor. The research topic and nature of involvement are determined by consultation between student and professor. S/U graded.

**PSY 694 Practicum (3)**

Consent of instructor. Majors only. Supervised experience in diagnostics of neuropsychological deficits. Individual and group supervision emphasizing behavioral interview and psychometric data. S/U graded.

**PSY 697 Master's Project in Psychology (3-6)**

Majors only. Consent of advisor. For Master's students in psychology as an approved alternative to the written comprehensive examination. Students will enroll with major advisor to develop research proposal, conduct project and report results. S/U graded. Repeatable, maximum of six credits.

**PSY 699 Thesis (1-6)**

Recommended in place of M.A. project, especially for students applying to doctoral programs. S/U graded. Repeatable, no limitations.

**REC — RECREATION****REC 203 Introduction to Recreation and Leisure (3)**

Study conceptual foundations of play, recreation and leisure, historical and cultural perspectives, economic and political significance, leisure behavior and the environment, relationship of leisure service agencies, professionalism, issues and trends.

**REC 204 Introduction to Therapeutic Recreation (3)**

Study cultural and historical significance of therapeutic recreation, psychological, sociological, cultural, physiological nature of illness and disability; impact of social attitudes; advocacy, accessibility and inclusion; settings, services, and professional roles.

**REC 206 Commercial Recreation and Tourism (3)**

Organization of commercial recreation and tourism. Supply and demand components, historical and cultural perspectives, marketing, public relations, promotional techniques, roles and relationships of commercial leisure delivery systems, and programming strategies.

**REC 251 Leisure, Recreation and the Older Adult (3)**

Role of leisure and recreation of the elderly; how aging influences recreation programming methods and techniques. Concepts, practices, trends, current issues in aging and research. Visits, observations and practicum required.

**REC 351 Areas and Facilities in Parks and Recreation (3)**

Prerequisite: REC 203, REC 204. Study planning, designing and operating areas and facilities; environmental impact; relationship between leisure services and resource management; assessments, standards/regulations, maintenance, operations, construction, equipment; roles of contractors and consultants.

**REC 368 Programs in Recreation (3)**

Prerequisites: REC 203, REC 204, REC 206. Role and content of leisure programs and services for all populations and cultures in diverse leisure delivery settings; marketing and public relations, assessment, planning, implementation/evaluation of programs and services.

**REC 372 Recreation Leadership (3)**

Prerequisite: REC 203, REC 204, REC 206. Organization, assessment, conduct, evaluation of leisure programs and services for all populations throughout the lifespan in variety of settings and cultures using leadership techniques, strategies and resources.

**REC 394 Practicum in Recreation and Therapeutic Recreation (3)**

Prerequisites: REC 203, REC 204, REC 206. CPR and First Aid, 50 clock hours of experience in recreation and/or therapeutic recreation settings. Consent of instructor. Supervised experience in agency, which provides recreation and/or therapeutic recreation services. Internship and career planning, agency and student placement are pre-approved. Repeatable, maximum of six credits.

**REC 408 Workshop (1-3)**

Workshops on topics in professional preparation taught by practitioners on site. Topics cover standards that require students to demonstrate didactic skills and use agency resources not available on campus. Repeatable, under different subtitles.

**REC 415 Clinical Aspects in Therapeutic Recreation (3)**

Prerequisite: REC 203, REC 204, REC 206. Majors with therapeutic emphasis only. Medical, psychiatric and pharmacological terminology, medical and disabling conditions and illnesses, health and human service systems and the role of therapeutic recreation in various settings, documentation/assessment processes.

**REC 416 Techniques of Therapeutic Recreation (3)**

Prerequisite: REC 203, REC 204, REC 206. Majors with therapeutic emphasis only. Developing therapeutic relationships, planning and using leadership, supervision, facilitation techniques; implement interventions and select assistive techniques; adaptive devices and equipment to assist individuals with disabilities.

**REC 421 Program Design in Therapeutic Recreation (3)**

Prerequisite: REC 203, REC 204, REC 206 and concurrent enrollment in REC 415. Majors with therapeutic emphasis only. Application of therapeutic recreation process to design individual/group programs and treatment plans. Plan transitions, evaluate outcomes, assess impact of professional and regulatory standards on therapeutic recreation programs and services.

**REC 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**REC 426 Management and Issues in Therapeutic Recreation (3)**

Prerequisites: REC 203, REC 204, REC 206, REC 415, and concurrent enrollment in REC 416. Therapeutic recreation service history, theory, models, concepts and issues; management practices, financial, personnel, risk/safety procedures; legal and legislative issues, ethical practices, standards of practice, governmental regulatory standards, credentialing processes.

**REC 444 Professional Participation and Issues (3)**

Prerequisites: REC 368, REC 372, REC 394. Majors Only. Professional participation in on-site activities of agencies and professional associations. Experiences include standards, issues, legislation, regulations, conference planning, employment procedures; historical and current theories, and practices guiding professionals.

**REC 451 Administration of Leisure Delivery Systems (3)**

Prerequisites: REC 368, REC 372, REC 394. Majors only. Personnel, budgeting, financing, organizational practices, legal and legislative processes, regulatory standards, risk management and applications of computers and technology to the management of recreation services.

**REC 492 Internship in Recreation and Therapeutic Recreation (12)**

Prerequisites: All major course work completed. CPR and First Aid. 500 clock hours of approved experience in recreation and therapeutic recreation settings. 2.5 GPA in major courses. Consent of instructor. One full semester, 480-600 clock hours, minimum of 12-15 weeks, in approved agency under qualified supervisor with tasks encompassed by professional competencies of accreditation and certification bodies.

**REC 494 Recreation Evaluation and Research (3)**

Prerequisites: All course work in major should be completed and/or concurrent enrollment in REC 451, excluding REC 492. Majors only. Apply research and evaluation procedures. Use communication tools, media and computers to present evaluation and research in leisure services.

**RUS — RUSSIAN**

Note: Russian courses are not offered on a regular basis. Consult the Department of Foreign Languages for current status of the program.

**RUS 101 Elementary Russian I (5)**

For students with no previous Russian. Conversational Russian using oral techniques with reading and writing drills. Stresses comprehension, structure, pronunciation, fluency and cultural awareness. (GenEd)

**RUS 102 Elementary Russian II (5)**

Prerequisite: RUS 101. Continuation of RUS 101. Conversational Russian using oral techniques with reading and writing drills. Stresses comprehension, structure, pronunciation, fluency and cultural awareness. (GenEd)

**SCED — SCIENCE EDUCATION****SCED 422 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**SCED 441 Methods of Teaching Secondary School Science (3)**

Full admittance to PTEP or certification at the undergraduate level required. Prerequisite to student teaching. Consider curriculum and classroom organization, testing and evaluation, procedures and materials, relationship of subject area to total secondary program, emphasizing teaching techniques.

**SCED 513 Professional Renewal (1-12)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**SCED 541 Methods of Teaching Secondary School Science (3)**

Full admittance to PTEP or certification at the undergraduate level required. Prerequisite to student teaching. Consider curriculum and classroom organization, testing and evaluation, procedures and materials, relationship of subject area to total secondary program, emphasizing teaching techniques.

**SCED 555 Science Education for Adults and Communities (3)**

Provides an overview of the principles and skills required to teach non-formal and informal education with an adult/community education perspective.

**SCED 570 Teaching Science in the Elementary School (3)**

(2 lecture, 2 laboratory) Full admittance to PTEP or certification at the undergraduate level required. Develop a knowledge of objectives, methods and materials needed for teaching a functional elementary science program. Laboratory activities included.

**SCED 622 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**SCED 671 Elementary and Middle School Science Curriculum (3)**

Analyze elementary and middle level science programs regarding learning theory, research and the new Colorado Model Content Standards for science. Applications include strategies, management, and science technology and society.

**SCED 678 Science Education Seminar (1-2)**

Investigate current science education research, report on topics of interest in recent literature, discuss individual research problems. Repeatable, maximum of four credits.

**SCED 680 Science Curricula in Secondary/College Settings (3)**

A survey of contemporary trends and issues associated with designing, implementing and evaluating science curricula at the secondary and tertiary levels.

**SCED 694 Science Education Research (3)**

Prerequisite: SRM 502 or equivalent. An introduction to research in discipline-based science education, providing background and experience in the major activities associated with current practice in both field-based and quantitative studies.

**SCI — SCIENCE****SCI 103 Physical Science for the 21st Century (3)**

Important concepts in physical science applications to 20th century problems and anticipated applications in the 21st century. Taught by Physics or Chemistry faculty. (GenEd)

**SCI 106 Introduction to Spaceflight (3)**

Topics to be covered include history of spaceflight, mechanics of propulsion and satellite motion, living and working in space and the space shuttle. Taught by Physics faculty. (GenEd)

**SCI 109 The Cosmos (3)**

Present concepts of the universe, including the "big bang" and "steady state" theories, black holes and continuing expansion. Recent programs such as "Cosmos" will be studied. Taught by Physics faculty. (GenEd)

**SCI 265 Physical Science Concepts (4)**  
(3 lecture, 2 laboratory) Investigation of physical science concepts, emphasizing their application to the physical world. (GenEd)

**SCI 291 Scientific Writing (3)**  
Prerequisite: ENG 122. Techniques of problem identification, literature survey, data interpretation and synthesis and technical reports. (GenEd)

**SCI 391 Computer Applications in Science (2)**  
(1 lecture, 2 laboratory) Science teachers will learn how to apply the microcomputer as a tool in the classroom for interfacing with equipment, data management, software evaluation, record keeping and word processing.

**SCI 465 Principles of Scientific Inquiry: Finding Order in Chaos (3)**  
Prerequisites: two of the following courses: BIO 265, ESCI 265 or SCI 265. A look at the nature of scientific inquiry by investigating scientific breakthroughs in each of the four areas of science: biology, chemistry, earth sciences and physics.

**SCI 536 Principles of Physics II (3)**  
Investigation of basic principles of energy related to thermodynamics and wave motion with technological applications. For certified teachers interested in improving understanding and pedagogic delivery of physics concepts.

**SCI 591 Computer Applications in Science (2)**  
(1 lecture, 2 laboratory) Science teachers will learn how to apply the microcomputer as a tool in the classroom for interfacing with equipment, data management, software evaluation, record keeping and word processing.

## SES — SPORT AND EXERCISE SCIENCE

**Courses numbered SES 100 to SES 195 are: Repeatable, no limitations.**

**SES 100 Basketball (1)**  
Gain knowledge and skill in the game of basketball. (GenEd)

**SES 101 Flag Football (1)**  
Gain knowledge and skill in the game of flag football. (GenEd)

**SES 102 Soccer (1)**  
Gain knowledge and skill in the game of soccer. (GenEd)

**SES 103 Softball (1)**  
Gain knowledge and skill in the game of softball. (GenEd)

**SES 104 Volleyball (1)**  
Gain knowledge and skill in the game of volleyball. (GenEd)

**SES 110 Badminton (1)**  
Gain knowledge and skill in the game of badminton. (GenEd)

**SES 111 Bowling (1)**  
Gain knowledge and skill in the game of bowling. Participation fee. (GenEd)

**SES 113 Fly Fishing/Trap Shooting (1)**  
Gain knowledge and skill in the activities of fly fishing and trap shooting. (GenEd)

**SES 114 Golf (1)**  
Gain knowledge and skill in the game of golf. Participation fee. (GenEd)

**SES 115 In-Line Skating (1)**  
Gain knowledge and skill in the activity of in-line skating.

**SES 116 Water Safety Instructor (2)**  
A current Basic and Emergency Water Safety or Lifeguard Training certificate is required. Course trains instructor candidates to teach the American Red Cross Water Safety courses. (GenEd)

**SES 117 Racquetball (1)**  
Gain knowledge and skill in the game of racquetball. Participation fee. (GenEd)

**SES 118 Swimming (1)**  
Gain knowledge and skill in the activity of swimming. (GenEd)

**SES 119 Tennis (1)**  
Gain knowledge and skill in the game of tennis. (GenEd)

**SES 120 Lifeguard Training (1)**  
American Red Cross skills and knowledge required for an individual to properly assume the responsibilities of a lifeguard at a swimming pool or a protected (non-surf) open water beach.

**SES 125 Backpacking and Hiking (1)**  
Gain knowledge and skill in the activities of backpacking and hiking. (GenEd)

**SES 126 Canoeing (1)**  
Gain knowledge and skill in the activity of canoeing. (GenEd)

**SES 127 Cross-Country Skiing (1)**  
Gain knowledge and skill in the activity of cross-country skiing. Participation fee. (GenEd)

**SES 128 Cycling (1)**  
Gain knowledge and skill in the activity of cycling. (GenEd)

**SES 129 Downhill Skiing (1)**  
Gain knowledge and skill in the activity of downhill skiing. Participation fee. (GenEd)

**SES 130 Kayaking (1)**  
Gain knowledge and skill in the activity of kayaking. Participation fee. (GenEd)

**SES 131 Orienteering (1)**  
Gain knowledge and skill in the activities of orienteering. (GenEd)

**SES 132 Challenge Ropes Course (1)**  
Students will participate in high and low level rope adventure activities. (GenEd)

**SES 133 Scuba Diving (1)**  
Gain knowledge and skill in the activity of scuba diving. Participation fee. (GenEd)

**SES 134 Self Defense (1)**  
Gain knowledge and skill in the activity of self defense. (GenEd)

**SES 135 Rock Climbing (1)**  
Gain knowledge and skill in the activity of technical climbing. (GenEd)

**SES 136 Intermediate Challenge Ropes Course (1)**  
Prerequisite: SES 132. Designed to provide students with increased challenges on the UNC adventure course. The course will culminate in a field trip in the mountains.

**SES 145 Activity for Stress Management (1)**  
Use of a variety of physical activities to control stress. (GenEd)

**SES 146 Aerobics (1)**  
Improve personal skills and fitness through aerobic activities. (GenEd)

**SES 147 Aquacize (1)**  
Improve personal skills and fitness through aquacize activities. (GenEd)

**SES 148 Exercise and Weight Control (1)**  
Improve personal skills and fitness through exercise and weight control activities. (GenEd)

**SES 149 Fitness and Conditioning (1)**  
Improve personal skills and fitness through fitness and conditioning activities. (GenEd)

**SES 150 Jogging and Walking (1)**  
Improve personal skills and fitness through jogging and walking. (GenEd)

**SES 152 Swimming Conditioning (1)**  
Improve personal skills and fitness through swimming activities. (GenEd)

**SES 153 Weight Training (1)**  
Improve personal skills and fitness through weight training activities. (GenEd)

**SES 174 Social Dance (1)**  
Gain knowledge and skill in social dance. Includes traditional dance steps: polka, foxtrot, waltz, two-step; Latin American Rhythms: Cha-Cha, Rhumba, Tango; country swing and swing, social etiquette. (GenEd)

**SES 181 Introduction to Clinical Athletic Training (1)**  
This course is an introduction to the clinical athletic training program for first year students interested in the field of athletic training.

**SES 185 Varsity Baseball (1)**  
Participate in the sport of varsity baseball.

**SES 186 Varsity Basketball (1)**  
Participate in the sport of varsity basketball.

**SES 187 Varsity Football (1)**  
Participate in the sport of varsity football.

**SES 190 Varsity Swimming (1)**  
Participate in the sport of varsity swimming.

**SES 191 Varsity Tennis (1)**  
Participate in the sport of varsity tennis.

**SES 192 Varsity Track and Field (1)**  
Participate in the sport of varsity track.

**SES 193 Varsity Volleyball (1)**  
Participate in the sport of varsity volleyball.

**SES 194 Varsity Wrestling (1)**  
Participate in the sport of varsity wrestling.

**SES 195 Varsity Women's Soccer (1)**  
Participate in Varsity Women's Soccer.

**SES 200 Weight Training and Conditioning (1)**

Prerequisite: SES 220. Majors and minors only. Motor skill acquisition, advanced techniques, and knowledge appropriate for the successful participation and instruction in strength training activities and conditioning.

**SES 201 Track and Field (1)**

Majors and minors only. To teach the rules, training principles, techniques, movement skills, and analyses of the sport of track and field to professional preparation candidates completing a physical education major.

**SES 209 Dance Activities (1)**

Majors and minors only. Focus on participation and analyses of traditional, social, American folk and square, and popular dance forms appropriate for upper elementary and secondary physical education.

**SES 210 Developmentally Appropriate Elementary Activities (3)**

Majors and minors only. Exploration, participation, and analysis of broad-based variety of physical activities that promote an optimal childhood development of movement foundations.

**SES 220 Anatomical Kinesiology (3)**

Study of the anatomical bases of human movement. Laboratory provides application of principles.

**SES 221 Biomechanics (3)**

Prerequisites: SES 220 and 3 Math credits or equivalent. Application of mechanical principles in the study of human movement. Laboratory provides application of concepts.

**SES 232 Leadership in Outdoor**

**Education and Recreation (3)**  
Learn the theory and application of outdoor leadership. Topics include program design, risk management principles, trip planning, outdoor living skills, leadership considerations, teaching methodology, and facilitation and debriefing principles.

**SES 233 Advanced First Aid and Cardiopulmonary Resuscitation (2)**

Provide advanced and additional topics relative to first aid, i.e., increase proficiency skills, update CPR knowledge, increase knowledge in preventive and causative factors of injury and illness.

**SES 234 Mountain Biking (2)**

Prerequisite: SES 128, SES 232, and consent of instructor. Designed for outdoor education and recreation leaders implementing mountain biking into outdoor programs. The course covers technical skills, instructional methodology, leadership issues, and environmentally sound riding ethics.

**SES 235 Backcountry Skiing (2)**

Prerequisite: SES 127, SES 232, consent of instructor and concurrent enrollment in SES 238. Designed to develop outdoor education and recreation leaders' skills and knowledge of teaching and leading backcountry skiing. Including classic touring, telemarking, backcountry skills and avalanche awareness.

**SES 236 Technical Rock Climbing (2)**

Prerequisite: SES 135, SES 232 and consent of instructor. Develop students' knowledge and techniques for teaching and managing technical rock climbing activities, focusing on top-rope climbing. Topics include climbing and rappelling skills, anchors, site management, equipment, and safety.

**SES 237 Paddle Sports (2)**

Prerequisite: SES 130, SES 232 and consent of instructor. Introduces outdoor education and recreation leaders to technical skills, leadership concepts, and instructional methodologies of paddle sports. Emphasis is on minimum impact paddling skills for lake and river travel.

**SES 238 Winter Wilderness Living (2)**

Prerequisite: SES 232, consent of instructor, and concurrent enrollment with SES 235. Develop knowledge and techniques for teaching and leading winter camping and backcountry travel activities. Topics include avalanche awareness, and fundamental camping and travel techniques for winter environments.

**SES 240 Games I (3)**

Majors and minors only. Facilitates enhanced performance, analysis, and tactical understanding of invasion games and field run/score games (e.g., basketball, soccer, team handball, football, speedball, ultimate frisbee, hockey, softball, cricket, and modified kickball).

**SES 241 Games II (3)**

Majors and minors only. Facilitates enhanced performance, analysis, and tactical understanding of net/wall games and target games (e.g., tennis, volleyball, badminton, golf, shuffleboard, boccie, disc golf).

**SES 243 Outdoor and Adventure Programming (3)**

Majors only. Designed to provide physical education majors with activities and teaching strategies necessary for integrating and implementing outdoor and adventure activities into a school program.

**SES 266 Introduction to Physical Education as a Profession (3)**

Prerequisites: PTEP oral proficiency requirements, 2.5 overall GPA, and 2.7 major GPA. Corequisites: EDFE 170 and EDF 366. Majors and minors only. Focus on historical and current issues and philosophical perspectives of physical education, sport, and fitness. Implications for today's physical education programs will be identified and discussed.

**SES 300 Fitness Management (3)**

Majors only. Management, marketing, risk management and legal strategies as related to the exercise and fitness industry. Students observe, practice and analyze management, marketing and legal strategies.

**SES 305 Programming in Youth Development (3)**

Provides philosophical and practical base for working in youth development programs. Focus on programs that serve youth through physical activity, with special emphasis on goals of personal and social responsibility.

**SES 312 Coaching and Officiating of Baseball (2)**

Study techniques and strategies of coaching competitive baseball and obtain background and understanding of rules and techniques of baseball officiating.

**SES 313 Coaching and Officiating of Basketball (2)**

Study techniques and strategies of coaching competitive basketball and obtain background and understanding of rules and techniques of basketball officiating.

**SES 314 Coaching and Officiating of Football (2)**

Study techniques and strategies of coaching football and obtain background and understanding of rules and techniques of football officiating.

**SES 315 Coaching and Officiating of Gymnastics (2)**

Study techniques and strategies of coaching competitive gymnastics and obtain background and understanding of rules and techniques of gymnastics officiating.

**SES 316 Coaching and Officiating Tennis (2)**

Study techniques and strategies of coaching competitive tennis and obtain background and understanding of rules and techniques of tennis officiating.

**SES 317 Coaching and Officiating of Track and Field (2)**

Study techniques and strategies of coaching competitive track and field and obtain background and understanding of rules and techniques of track and field officiating.

**SES 318 Coaching and Officiating of Soccer (2)**

Study techniques and strategies of coaching competitive soccer and obtain background and understanding of rules and techniques of soccer officiating.

**SES 319 Coaching and Officiating of Softball (2)**

Study techniques and strategies of coaching competitive softball and obtain background and understanding of rules and techniques of softball officiating.



**SES 320 Coaching and Officiating of Swimming (2)**

Current WSI. Study techniques and strategies of coaching competitive swimming and obtain background and understanding of rules and techniques of swimming officiating.

**SES 321 Coaching and Officiating of Volleyball (2)**

Study techniques and strategies of coaching competitive volleyball and obtain background and understanding of rules and techniques of volleyball officiating.

**SES 322 Exercise Physiology I (3)**

Prerequisites: SES 220 and SES 221. Investigate the basic concepts in the physiological components of human movement. Laboratory provides application of principles.

**SES 323 Motor Learning and Development (3)**

Study of the neuropsychological components of motor behavior, with an emphasis on movement problems. Laboratory provides application of concepts.

**SES 324 Exercise Physiology II (3)**

Prerequisites: SES 220, SES 221, and SES 322. Application of the physiological principles of human movement during special circumstances such as training, altitude, hot and cold environments, and ergogenic aids.

**SES 325 Coaching and Officiating of Wrestling (2)**

Study techniques and strategies of coaching competitive wrestling and obtain background and understanding of rules and techniques of wrestling officiating.

**SES 330 Practicum in Exercise Leadership (3)**

Prerequisite: SES 220, SES 322 or equivalent. Students will gain exercise leadership. Skills in the fitness and wellness area. Such experiences may include leadership in: aerobics, weight training, fitness assessment, and other fitness related activities. Repeatable, maximum of nine credits.

**SES 333 Psychological Analysis of Sports, Exercise and Physical Activity (3)**

An introduction to the theories, subject matter and latest empirical research concerning the cognitive processes and emotional states that regulate and influence performance in sports, exercise and other physical activities.

**SES 335 Sports Pedagogy (2)**

Designed to analyze and study teaching and coaching behaviors that are necessary for students interested in the coaching profession.

**SES 338 Teaching Diverse Populations (3)**

Prerequisites: Majors only. Provisional admission to PTEP. Recreation majors and youth development minors only. This course is designed to assist students in acquiring methods and techniques for teaching diverse populations in traditional and alternative physical activity settings.

**SES 340 Planning and Instructional Design (3)**

(3 lecture, 3 laboratory) Prerequisites: SES 266, SES 240; plus six other activity credits. Provisional admittance to PTEP required. Laboratory required. Majors and minors only. Introductory course in sequence of professional teaching skills courses. Emphasis on identifying and developing beginning teaching skills necessary for effective instruction in physical education. Laboratory provides application of principles.

**SES 342 Teaching Health-Related Fitness (3)**

Prerequisites: SES 220, SES 322 and Full admittance to PTEP required. Majors and minors only. Facilitates future teacher's knowledge, skills appreciation and confidence needed to lead school-aged children in the development of active healthy lives.

**SES 380 Prevention and Care of Sports Injuries (2)**

Prerequisites: SES 220 or equivalent. Emphasis on prevention of injury to the athlete. Includes an overview of mechanisms, initial care, reconditioning and basic wrapping and taping techniques of sports injuries and organization of preventive programs.

**SES 381 Clinical Practicum in Athletic Training Level I: Practice Preparation (3)**

Prerequisite: Admission to Athletic Training Clinical Program required. Clinical proficiencies will be taught and proficiencies and skills applied in a practical situation progressing toward completion of their first semester NATA competencies.

**SES 382 Clinical Practicum in Athletic Training Level II: Protective Padding and Equipment Fitting (3)**

Prerequisites: Admission to the clinical athletic training program and successful completion of SES 381 with a grade of "C" or better. Clinical proficiencies will be taught and proficiencies and skills applied in a practical situation progressing toward completion of NATA competencies.

**SES 383 Clinical Practicum in Athletic Training Level III: Evaluation and Rehabilitation (3)**

Prerequisites: Admission to the clinical athletic training program and successful completion of SES 382 with a grade of "C" or better. Clinical proficiencies will be taught and proficiencies and skills applied in a practical situation progressing toward completion of NATA competencies.

**SES 390 Cardiopulmonary Resuscitation Certification (1)**

Basic, skills and techniques of basic life support. Includes emergency medical systems, CPR for adult and child, obstruction for adult and child and special situation techniques.

**SES 392 Internship in Physical Education (1-6)**

Consent of instructor. Put into practice the knowledge and skills learned in the classroom. Assume responsibilities in administration supervision and evaluation in physical education and athletic settings. S/U graded. Repeatable, may be taken two times.

**SES 394 Practicum in Outdoor Leadership (1-6)**

Prerequisite: SES 232 or equivalent. A field base, advanced course in wilderness-based teaching and leadership. Students develop skills and knowledge in group development and safe leadership of ethical and effective wilderness travel. Repeatable, maximum of twelve hours.

**SES 400 Wilderness First Responder/CPR (3)**

(3 lecture, 1 laboratory) Designed to provide outdoor practitioners with the knowledge needed to deal with emergencies in remote settings. 80-hour curriculum. Successful completion provides Wilderness First Responder certification.

**SES 401 Physiological Implications for Human Performance (3)**

This course is designed to explore the scientific principles of human physiology as related to exercise and performance. KPE majors cannot use this course for their core requirements.

**SES 404 Exercise Nutrition and Body Composition (3)**

Prerequisite: SES 322 or equivalent. The nutritional aspects of human performance will be explored with a focus on fitness. The current methods of assessment of body composition are included.

**SES 405 Exercise Programming for Cancer Patients (3)**

Prerequisites: SES 322 and SES 324 or equivalent. This course will prepare individuals to design and conduct exercise intervention programs for cancer patients. The physiological alterations from cancer therapy and the exercise effects will be presented.

**SES 408 Workshop in Sport and Exercise Science (1-3)**

A variety of special topics related to issues associated with the sport and exercise science field of study. S/U or letter graded. Repeatable, under different subtitles.

**SES 410 Cardiac Rehabilitation (3)**

Prerequisite: SES 322 or equivalent. Majors only. Juniors or above. Basic electrocardiography and ECG interpretation will be studied. Emphasis is placed on interpretation of resting and exercise EKG's, monitoring procedures, interpretation of abnormalities and drugs that may affect exercise.

**SES 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**SES 436 Social Influences on Sport and Exercise Behavior (3)**

Application of sociological concepts and theories to examine current practices, problems and issues in physical activity, exercise and sport.

**SES 440 Developing Pedagogical Skills in Elementary Physical Education (3)**

(3 lecture, 3 laboratory) Prerequisites: SES 323, SES 210, SES 340, and Full admittance to PTEP required. Laboratory required. Majors and minors only. Course is the second in sequence of professional teaching courses in physical education. Designed to develop skills and knowledge related to elementary physical education. Laboratory provides application of principles.

**SES 441 Learner Assessment and Physical Education Technology (3)**

Prerequisite: SES 340. Majors and minors only. Conceptual and practical understanding of alternative and traditional assessment of student learning in school physical education. Emphasis will be on formal and informal assessment and technological strategies that enhance learning.

**SES 442 Developing Pedagogical Skills in Secondary Physical Education (3)**

(3 lecture, 3 laboratory) Prerequisite: PE 440. Laboratory required. Majors and minors only. Provides preservice physical education teachers with theoretical knowledge and practical experiences required to successfully teach secondary physical education. Laboratory provides application of principles.

**SES 461 Administration and Law (3)**

Juniors or above. This course is designed to introduce the student to the legal and administrative principles involved in physical education teaching and coaching and working in recreational settings.

**SES 481 Clinical Practicum in Athletic Training Level IV: Therapeutic Modalities (3)**

Prerequisites: Admission to the clinical athletic training program and successful completion of SES 383 with a grade of "C" or better. Clinical proficiencies will be taught and proficiencies and skills applied in a practical situation progressing toward completion of their fourth semester NATA competencies.

**SES 482 Clinical Practicum in Athletic Training Level V: Senior Seminar (3)**

Prerequisites: Admission to the clinical athletic training program and successful completion of SES 481 with a grade of "C" or better. Clinical proficiencies will be taught and proficiencies and skills applied in a practical situation progressing toward completion of their fifth semester NATA competencies.

**SES 485 Mechanisms and Evaluation of Sports Injury (5)**

(4 lecture, 2 laboratory) Laboratory required. Prerequisite: SES 380 or equivalent. Admission to the Athletic Training Clinical Program required and consent of instructor. Majors only. Knowledge and practical applications that effectively recognize and evaluate the acute, chronic and life threatening injuries. Includes history, inspection, palpation, functional testing and special evaluation techniques.

**SES 486 Clinical Methods of Sports Injury Rehabilitation (4)**

Prerequisite: SES 380 or equivalent. Admission to the Athletic Training Clinical Program required and consent of instructor. Majors only. Neurophysiological basis, techniques and skills utilized in the prevention and rehabilitation of sports injuries. Includes indications, contraindications, applications of therapeutic exercise, protective aids and return to participation parameters.

**SES 487 Therapeutic Modalities (3)**

Prerequisites: admission to the Athletic Training Clinical Program required and consent of instructor. Majors only. Introduction and practical application of theory, basis, and uses of the following modalities: cold, heat, hydrotherapy, muscle stimulation, compression, biofeedback, ultrasound, massage and other modalities utilized in sports injury.

**SES 488 Athletic Training Administration (2)**

Admission to Clinical Athletic Training Program required and consent of instructor. Majors only. Organization and administration of athletic training and sports medicine program. Topics include facilities, equipment, medical personal, budgets, insurance, emergency planning, risk management, professional code of ethics and other current topics.

**SES 489 Medical Conditions (2)**

Prerequisite: Admission into clinical athletic training program. Clinical proficiencies, introductory skills, and evaluation techniques in the area of medical injury, illness and disabilities will be taught. Basic clinical competencies and skills will be tested and evaluated.

**SES 490 Exercise Assessment and Programming (4)**

Prerequisites: SES 220, SES 221, SES 300, SES 322, SES 323 and SES 324; successful completion of Competency Assessment I test. Majors only. Juniors and seniors only. Application of fitness assessments and the subsequent development, organization and implementation of exercise programs for healthy individuals and individuals with controlled diseases. Laboratory provides application of principles.

**SES 492 Internship in Sport and Exercise Science (6-12)**

Prerequisites: Completion of SES prefix courses with a GPA of 2.7; current CPR certification and consent of the Internship Director. Supervised experience in fitness and exercise programs or cardiac rehabilitation. S/U graded. Repeatable, maximum of 12 credits.

**SES 500 Wilderness First Responder/CPR (3)**

Designed to provide outdoor practitioners with the knowledge needed to deal with emergencies in remote settings. 80-hour curriculum. Successful completion provides Wilderness First Responder certification.

**SES 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**SES 510 Cardiac Rehabilitation (3)**

Prerequisite: SES 322 or SES 626 or equivalent. Majors only. Basic electrocardiography and ECG interpretation will be studied. Emphasis is placed on interpretation of resting and exercise EKG's and monitoring procedures, interpretation of abnormalities and drugs that may affect exercise.

**SES 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**SES 520 Marketing of Sport (3)**

Develop an understanding of and skill in the marketing process as it relates to promotion and public relations activities in physical education athletics and commercial sport operations. Cannot be taken in lieu of SES 576 required in the Sport Administration graduate programs.

**SES 550 Neural Aspects of Kinesiology (3)**

Advanced study of neurological influences to movement. Learn terminology, structures of the human nervous system, cellular and macroscopic neurophysiology, and clinical applications associated with reflexive and voluntary movements and posture.

**SES 555 Supervised Practicum in Teaching a College Basic Activity Course (1-3)**

Consent of advisor. Provide a supervised college teaching experience of a basic activity course for qualified graduate students. S/U graded. Repeatable, maximum of three credits.

**SES 560 Issues and Ethics in Sport Management (3)**

An exploration of major issues, ethical theories, moral reasoning and their impact on the operation of programs in sport, physical education, fitness, athletics and recreation.

**SES 570 Program Management (3)**

Develop an understanding of theories and principles involved in managing a program in human performance and leisure studies.

**SES 576 Sport Promotion and Marketing (3)**

Develop skill and understanding in the marketing process relating to promotion and public relations activities in physical education, athletics and commercial sport operations. Primary focus: application of marketing principles to specific sport scenarios.

**SES 580 Advanced Prevention, Care and Rehabilitation of Athletic Injuries (3)**

Prerequisite: SES 380 or equivalent. Analyze, evaluate and apply current techniques and practices to injuries in the school physical activity and sports programs.

**SES 594 Practicum in Outdoor Leadership (1-6)**

A field based, advanced course in wilderness-based teaching and leadership. Students develop skills and knowledge in group development, planning, and safe leadership of ethical and effective wilderness travel. Repeatable, maximum of 12 credits.

**SES 602 Introduction to Research in Sport and Exercise Science (3)**

Receive an introduction and some application of strategy and methods of research to problem solving in physical education, recreation and kinesiology.

**SES 603 Professional Development Seminar (3)**

This seminar will provide a cross disciplinary knowledge of the sport and exercise science field while simultaneously preparing students to disseminate scholarly work.

**SES 605 Youth Development and Physical Activity (3)**

Advanced theoretical and applied understanding of youth development programs. Emphasis is on service learning experience with physical activity programs that concentrate on the goals of personal and social responsibility.

**SES 606 Scholarship in Youth Development (3)**

The intent of this course is to critically examine scholarly efforts concerning programs and issues in youth development.

**SES 612 Assessment in Sport Pedagogy (3)**

Disseminate knowledge that contributes to quality professional practice. Students will experience new ways of thinking about assessment. Alternative ways of determining student learning, evaluation, grading and reporting will be explored.

**SES 614 Analysis of Teaching in Physical Education (3)**

Present and analyze systems used in evaluating student behavior, teacher behavior and student-teacher interaction. Study strategies for planning and implementing effective teaching and supervising in physical education.

**SES 620 Advanced Anatomical Kinesiology (3)**

Prerequisite: SES 220 or equivalent. Make an advanced study of the structural components of human movement, with special attention to the analysis of movement problems.

**SES 621 Advanced Biomechanics (3)**

Prerequisite: SES 221 or equivalent. Make an advanced study of the mechanical components of human movement, stressing the analysis of movement problems.

**SES 622 Directed Studies (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**SES 623 Advanced Neuromotor Kinesiology (3)**

Prerequisite: SES 323 or equivalent. Advanced study of the neuropsychological components of motor learning and control with an emphasis on physical activity applications.

**SES 624 Advanced Developmental Kinesiology (3)**

Prerequisite: SES 323 or equivalent. Advanced study of the influence of developmental and aging processes upon movement across the lifespan.

**SES 625 Laboratory Techniques in Kinesiological Research (3)**

Consent of instructor. Titles: Laboratory Techniques in Biomechanics; Techniques in Exercise Physiology; and Laboratory Techniques in Social Psychological Kinesiology. Repeatable, under different subtitles.

**SES 626 Advanced Physiological Kinesiology I (3)**

Prerequisite: SES 322 or equivalent. Advanced study of energy metabolism and exercise nutrition involved with human movement.

**SES 627 Advanced Physiological Kinesiology II (3)**

Prerequisite: SES 626 or equivalent. Advanced study of the muscular and endocrine systems involved with human movement.

**SES 628 Facilitating the Adventure Experience (3)**

Introduction of the philosophy, goals, and standards of adventure activities with specific emphasis on challenge course facilitation. Skills include knowledge, technique and awareness for conducting safe, ethical, and effective programs.

**SES 629 Concepts in Kinesiology (3)**

Experiences provided are: Biomechanics of Locomotion, Cardiopulmonary Physiology and Motivation. Repeatable, under different subtitles.

**SES 630 Challenge Course Programming (3)**

Study the history, philosophy and principles of adventure ropes courses. Construction, maintenance and risk management will be stressed for public school educators.

**SES 631 Outdoor Education (3)**

Study the history, philosophy and principles of outdoor physical education. Focus will be on the interdisciplinary nature and educational growth through outdoor experiences.

**SES 635 Exercise and Sports Psychology (3)**

Application of psychological concepts, principles and empirical findings to exercise programs and organized sport settings.

**SES 640 Curriculum in Physical Education (3)**

Consider the principles underlying curriculum instruction, various curriculum elements and build a curriculum in physical education.

**SES 641 Instructional Strategies for Elementary School Physical Education (3)**

Study of research and advanced techniques in teaching elementary physical education. Emphasis on teacher instruction and management, student skill learning time and current program planning.

**SES 642 Instructional Strategies for Secondary School Physical Education (3)**

Study of research and advanced techniques in teaching secondary physical education. Emphasis on understanding the role of the secondary teacher and secondary student needs in teaching physical education.

**SES 650 Financial Management for Sport Organizations (3)**

Develop an understanding of and skill in financial resource management for the operation of programs in sport, physical education, fitness, athletics and recreation.

**SES 660 Sport Personnel Management (3)**

Develop understanding of and skill in human resource management for the operation of programs in sport, physical education, fitness and athletics.

**SES 665 Advanced Sociological Kinesiology (3)**

Advanced study of the application of sociological concepts and theories to current issues in kinesiology.

**SES 670 Sport and Higher Education (3)**

Identification and examination of the contemporary issues and problems in sport in American higher education, their historical foundation, and propose methods for their resolution.

**SES 675 Management of Sports Facilities and Equipment (3)**

An examination of the functions of planning, management, evaluation, maintenance operations and situational analysis as they relate to management of sport facilities and equipment.

**SES 676 Sport Public Relations and Information Systems (3)**

Presentation of principles, standards and guidelines in sport public relations and information systems involved in sport information management.

**SES 678 Event Development and Management (3)**

Provide student with the skills necessary to develop, propose and conduct sport-related contests and special events including game management and facility management.

**SES 680 Perspectives in Sport Pedagogy (3)**

Philosophical perspectives of issues in physical education and sport, which are influenced by contemporary trends in American education.

**SES 685 Critical Pedagogy (3)**

Students will examine critical pedagogical philosophies and strategies while analyzing socialization process in schools. Also, students will learn how to develop critical awareness and take transformative action in schools.

**SES 688 Legal Aspects of Sport (3)**

Study the law and implications relative to physical education and sport. Emphasis on legal theory and responsibilities and risk management.

**SES 690 Graduate Seminar in Kinesiology (1)**

Consent of advisor. Examine professional and scholarly issues in kinesiology, physical education and sport administration through readings, discussions, laboratory tutorials and presentations of current research topics. S/U graded. Repeatable, maximum of three credits.

**SES 692 Graduate Internship in Sport and Exercise Science (1-6)**

Consent of instructor. Supervised experience structured to the special focus and functions of the student's graduate program. S/U graded. Repeatable, maximum of six credits.

**SES 694 Special Topics in Kinesiology (1-3)**

Engage in a course of study designed to investigate a special topic. Repeatable, maximum of three credits.

**SES 695 Seminar in Physical Education (2)**

Consent of instructor. Students will make an in-depth study of contemporary topics under guidance of qualified graduate faculty and consultants. Repeatable, may be taken two times.

**SES 696 College Teaching (3)**

Consent of instructor. Examines instructional models, issues and practices specific to teaching at the college level. Presentation modes such as lecture, discussion, questioning and small group procedures will be included.

**SES 699 Thesis (1-6)**

Optional for Master of Science students on recommendation of major advisor. S/U graded. Repeatable, no limitations.

**SES 703 Research Seminar in Sport and Exercise Science (3)**

For doctoral candidates planning to conduct research in Physical Education or allied areas. Learn techniques and procedures of research and receive aids in development of required research outline for degree.

**SES 705 Seminar in Sport Administration (2)**

Student will undertake an in-depth study of current topics related to the administration and management of sport, physical education, fitness and athletic programs.

**SES 755 Supervised Practicum in College Teaching (1-6)**

Experience supervised teaching of undergraduate kinesiology lessons. Develop course outlines and effective teaching techniques. S/U graded. Repeatable, maximum of six credits.

**SES 797 Doctoral Proposal Research (1-4)**

Doctoral students must earn a minimum-maximum of 4 hours credit in partial fulfillment of degree requirements. S/U graded. Repeatable, maximum of four credits.

**SES 799 Doctoral Dissertation (1-12)**

Doctoral students must earn at least 12 hours of credit for the dissertation as a requirement of the student's doctoral program. S/U graded. Repeatable, no limitations.

**SOC — SOCIOLOGY****SOC 100 Principles of Sociology (3)**

Overview of basic theories, methods, concepts and issues central to the discipline of sociology. Examine the relationship between social behavior and society. (GenEd)

**SOC 120 Introduction to Family Studies (3)**

Survey the characteristics, issues and problems of the family as a social institution. Topics discussed include: marital satisfaction, conflict, mate selection, alternatives and social change. (GenEd)

**SOC 131 Introduction to Sociological Practice (3)**

Examine facets of sociology in action, including the sub-disciplines of applied sociology and clinical sociology. Focus is on applying sociology in order to make a better world.

**SOC 141 Introduction to Criminal Justice (3)**

A survey of three components of criminal justice system: police, courts and correction. Emphasis on structural and situational factors influencing the way these agencies of social control operate.

**SOC 221 Sociology of Gender (3)**

Prerequisite: SOC 100 or equivalent. Examine gender stratification and social inequality. Topics include cultural definitions of masculinity and femininity, socialization and social change. (GenEd)

**SOC 222 Sociology of Popular Culture (3)**

Examines sociological perspectives, theories, and research on popular culture in society. Focus on people, activities, organizations, and institutions involved in production of popular culture.

**SOC 235 Social Change (3)**

Prerequisite: SOC 100 or equivalent. Study approaches to change including social movements and revolutions as the product of social factors. Compare the processes of change in underdeveloped countries with change in industrial societies.

**SOC 237 Sociology of Minorities (3)**

Prerequisite: SOC 100 or equivalent. Examine intergroup relations and the dynamics of power relating to ethnicity and other dimensions of social life that have produced tension and conflict among groups historically and in the present. (GenEd)

**SOC 247 Social Deviance (3)**

Prerequisite: SOC 100 or equivalent. Study social deviancy, particularly in terms of types, sources, functions, dysfunctions and social control mechanisms that operate relative to those departures from conformity.

**SOC 258 Contemporary Social Issues (3)**

Review theoretical perspectives and current research on contemporary social issues in society. Examine major issues from varied perspectives within diverse cultures.

**SOC 272 The Community (3)**

Prerequisite: SOC 100 or equivalent. Study the community from small to large as a complex of human relations. Explore the community historically and functionally on a cross-cultural basis through a critical perspective.

**SOC 275 Sociology of Mental Illness (3)**

Prerequisite: SOC 100 or equivalent. Sociological perspectives on mental illness. Examine conceptual models of mental illness, social epidemiological help-seeking behavior, social impacts of treatment, mental health delivery systems and social policy issues.

**SOC 277 Social Movements (3)**

Prerequisite: SOC 100 or equivalent. Explore significant aspects of unconventional political, economic, religious and cultist organizations. Study institutionalized and uninstitutionalized groups and their members.

**SOC 278 Sociology of Emotions (3)**

Examines sociological perspectives, theories, and research on emotions. Focus on the social definitions and relationship between social structure; and emotional socialization, emotion rules, management, and performance rituals in everyday life.

**SOC 302 Variable Topics in Sociology (1-4)**

Prerequisite: SOC 100 or equivalent. Topics may include sociology of religion, human ecology, social conflict, fascism, urban sociology, etc. Repeatable, may be taken three time, under different subtitles.

**SOC 322 Women and Aging (3)**

Prerequisite: SOC 100 or equivalent. Aging from a female perspective. Aspects of maturity and old age such as widowhood, work and retirement, and living situations are examined with particular reference to women.

**SOC 324 Issues in the Family (3)**

Prerequisite: SOC 120. Examine theoretical perspectives and research issues in the family. Analyze current issues in the family studies areas. Possible topics: singlehood, prenuptial contracts, dual career households, divorce, parenting, cohabitation, custody arrangements.

**SOC 326 Sociology of Childhood and Adolescence (3)**

Prerequisite: SOC 100 or equivalent. Examine the societal definition of childhood and adolescence and how social institutions influence socialization.

**SOC 330 Sociology of Organizations (3)**

Prerequisite: SOC 100 or equivalent. Study the social structure of modern bureaucratic organizations. Review human behavior in organizations from a sociological perspective.

**SOC 332 Social Psychology (3)**

Prerequisite: SOC 100 or equivalent. Examine the relationships between individuals and social systems. Focus on language interaction, self-conceptualizing behaviors and change. Review dominant social psychological theories and issues.

**SOC 333 Social Class and Inequality (3)**

Prerequisite: SOC 100 or equivalent. Presents a critical analysis of the realities of America's open-class system, making use of current theoretical perspectives and systematic research. Examines cross-cultural perspectives of stratification.

**SOC 340 Juvenile Delinquency (3)**

Prerequisite: SOC 100 or equivalent. Study the history of juvenile law, enforcement structures and explanations for the emergence of delinquency. Study the American juvenile legal system and its major problems.

**SOC 346 Criminology (3)**

Prerequisite: SOC 100 or equivalent. Survey criminal behavior generally, including theories of causation, types of crime, extent of crime, law enforcement, criminal justice, punishment and treatment.

**SOC 347 Sociology of Corrections (3)**

Prerequisite: SOC 100 or equivalent. Survey of the history and structure of punishment in Western societies. Review of the major philosophies and practices of modern corrections.

**SOC 351 Classical Social Theory (3)**

Prerequisite: SOC 100 or equivalent. Study the major classical theorists who established the foundations of sociology during the late 19th and early 20th centuries. Focus on the emergence of sociology.

**SOC 352 Contemporary Social Theory (3)**

Prerequisites: SOC 100, SOC 351. Review the major modern theoretical paradigms and prominent contemporary theorists in sociology. Examine contemporary issues in sociology.

**SOC 361 Social Research (3)**

Prerequisites: SOC 100 or equivalent, STAT 150. Juniors or above. Introduce research methodologies in the social sciences. Study the logic of research, role of theory, measurement, sampling and research designs.

**SOC 362 Social Statistics (3)**

Prerequisites: SOC 100 or equivalent, STAT 150. Introduce statistics in social science research. Levels of measurement; measures of central tendency and variability, probability; estimation and hypothesis testing; measures of association - chi square.

**SOC 371 Sociology of Aging (3)**

Prerequisite: SOC 100 or equivalent. Survey theories and research on the social aspects of aging with emphasis on later maturity and old age.

**SOC 372 Gangs, Schools and Community (3)**

Prerequisite: SOC 100. An examination of why today's youth join, remain in and leave gangs. This course also provides prospective teachers with strategies for dealing with gangs in their classroom, school and community.

**SOC 373 Political Sociology (3)**

Prerequisite: SOC 100 or equivalent. Evaluate structural strains and alternatives of left and right development in society. Analyze the state, its relationship to the masses, elites and problems of legitimacy.

**SOC 375 Medical Sociology (3)**

Prerequisite: SOC 100. Provides sociological perspective on the mutual relationships between health care and society. Covers epidemiology, social factors in illness, illness behavior, sick role, health care providers and health care policies.

**SOC 376 Revitalizing Urban Education (3)**

Prerequisite: SOC 100. Examines urban educational settings and the initiatives implemented to invigorate and preserve public education in large urban cities. Provides strategies for dealing with issues of school safety, diversity, and equality.

**SOC 377 Self in Modern Society (3)**

Prerequisite: SOC 100. Examine interrelationship between self and society in the modern world. Focus on sociological theories and research that analyze social influences on the self and response of self to these influences.

**SOC 378 Sociology of Education (3)**

Prerequisite: SOC 100 or equivalent. Systematically attempt to relate sociological concepts to the educational institution. Focus on a scientific analysis of social processes and patterns involved in the educational system.

**SOC 409 Senior Seminar in Sociology (3)**

Prerequisite: SOC 100 and three of the following courses: SOC 351, SOC 352, SOC 361 or SOC 362. Majors only. Culminating seminar to provide opportunity for students to experience sociology by conducting a research project on an instructor-approved topic. Capstone course for Social Issues and Sociology of Education Emphases.

**SOC 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**SOC 423 Violence and the Family (3)**

Prerequisite: SOC 100 or equivalent. Juniors or above. Examine major issues in family violence such as defining family violence, comparing types of explanations from different disciplines and translating social science perspectives to policy and social service delivery systems.

**SOC 425 Sociology of Work and Occupations (3)**

Prerequisite: SOC 100 or equivalent. Juniors or above. The origins of the structure and administration and the future of work and occupations. Other topics covered are occupational choice, socialization, managing workers, feelings about work and deviance.

**SOC 444 Sociology of Criminal Law (3)**

Prerequisites: SOC 100. Majors only. Seniors or above. Focus on substantive and procedural criminal law in the context of sociological theory, research and jurisprudence. Capstone course for criminal justice emphasis.

**SOC 445 Comparative Justice Systems (3)**

Prerequisites: SOC 100 and SOC 141. Examine the criminal justice systems in a variety of countries throughout the world. Compare and contrast those systems with each other and with the United States' justice system.

**SOC 447 Introduction to Grant Proposal Writing (3)**

Prerequisite: SOC 100 or equivalent. Juniors or above. A course for juniors and seniors designed to teach students how to prepare grant proposals. This course gives students opportunities to learn by actively participating in the writing of a grant proposal.

**SOC 448 Issues in Social Policy (3)**

Prerequisites: SOC 100, SOC 361, SOC 362. Survey the history of social policy development and contemporary social change and social trends. Study research in social policy and analyze application and implementation.

**SOC 452 Applied Social Theory (3)**

Prerequisites: SOC 100, Junior or senior status and permission of instructor. Provide understanding of theory in social sciences, knowledge of major paradigms used in social science, assess applied explanatory strengths and weaknesses of these paradigms.

**SOC 490 Internship (3-9)**

Prerequisite: SOC 100 or equivalent. Study the basic principles of field research by working as a volunteer intern with a community service agency. Repeatable, maximum of nine credits.

**SOC 491 Internship in Social Issues (3-9)**

Prerequisites: SOC 100, SOC 272, SOC 351 or equivalent. Social Issues Internship provides the student with an opportunity to study and gain experience in a social issue by working with a community agency or group. Repeatable, maximum of nine credits.

**SOC 492 Practicum in Applied Sociology (3-9)**

Prerequisite: SOC 100, SOC 131, SOC 258, SOC 351, SOC 352, SOC 361, SOC 362. Majors only. Seniors or above. Complete an individualized research project for a community agency or organization. Classroom component addresses issues in applied theory, applied research and professional socialization. Capstone course for Applied Sociology emphasis. Repeatable, maximum of nine credits.

**SOC 493 Practicum in Family Studies (3-9)**

Prerequisites: SOC 100, SOC 120, SOC 324, SOC 351, SOC 352, SOC 361, SOC 362. Majors only. Permission of instructor. Seniors or above. Complete an individualized applied research project for a family service agency. Classroom component addresses issues in applied research, professional socialization and family policy. Capstone course for the Family Studies emphasis.

**SOC 494 Research Practicum (3-6)**

Individualized research project for a non-profit organization. Classroom component addresses issues in applied research. Project must be initiated before enrollment and approval of the project is required.

**SOC 508 Workshop (1-6)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**SOC 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**SOC 523 Violence and the Family (3)**

Examine major issues in family violence such as defining family violence, comparing types of explanations from different disciplines and translating social science perspectives to policy and social service delivery systems.

**SOC 530 Organizational Analysis (3)**

Analysis of complex organizations in education, health, criminal justice, business and media. Application of theories in structures of organizations, behaviors of individuals within organizations and interorganizational relationships.

**SOC 532 Social Psychology and Group Dynamics (3)**

Prerequisite SOC 332 or consent of instructor. Analyze and discuss issues, trends, paradigms and applications. Includes social interaction theories, small group dynamics and group based methodologies.

**SOC 539 Seminar in Clinical Sociology (3)**

Examine important issues and activities related to clinical sociology, survey research methods and intervention techniques used by sociologists, consider ethics of sociology, emphasize critical thinking, research and writing.

**SOC 544 Sociology of Criminal Law (3)**

Graduates only. Focus on substantive and procedural criminal law in the context of sociological theory, research and jurisprudence.

**SOC 551 Classical Social Theory (3)**

Study the major pioneering classical social theorists who established modern sociology during the late 19th and early 20th centuries. Focus on the emergence of sociology as a discipline.

**SOC 552 Applied Social Theory (3)**

Provide understanding of the role of theory in the social sciences, provide knowledge of major paradigms utilized in contemporary social science theory, assess applied explanatory strengths and weaknesses of paradigms.

**SOC 554 Criminological Theories (3)**

Analyze and evaluate the major historical and contemporary theories of criminal behavior.

**SOC 562 Social Statistics (3)**

Prerequisites: SOC 100 or equivalent, STAT 150. Introduce applied statistics in social science research. Levels of measurement; measures of central tendency and variability, probability; estimation and hypothesis testing; measures of association - chi square.

**SOC 563 Qualitative Methods (3)**

Examination of major qualitative methods in sociology: ethnography, participant observation, phenomenological sociology, ethnomethodology, Verstehen sociology, hermeneutics and other methods. Emphasis is on field research and application of specific qualitative methods.

**SOC 571 Sociology of Aging (3)**

Prerequisite: SOC 100 or equivalent. Survey theories and research on the social aspects of aging with emphasis on later maturity and old age.

**SOC 580 Social Policy Analysis (3)**

Examines social policy and society. Socio-cultural historical conditions, social institutions which affect policy formation. Social change and social policy and utilization of sociological concepts and methods are examined.

**SOC 622 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**SOC 660 Applied Social Research (3)**

Apply techniques of applied sociological research to an approved community project in applied social research, understand the relationship between basic and applied social research.

**SOC 690 Practicum in College Teaching of Sociology (2)**

Masters students arrange with individual faculty to receive experience in observation and supervised practice. S/U Graded.

**SOC 691 Research Internship (1-9)**

Prerequisites: Nine hours of graduate credit in sociology and consent of instructor. S/U graded. Put classroom learning into practice with research in an organizational setting. Repeatable, maximum of nine credits.

**SOSC — SOCIAL SCIENCE****SOSC 200 Exploring Colorado (3)**

Uses a multidisciplinary approach to explore topics of Colorado history that are typically included in the K-6 curriculum. This course is especially appropriate for future elementary teachers.

**SOSC 300 Social Studies Methods of Inquiry (3)**

Prerequisites: Select one course from:  
a. HIST 100, HIST 101 or HIST 121;  
b. GEOG 100, GEOG 110 or GEOG 200;  
&  
c. ECON 101, ECON 103, ECON 105, PSCI 100 or PSCI 105. This course is designed to explain and integrate methods and forms of explanation found in the social science disciplines and history.

**SOSC 341 Teaching Secondary Social Studies (3)**

Full admittance to PTEP or certification at the undergraduate level required. Prerequisite to student teaching. Learn curriculum and course planning, teaching methods, strategies and techniques, materials, microcomputer applications, testing and evaluation.

**SOSC 400 Senior Seminar (3)**

Majors only. Seniors only. Research selected topics from historical and social science perspectives. Course focuses on the assessment of student's knowledge of history, the social sciences and research skills.

**SOSC 470 Theory and Research in Social Science (3)**

Study theory and research in the social sciences, emphasizing the logic of thinking analytically about human behavior in the context of the social sciences and history.

**SOSC 699 Thesis (1-6)**

Required of Master of Arts Candidates in Sociology on recommendation of major advisor. S/U graded. Repeatable, no limitations.

**SPAN — SPANISH****SPAN 101 Elementary Spanish I (5)**

First part of a two semester sequence emphasizing the development of a functional proficiency in the four basic language skills of listening, speaking, reading and writing. Oral communication is stressed. (GenEd)

**SPAN 102 Elementary Spanish II (5)**

Prerequisite: SPAN 101 or equivalent. A continuation of SPAN 101. (GenEd)

**SPAN 201 Intermediate Spanish I (3)**

Prerequisite: SPAN 102 or two years of high school Spanish. Review the basic principles of the language and emphasize oral Spanish communication. Become familiar with Spanish and Latin American civilization. (GenEd)

**SPAN 202 Intermediate Spanish II (3)**

Prerequisite: SPAN 201 or three years of high school Spanish. A continuation of SPAN 201. (GenEd)

**SPAN 301 Spanish Grammar (3)**

Prerequisite: SPAN 202 or approval from department. A systematic study of the more complex theories and forms of Spanish grammar with emphasis on mood, tense and voice.

**SPAN 302 Spanish Composition (3)**

Prerequisite: SPAN 301 or approval from department. Designed to increase the student's composition skills in Spanish through the use of original essays, descriptions, compositions, research papers and translations.

**SPAN 303 Spanish Conversation (3)**

Prerequisite: SPAN 302 or approval from department. A course designed to develop a high level of proficiency in spoken Spanish. Language functions are practiced in the context of practical everyday situations.

**SPAN 304 Introduction to Hispanic Literature (3)**

Prerequisite: SPAN 302 or approval from department. To acquaint the student with the elements of the various literary genres and literary criticism. The MLA Handbook will be introduced for research writing.

**SPAN 321 Spanish Civilization and Culture (3)**

Prerequisite: Three years of college Spanish or approval from department. Designed to acquaint students with general trends of Spanish civilization and culture. Includes historical, economic, political and artistic developments of Spain from prehistoric times to the present.

**SPAN 331 Latin American Civilization and Culture (3)**

Prerequisite: Three years of college Spanish or approval from department. Designed to examine the historical and cultural development of the Latin American countries. Surveys the major historical events from the pre-Columbian period to the present.

**SPAN 350 Masterpieces of Spanish Literature (3)**

Prerequisite: SPAN 304. Study Spanish Golden Age, Spanish and Spanish American Baroque and Latin American literary works of the period after independence. Includes poetry, novel, essay and drama.

**SPAN 351 Masterpieces of Latin American Literature (3)**

Prerequisite: SPAN 350. Study the masters of contemporary Latin American literature and the late 19th and 20th century Spanish literature.

**SPAN 405 Spanish Phonetics and Dialects (3)**

Prerequisite: Three years of college Spanish. The study of the major semantic, syntactic and phonological aspects of the Spanish language dialects and the standard Latin American Spanish found in the Americas.

**SPAN 406 Introduction to Translation (3)**

Prerequisites: SPAN 301, SPAN 302, SPAN 303, SPAN 405. Introduction to translation techniques and resource material in a wide variety of subjects and styles. Emphasis will be placed on translation accuracy.

**SPAN 407 Spanish for Oral Proficiency (3)**

Prerequisite: SPAN 303. A course designed to develop oral proficiency by exposing students to advanced and superior linguistic functions.

**SPAN 411 Spanish for Bilingual Education I (3)**

Prerequisite: SPAN 301, SPAN 302, SPAN 303. Develops Spanish language skills for teaching language arts and math. ACTFL/ETS Spanish Oral Proficiency Interview must be taken before student teaching. Can be taken after SPAN 412.

**SPAN 412 Spanish for Bilingual Education II (3)**

Prerequisite: SPAN 301, SPAN 302, SPAN 303. Develops Spanish language skills for teaching science and social studies. ACTFL/ETS Spanish Oral Proficiency Interview must be taken before student teaching. Can be taken before SPAN 411.

**SPAN 414 Contrastive Features of Spanish and English (3)**

Prerequisite: Three years of college Spanish. Consent of instructor. General contrastive approach to analysis of Spanish/English. Underscores areas through which native speakers of Spanish/English pass when learning their respective second language. Course taught in Spanish.

**SPAN 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**SPAN 455 Spanish Readings (3)**

Prerequisite: Two years of college Spanish or equivalent. Designed to accommodate the reading abilities and interests of students. Extensive reading to be discussed in class and in conference. Reading content is variable and determined by instructor.

**SPAN 456 Spanish and Latin American Short Story (3)**

Prerequisite: Two years of college Spanish or equivalent. Study of the short story in Spain and Spanish America. Will review its development from the Middle Ages to the present. Includes works of Matute, Garcia Marquez, Borges and Rulfo.

**SPAN 457 Literature of U. S. Hispanics (3)**

Prerequisite: Two years of college Spanish or equivalent. Examines the most important works of literature written by Hispanics from the United States. Includes the four genres: poetry, drama, novel and short story.

**SPAN 459 Hispanic Drama (3)**

Prerequisite: Two years of college Spanish or equivalent. A study of Hispanic drama masterpieces from Spain's Golden Age to the post-Civil War period; Latin America's Contemporary Theatre of Social Protest; and the United States' Hispanic Theatre Movement.

**SPAN 501 Spanish Grammar (3)**

A systematic study of the more complex theories and forms of Spanish grammar with emphasis on mood, tense and voice.

**SPAN 502 Spanish Composition (3)**

Designed to increase the student's composition skills in Spanish through the use of original essays, descriptions, compositions, research papers and translations.

**SPAN 503 Spanish Conversation (3)**

A course designed to develop a high level of proficiency in spoken Spanish. Language functions are practiced in the context of practical everyday situations.

**SPAN 505 Spanish Phonetics and Dialects (3)**

The study of the major semantic, syntactic and phonological aspects of the Spanish language dialects and the standard Latin American Spanish found in the Americas.

**SPAN 506 Translation (2)**

Students will be introduced to techniques, theory and history of translation in understanding the complexities involved in the translation of English to Spanish or Spanish to English.

**SPAN 507 Spanish for Oral Proficiency (3)**

A course designed to develop oral proficiency by exposing students to advanced and superior linguistic functions.

**SPAN 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**SPAN 510 Advanced Placement Program-Spanish (1-3)**

Consent of instructor. A course designed to provide content and pedagogical information related to the teaching of grammar and literature in the secondary school Spanish advanced placement program. S/U graded. Repeatable, no limitations.

**SPAN 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**SPAN 514 Contrastive Features of Spanish and English (3)**

Consent of instructor. General contrastive approach to analysis of Spanish/English. Underscores areas through which native speakers of Spanish/English pass when learning their respective second language. Course taught in Spanish.

**SPAN 521 Spanish Civilization and Culture (3)**

Designed to acquaint students with general trends of Spanish civilization and culture. Includes historical, economic, political and artistic developments of Spain from prehistoric times to the present.

**SPAN 531 Latin American Civilization and Culture (3)**

Designed to examine the historical and cultural development of the Latin American countries. Surveys the major historical events from the pre-Columbian period to the present.

**SPAN 550 Masterpieces of Spanish Literature (3)**

Prerequisite: SPAN 521. Study Spanish Golden Age, Spanish and Spanish American Baroque and Latin American literary works of the period after independence. Includes poetry, novel, essay and drama.

**SPAN 551 Masterpieces of Latin American Literature (3)**

Prerequisite: SPAN 550. Study the masters of contemporary Latin American literature and the late 19th and 20th century Spanish literature.

**SPAN 555 Spanish Readings (3)**

Designed to accommodate the reading abilities and interests of students. Extensive reading to be discussed in class and in conference. Reading content is variable and determined by instructor.

**SPAN 560 Spanish Civilization and Culture (2)**

Interpretation of the civilization and culture of Spain from its earliest beginnings to the present. Includes an analysis of the artistic, political and economic currents that have shaped modern Spain.

**SPAN 561 Latin American Civilization and Culture (2)**

Designed to examine the cultural heritage of Latin America and its current state of political, economic and social development. Forces affecting the everyday life of the people are emphasized.

**SPAN 562 Mexico and United States Hispanic Civilization and Culture (2)**

The course examines the history and cultural heritage of the contemporary Mexican and of the Hispanics (Chicano, Cuban, Puerto Rican) living in the United States.

**SPAN 563 Hispanic Cultural Topics (1-3)**

Selected readings and discussion of a variety of cultural topics that manifest themselves in the everyday life of the Hispanic people. Customs and traditions will be emphasized. Repeatable, maximum of three credits.

**SPAN 570 Readings in United States Hispanic Literature (1-3)**

Designed to cover literature in English or Spanish by United States Hispanics: Mexican, Cuban or Puerto Rican Americans. Readings in narrative, theatre, poetry. Content is variable and determined by instructor. Repeatable, maximum of three credits.

**SPAN 571 Readings in Spanish Literature (1-3)**

Thorough coverage of topics such as any period of Spanish literature, especially the Golden Age, the generation of 1898 and post-Civil War novel. Repeatable, maximum three credits.

**SPAN 572 Readings in Latin American Literature (1-3)**

Designed to cover selected readings in Latin American literature. Course may be designed by author, themes or genre. Content is variable and will be determined by instructor. Repeatable, maximum of three credits.

**SPAN 575 Masterpieces of 20th Century Latin America (2)**

A study of the most representative Masterpieces of 20th century Latin American literature. Representative topics might include the modern novel, the essay, contemporary theatre and poetry and fantastic literature.

**SPAN 576 Mexican Literature (2)**

Provides a basic understanding of Mexican contemporary literature, its general trends and some of the most important authors in each of the four genres: poetry, novel, theatre and short story.

**SPAN 580 Grammar Topics (1-3)**

An in-depth study of difficult and selected structures of the language, which traditionally present problems; such as: the subjunctive mood, ser and estar, preterite vs. imperfect and others. Repeatable, maximum of three credits.

**SPAN 581 Advanced Spanish Grammar (2)**

An intensive study of the more complex theories and forms of Spanish grammar, with emphasis on mood, tense and voice.

**SPAN 582 Spanish for Oral Proficiency (2)**

A course designed to develop oral proficiency by exposing students to superior linguistic functions.

**SPAN 583 Oral and Written Discourse (2)**

Designed to enable students to speak and write extensively in Spanish, using description, narrations and exposition. Emphasis will be on fluency, accuracy and organization.

**SPAN 622 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**SPCO — SPEECH COMMUNICATION****SPCO 100 Basics of Public Speaking (1)**

Corequisite: SPCO 103. Overview of concepts central to effective public speaking including managing nervousness, researching and organizing information, thinking critically, delivering messages, fielding questions and influencing an audience.

**SPCO 102 Introduction to Speech Communication (3)**

An introduction to the nature of speech communication as symbolic behavior including an overview of communication contexts.

**SPCO 103 Speaking Evaluation (2)**

Corequisite: SPCO 100. Evaluation of basic concepts central to effective speaking, listening, responding and critical thinking in an oral context.



**SPCO 111 Oral Interpretation (3)**  
(2 lecture, 2 laboratory) A study in the oral interpretation of literature, especially prose and poetry. Laboratory experiences include substantial student performance in individual and group presentations.

**SPCO 201 Inquiry in Speech Communication (3)**

An introduction to speech communication inquiry; includes practice with skills of critical thinking, library research and social science techniques.

**SPCO 211 Argumentation and Debate (3)**  
Study the basics of argumentation including reasoning, evidence and critical thinking. Practice the practical skills of public debating.

**SPCO 212 Professional Speaking (3)**

Prerequisite: SPCO 100 or instructor's consent. Practical experience in presentation design and delivery to facilitate understanding of a message and for influence of others.

**SPCO 221 Non-Verbal Communication (3)**

An overview of current theory and research in non-verbal communication. The course will focus on non-verbal communication message systems and their impact on the communication process.

**SPCO 232 Principles of Interviewing (3)**

Study interviewing from the perspectives of both the interviewer and interviewee. Examine information seeking, employment, appraisal, grievance, firing and exit interviews.

**SPCO 321 Interpersonal Theory (3)**

An undergraduate course focusing on the philosophical and theoretical issues of self-perception and relationships as they are affected by verbal and non-verbal communication.

**SPCO 323 Intercultural Communication (3)**

Learn about the communication concepts and theories inherent in the process of interacting with individuals in cross-cultural and inter-ethnic situations. (GenEd)

**SPCO 324 Family Communication (3)**

Investigate family structure from a human communication perspective.

**SPCO 330 Small Group Communication (3)**

Consent of instructor. Apply problem-solving and decision-making techniques and theories, particularly in the relationship between communication and group variables such as leadership roles and cohesiveness.

**SPCO 331 Organizational Communication (3)**

Study the dynamics of communication activities within an organization.

**SPCO 341 Courtroom Communication (3)**

Investigate the relationship between communication and the law and legal argumentation and persuasion within courtroom advocacy. Analyze communication within the legal profession.

**SPCO 343 Persuasion (3)**

Investigate major variables surrounding attitude change and human persuasion.

**SPCO 350 Communication in the Classroom (3)**

Prerequisite: SPCO 201 or consent of instructor. Investigate communication theory and research related specifically to the classroom setting. Course content will focus on the development of self-concept perception, verbal and non-verbal language and group dynamics.

**SPCO 352 Methods of Teaching Speech Communication (3)**

PTEP full admittance required. Focus of the course is on curriculum and classroom organization, testing and evaluation, procedures and materials specific to secondary speech communication instruction.

**SPCO 422 Directed Study (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**SPCO 431 Communication and Leadership (3)**

Examine theories of leadership, major leadership research findings and various leadership methods. Consider how the principles derived from leadership literature can be applied to small group and organizational settings.

**SPCO 461 Seminar in Speech Communication (1-3)**

Investigate issues of current concern for SPCO professionals with subject varied according to faculty expertise. Repeatable, maximum of nine credits, under different subtitles.

**SPCO 491 Speech Communication Theory (3)**

Consent of instructor. Summative course of the nature and function of communication theory and research including an overview of the traditions of theory and current perspectives in the discipline.

**SPCO 492 Undergraduate Internship (1-10)**

Supervised work experience in area of specialization. Submit a proposal to the coordinator of internships six weeks before registration. Maximum of six semester credit hours may be counted toward the major. Repeatable, maximum of ten credits.

**SPCO 502 Teaching College SPCO Courses (1)**

Required of all graduate teaching assistantships in SPCO. S/U graded. Repeatable, maximum of three credits.

**SPCO 504 Rhetorical Theory (3)**

Systematic review of the major contributions of rhetorical theorists for their probable impact on communication.

**SPCO 511 Instructional Communication (3)**

This graduate seminar for educators will focus on contemporary issues, theoretical perspectives and academic research in communication instruction.

**SPCO 512 Persuasion (3)**

Investigate the implications of contemporary research and theory in the area of persuasion and attitude change.

**SPCO 514 Interpersonal Communication (3)**

An overview of current theoretical perspectives on interpersonal communication and representative supportive research.

**SPCO 515 Group Communication (3)**

Examine theories of group process, major group process research findings and how the principles derived from speech communication literature can be applied to small groups.

**SPCO 517 Organizational Communication (3)**

Examine theories of organizing, research findings on organizational communication and how the principles derived from speech communication impact institutions.

**SPCO 531 Communication and Leadership (3)**

Examine theories of leadership, major leadership research findings and various leadership methods. Consider how the principles derived from leadership literature can be applied to small group and organizational settings.

**SPCO 541 Courtroom Communication (3)**

Investigate the relationship between communication and the law and legal argumentation and persuasion within courtroom advocacy. Analyze communication within the legal profession.

**SPCO 542 Seminar in Political Communication (3)**

Graduate students only. Analysis and criticism of political discourse using theories and methods from the discipline of speech communication.

**SPCO 552 Methods of Teaching Speech Communication (3)**

Full admittance to PTEP required. Focus of the course is on curriculum and classroom organization, testing and evaluation, procedures and materials specific to secondary speech communication instruction.

**SPCO 553 Professional Speaking (3)**

Prerequisites: SPCO 100, SPCO 103. Theory and practice of advanced speech composition, presentational decisions and techniques in a variety of contexts.

**SPCO 561 Seminar in Speech Communication (1-3)**

Investigate issues of current concern, for SPCO professionals with subject varied according to faculty expertise. Repeatable, maximum of nine credits, under different subtitles.

**SPCO 592 Internship (1-3)**

Receive professional communicative experience. Submit a proposal to the Internship Coordinator six weeks before registration. Hours may not be credited to 30 basic hours in speech communication graduate program. Repeatable, maximum of six credits.

**SPCO 600 Graduate Study in Communication (3)**

Orientation to graduate study with emphasis on learning to conduct literature reviews using the major journals of the speech communication discipline. Introduction to research using quantitative, qualitative and rhetorical approaches.

**SPCO 601 Qualitative Methods in Communication Research (3)**

Orientation to the methods of qualitative research that are most frequently used in the speech communication discipline. Practical experience in data gathering and analysis procedures.

**SPCO 602 Quantitative Methods in Communication Research (3)**

Orientation to the methods of quantitative research that are most frequently used in the speech communication discipline. Practical experience in data gathering and analysis procedures.

**SPCO 603 Communication Theory (3)**

The study of current theories of human communication and the process of theory building.

**SPCO 605 Rhetorical Criticism (3)**

Systematic review of the major contributions of rhetorical criticism theorists for their probable impact on communication.

**SPCO 622 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**SPCO 699 Thesis (1-6)**

Optional for Master of Arts candidates on recommendation of major advisor. S/U graded. Repeatable, no limitations.

**SRM — STATISTICS AND RESEARCH METHODS****SRM 502 Applied Statistics (4)**

Hypothesis formulation and testing; estimation and confidence limits; one- and two-sample tests; and statistical decision theory. Study inferences arising from distribution functions: t, F, chi-square, binomial, normal.

**SRM 520 Introduction to Statistical Computing (1)**

The course is designed to familiarize students with the use of statistical packages on both the mainframe and microcomputer platforms. Students will learn to organize, input, and analyze data.

**SRM 521 Statistical Computing with SPSS (1)**

Prerequisites: Completion of or concurrent enrollment in SRM 602; familiar with basic Windows commands and features, including use of pull-down menus, basic text editing features, etc. Course will acquaint students with the data management, data transformation and statistical analysis procedures available in SPSS for Windows.

**SRM 551 Mathematical Statistics with Applications I (4)**

Prerequisite: MATH 233 or Consent of instructor. Study of probability, random variables, distributions, moments, expected values and standard probability laws, probability bounds and point estimation.

**SRM 552 Mathematical Statistics with Applications II (4)**

Prerequisite: SRM 551. Continuation of SRM 551. Sampling distributions, estimation techniques, maximum likelihood, tests of hypothesis, confidence intervals, regression and chi-square tests.

**SRM 595 Special Topics in Applied Statistics and Research Methods (1-4)**

Specialized topics or contemporary issues. Topics vary. Repeatable, maximum two times, under different subtitles.

**SRM 600 Introduction to Graduate Research (3)**

Principles of research, design and analysis. Read and critique published research. Required of all first year graduate students except in those departments with substitutes. Taught every semester.

**SRM 602 Statistical Methods I (3)**

Prerequisite: SRM 600. Brief review of descriptive statistics. Covers probability, inference and sampling, correlation, hypothesis testing one-way ANOVA and an introduction to computer statistics packages.

**SRM 603 Statistical Methods II (3)**

Prerequisite: SRM 602. Continuation of SRM 602. Review of one-way ANOVA. Covers multiple comparisons, factorial designs, nested and mixed models, repeated measures, analysis of covariance and use of computer statistics packages.

**SRM 606 Multiple Linear Regression Analysis (3)**

Prerequisite: SRM 502 or Consent of instructor. Matrix approach to continuous and categorical variables, polynomial and selected non-linear models; formulation of ANOVA and ANCOVA designs and collinearity; regression methods; backward elimination, forward selection, stepwise regression.

**SRM 607 Non-Parametric Statistics (3)**

Prerequisite: SRM 502 or Consent of instructor. Study non-parametric tests; the rationale underlying the tests; examples of application of the tests in behavioral research; and comparison of the tests with their parametric equivalents.

**SRM 608 Experimental Design (3)**

Prerequisite: SRM 502 or SRM 603. Topics include factorial designs, crossed/nested designs, repeated measurements, blocking, analysis of covariance, pre- and post-multiple comparisons, trend analysis, power and use of computer software.

**SRM 609 Sampling Methods (3)**

Prerequisite: SRM 502 or Consent of instructor. Learn methods of survey sampling, including such topics as simple and stratified random sampling, ratio estimation, cluster sampling, systematic sampling, questionnaire design, problems of non-response and non-sampling errors.

**SRM 610 Statistical Methods III (3)**

Prerequisite: SRM 502 or SRM 603. Additional multiple regression topics. Introduction to MANOVA designs, discriminant analysis, factor analysis, cluster analysis, and path analysis.

**SRM 611 Advanced Statistical Data Analysis (3)**

Prerequisite: SRM 610. Student deals with large data sets and problems and issues that arise when working with such sets such as missing data, "dirty" data, rounding errors, storage issues, and the like.

**SRM 614 Linear Models (3)**

Prerequisite: MATH 525, SRM 502, SRM 551. Advanced topics in matrix algebra with applications to statistics. Development of the theory of linear models as a structure for handling problems in regression, analysis of variance, and experimental design.

**SRM 617 Biostatistics and Health Data Analysis (3)**

Prerequisite: SRM 600 or equivalent. Students will gain an understanding of biostatistical methods. This course enables students to develop the skills and knowledge necessary to manage and analyze health care and biomedical data.

**SRM 619 Resampling Methods (3)**

Prerequisite: SRM 502 or Consent of instructor. Use of computer simulation techniques to investigate problems in probability and statistics. Topics include jackknife procedures, bootstrap procedures and randomization tests.

**SRM 622 Directed Studies (1-3)**

Consent of instructor. Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**SRM 625 Applied Multiple Regression Analysis (3)**

Prerequisites: SRM 602 and SRM 603 or equivalent. Acquaint students with the major applications of and issues related to multiple regression analysis. Gain the skills necessary for conducting and interpreting studies involving multiple regression analysis.

**SRM 627 Survey Research Methods (3)**

Prerequisites: SRM 600, SRM 602 and EPSY 674 or equivalent. Covers the uses of surveys, the process involved in designing and implementing a survey study, and general issues related to survey research.

**SRM 635 Categorical Data Analysis (3)**

Principles of Categorical Data Analysis. Emphasis on loglinear and logit modeling techniques, which parallel many features of the general linear model in the continuous case. Taught alternate years.

**SRM 641 Special Topics (1-4)**

Consent of instructor. Advanced topics in applied statistics, measurement theory and research. Specific topics will be determined by the instructor and by current student needs. Repeatable, under different subtitles.

**SRM 645 Statistical Process Control (3)**

Prerequisites: SRM 502. Introduction to the use of statistical methods for quality improvement. Provides a comprehensive coverage of material from basic principles to state-of-the-art concepts and applications to both product and non-product situations.

**SRM 650 Research and Statistics Colloquium (1)**

Required of all masters and doctoral students. Students present the results of their own research and critique and discuss the presentations of other students and faculty. S/U graded. Repeatable, no limitations.

**SRM 670 Evaluation: Models and Designs (3)**

Prerequisite: SRM 600. Theories and methods of program evaluation, models of evaluation and the social context of evaluation. Nature and types of evaluation, planning, proposal writing and measurements.

**SRM 680 Introduction to Qualitative Research (3)**

Prerequisite: SRM 600 or equivalent. This course introduces qualitative research. Students will explore the foundations, methods and processes of qualitative research and will learn to evaluate published research.

**SRM 685 Educational Ethnography (3)**

Prerequisite: SRM 680 or equivalent. Provides in-depth study of ethnography as related to educational research including issues of ethics, politics, diversity, and the researcher's role. Students will propose and conduct a mini-educational ethnography.

**SRM 686 Qualitative Case Study Research (3)**

Prerequisite: SRM 680 or equivalent. In-depth examination of qualitative case study research. Characteristics of general case studies along with specific types of case studies will be covered. Students will propose and conduct a mini-case study.

**SRM 687 Narrative Inquiry (3)**

Prerequisites: SRM 680 or equivalent. In-depth study of narrative research including life history, oral history, biography, and auto-ethnography. Group and individual narrative inquiries will be conducted. Interviewing, ethics and research benefiting participants will be emphasized.

**SRM 688 Writing as Analysis of Qualitative Research (3)**

Prerequisites: SRM 680 or equivalent and one of the following SRM 685, SRM 686 or SRM 687 or equivalent. An in-depth study of the role writing plays in quantitative research data collection, analysis and representation. Students will use data they collected in a variety of analysis and writing activities.

**SRM 689 Internship in Applied Statistics (1-10)**

Experiential learning in an on-campus setting, such as the Research Consulting Lab. Students work a minimum of 3 hours per week for each hour of credit. S/U graded. Repeatable, maximum of 10 credits.

**SRM 694 Practicum (1-9)**

Consent of instructor. Experiential learning in an on-campus setting, such as the Research Consulting Lab, in conjunction with supervision by a faculty member. Students work a minimum of 3 hours per week for each hour of credit. S/U graded. Repeatable, maximum of 18 credits.

**SRM 700 Advanced Research Methods (3)**

Prerequisites: SRM 600 and either SRM 502 or SRM 602. Advanced research designs, concepts and methods. Required of all specialist and doctoral candidates.

**SRM 705 Advanced Issues in Research Methods (3)**

Prerequisites: SRM 602, SRM 603, SRM 610, and EPSY 674 or equivalent; additional course work in research design, measurement and statistics is recommended. Seminar is designed to acquaint advanced doctoral students with selected current issues in the field of research methodology. Topics will vary based on instructor and student interest.

**SRM 731 Multivariate Analysis (3)**

Prerequisite: SRM 551, SRM 614. Introduces multivariate data structures including geometrical properties and interpretations, the multivariate normal distribution, multivariate one- and two-sample tests on mean vectors and covariance matrices, MANOVA, and profile analysis.

**SRM 742 Seminar (3)**

Prerequisite: SRM 502 or consent of instructor. Study advanced topics in statistics, mathematics, research design and information processing.

**SRM 763 Apprenticeship (1-3)**

Consent of instructor. Work with faculty member on professional endeavors such as research, writing, course planning or public service. Requires 3 hours per week for each credit. S/U graded. Repeatable, maximum nine credits.

**SRM 770 Evaluation: Advanced Methods (3)**

Prerequisite: SRM 670. Advanced methodological techniques for program evaluation. Topics include tailoring evaluations to the needs of clients and stakeholders, diagnostic procedures and needs assessments, program monitoring and judging the impact of programs.

**SRM 797 Doctoral Proposal Research (1-4)**

Required of all doctoral students. Doctoral students must earn 4 hours as partial fulfillment of requirements for the doctorate. Check with the Graduate School regarding appropriate procedures and formats. S/U graded. Repeatable, maximum of four credits.

**SRM 799 Doctoral Dissertation (1-12)**

Required of all doctoral candidates. Must earn 12 hours as partial fulfillment of requirements for the doctorate. Dissertation must be approved by and defended before the dissertation committee. S/U graded. Repeatable, no limitations.

**STAT — STATISTICS****STAT 150 Introduction to Statistical Analysis (3)**

Prerequisite: MATH 023 with a grade of "C" or better or a full year of high school modern second year algebra with a grade of "C" or better or consent of instructor. Study techniques used in organizing data, including frequency distributions, histograms, measures of central tendency, measures of dispersion, probability distributions, point estimation, interval estimation and testing hypotheses. (GenEd)

**STAT 250 Statistics for Health Sciences (3)**

Prerequisite: MATH 023 with a grade of "C" or better or a full year of high school modern second year algebra with a grade of "C" or better or consent of instructor. Receive an introduction to applied statistics, including such topics as histograms, central tendency, dispersion, normal distribution, hypothesis testing, chi-square and regression. Primarily for nursing and health science majors. (GenEd)

**STAT 251 Statistics for Business and Economics (3)**

Prerequisites: MATH 124 and select either 1) successful completion of the computer proficiency exam; 2) concurrent enrollment in BA 101; or 3) completion of BA 101. Learn the use of statistics in business activities through techniques of descriptive statistics, sampling distributions and statistical estimation. (F,S)

**STAT 406 Multiple Linear Regression (3)**

Prerequisite: MATH 350 with the grade of "C" or better. Topics in multiple linear regression, estimation of model parameters, inferences, diagnostics, model assumptions, ANOVA formulation.

**STAT 409 Sampling Techniques (3)**

Prerequisite: MATH 350 with the grade of "C" or better. Introduction to elementary sampling concepts. Includes random sampling, stratified sampling, cluster sampling and systematic sampling. Inferences and assumptions are presented for all sampling methods.

**STAT 422 Directed Studies (1-3)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**STAT 495 Topics in Applied Statistics (1-4)**

Consent of instructor. Topics selected from linear models, experimental designs, sampling, multivariate analysis, operations research methods or other areas in applied statistics form the focus of this course. Repeatable, under different subtitles.

## STEP — SECONDARY TEACHER EDUCATION PROGRAM

**STEP 161 Observation and Analysis of Secondary Teaching I (2)**

Corequisite: EDF 366, ET 249. Provisional or full admittance to the Secondary PTEP required. STEP 161 course activities, seminars and field experiences support Phase I course work. S/U graded.

**STEP 262 Observation and Analysis of Secondary Teaching II (2)**

Prerequisites: STEP 161, EDF 366, ET 249. Corequisites: EDSE 360, EPSY 349. Provisional or full admittance to the Secondary PTEP required. STEP 262 course activities, seminars and field experiences support Phase II course work.

**STEP 363 Clinical Experience: Secondary (2)**

Prerequisites: STEP 161, EDF 366, ET 249, STEP 262, EDSE 360, EPSY 349. Corequisites: EDRD 324, ET 349 and the appropriate content methods course(s). Junior or above standing. May be repeated in any semester for double majors. Full admittance to the Secondary PTEP required and consent of content area advisor. STEP 363 course activities, seminars and field experiences support Phase III course work.

**STEP 464 Secondary Student Teaching (1-14)**

Prerequisites: Completion of Phases I-III in their entirety. Consent of Advisor. A 16 week experience in content area teaching in senior high where the student demonstrates effective teaching from a culmination of prior knowledge, skills and behaviors. S/U graded. Repeatable, under different subtitles.

## TED — TEACHER EDUCATION

**TED 600 Professional Seminar I (1)**

This course is designed to provide students with information regarding program procedures and expectations, development of professional portfolios, and implementation of a teacher-researcher project.

**TED 601 Conceptions of Schooling (3)**

Examination and analysis of the nature and scope of American education, the common school tradition and what today's schools are for; becoming a citizen in a democratic society.

**TED 602 Teacher Leadership (3)**

Assist teachers in exploring their professional context (socially, politically and organizationally) and their role in enhancing, general schooling conditions, learning processes and outcomes.

**TED 603 Alternative Teaching and Assessment Strategies (3)**

The content of this course is intended to expand teacher's repertoires in the classroom by helping them develop facility with alternate assessment and instruction strategies.

**TED 605 Professional Seminar II (2)**

Prerequisites: SRM 600, TED 600. This course is designed to be a capstone experience. Synthesize and integrate what has been learned in the content and pedagogy coursework with classroom teaching and other work related experiences.

## TESL — TEACHING ENGLISH AS A SECOND LANGUAGE

Note: For information on Elementary Education and Middle School Education Endorsement in English as a Second Language or the minor, see the information provided under the Department of Hispanic Studies.

**TESL 301 TESL Practicum I (2)**

Prerequisite: HISP 395, HISP 400. A beginning level field experience in Teaching English as a Second Language. S/U graded.

**TESL 302 TESL Practicum II (1-2)**

Prerequisite: HISP 395, HISP 400, TESL 301. An intermediate/advanced level field experience for students taking a TESL minor or concentration. S/U graded.

**TESL 400 Methods and Approaches of ESL/EFL (3)**

Prepare teachers to develop teaching ability, meet students' needs ESL/EFL educational settings. Impart theoretical knowledge, display array of activities pertinent to teaching situation, give general information of profession ESL/EFL.

## THEA — THEATRE ARTS

**THEA 100 Individual Performance in Theatre (2)**

Majors only or consent of instructor. Participation in Little Theatre of the Rockies productions. Students must participate in 90 hours. Repeatable, no limitations.

**THEA 110 Performance in a Theatrical Production (2)**

Majors or Consent of Instructor. Practical experience as an actor or actress in mainstage productions. Repeatable, no limitations.

**THEA 125 Theatre in Film (3)**

Students have an opportunity to enrich their appreciation of society and culture by envisioning the human condition aspects of tragedy and triumph through the medium of theatre and film.

**THEA 130 Introduction to the Theatre (3)**

For non-majors. A survey of Theatre history and its effects upon modern Theatre. The roles of the actors, directors, choreographers, technicians, designers and critics will be explored through live presentations. (GenEd)

**THEA 135 Playscript Analysis (3)**

Majors and minors only. A survey of dramatic literature through script analysis. (This course is a prerequisite for many other courses in the Theatre Department and should be taken in the first year.)

**THEA 149 Orientation to Technology (3)**

Required laboratory arranged. Majors and minors only. Covers the practical application of stage construction, lighting and costume construction. Familiarizes student with equipment, hardware and safety in each area and hands-on experience with practical projects.

**THEA 150 Actor's Lab (1)**

(Laboratory activity-3 contact hours=1 credit hour). A one semester hour credit will be given for participation as an actor in a student directed scene. Repeatable, no limitations.

**THEA 159 Acting Theories and Practice (3)**

This course will provide an opportunity to study, from the viewpoint of an actor, the major elements of dramatic literature, playscript analysis, and historical acting methods. (GenEd)

**THEA 160 Beginning Acting (3)**

The emphasis of the course is on the primary needs of acting: emotional recall and recreation, concentration, motivation, personality and character development, physical and vocal ingredients of character and believability.

**THEA 190 Stage Speech I (2)**

Will help to develop good speech for the stage through intelligent use and care of the speaking instrument and appreciation and control of the language, the play, and character.

**THEA 193 Stage Speech and Dialects (3)**

Prerequisite: THEA 190 or consent of instructor. This course deals with continued development of intelligent use and care of the speaking voice utilizing Linkater and Lessac approaches and studies to the major stage dialects.

**THEA 210 Drafting and Painting for the Theatre (3)**

Prerequisites: THEA 135, THEA 149 or equivalent. Majors and minors only. Required laboratory arranged. An introduction course to the basics of theatrical drafting and scenic painting. Several projects allow the student to explore the applications of this foundation class.

**THEA 220 Stage Costume (3)**

Prerequisites: THEA 149 or equivalent. Design Technology, Teacher Education students, or by instructor consent. Required laboratory arranged. Introduction to stage costume, approach to the play, survey of dress history, research, the designer's tools, rendering, sketching, fabrics, putting a show together.

**THEA 221 Costume History (3)**

Prerequisites: THEA 149, THEA 220 or consent of instructor. Sophomores or above. Costume from ancient to modern times with attention for theatre design. Evolution of garments, cultural influence. Western world dress with Asian influence and world cultures noted.

**THEA 222 Costume Technology I (3)**

Prerequisites: THEA 149, THEA 220 or equivalent. Required laboratory arranged. Sophomores or above. Introduction to technical skills and crafts used in costuming. Sewing, cutting from patterns, fabric modification, dyeing, painting, garment fitting and alterations are included.

**THEA 230 Stage Lighting Design for the Theatre (3)**

Prerequisites: THEA 135, THEA 149, THEA 210 or equivalent. Required laboratory arranged. An introduction to designing with light, practical applications and theatrical use. Course concentrates on the process from script analysis, concept and paperwork through actually hanging and lighting two projects.

**THEA 240 Beginning Stage Directing (3)**

Prerequisites: THEA 135, THEA 149 and THEA 160 or consent of instructor. A basic course in the principles of directing a play. The major focus is on contemporary theories and practices of stage directing.

**THEA 245 Sound Design (3)**

Prerequisites: THEA 149 or consent of instructor. Required laboratory arranged. Prepares the student to design, set-up, operate and repair sound reinforcement and recording equipment with emphasis on theatre specific practices. Digital audio and live performance mixing is also covered.

**THEA 250 Stage Make Up I (3)**

Prerequisite: THEA 160. A basic course designed to acquaint the student with the principles of stage make-up.

**THEA 260 Scene Study (3)**

Prerequisite: THEA 160. Acting or directing emphasis only. A step-by-step process approach to scene study. Units will be covered connecting the actor with the discovery of purpose/obstacle/relationships/given circumstances/character/orchestration and text scoring.

**THEA 275 Stage Movement I (2)**

(2 contact hours per week) Two-part series of courses in the preparation of actor's skills in movement. Emphasis is movement analysis, body alignment and corrections.

**THEA 276 Stage Movement II (2)**

(2 contact hours per week) Prerequisite: THEA 275. Second in a two-part series of courses in the preparation of actor's skills in movement. Emphasis is movement analysis, body alignment and corrections.

**THEA 300 Advanced Individual Performance in Theatre (2)**

Prerequisites: THEA 100, THEA 149. Majors and minors only. Advanced level work in technical theatre in a given show assignment such as properties master, master carpenter, seamstress, master electrician, etc. This credit may not be used for design assignments. Repeatable, may be taken four times.

**THEA 308 Theatre Workshop (1-4)**

Receive information about current important ideas in many fields of knowledge from authorities nationally known in their fields of specialization. Repeatable, under different subtitles.

**THEA 310 Beginning Scene Design (3)**

(2 lecture, 1 laboratory) Prerequisite: THEA 210. A fundamental course in scene design. Emphasis is placed on the aesthetics and styles of stage design and the development of rendering skills and staging concepts.

**THEA 311 Scenic Painting for the Theatre (3)**

Prerequisites: THEA 135, THEA 149, THEA 210, or equivalent. Required laboratory arranged. Advanced work in scenic painting techniques including moldings, texture and foam carving. Advanced color mixing and hands on projects. Repeatable, may be taken two times.

**THEA 320 Stage Costume Design (3)**

Prerequisite: THEA 220 or consent of instructor. Introduction to designing costumes for the stage. Emphasis on the historical, conventional and visual tools and media available to the designer for translating verbal script to visual and tactile form.

**THEA 322 Costume Technology II (3)**

Prerequisites: THEA 149, THEA 220, THEA 222, or equivalent. Required laboratory arranged. Sophomores or above. Advanced technology skills for pattern drafting, draping, sewing and construction. Work with theatre productions. Develops skills of cutter/drafter and costume shop manager.

**THEA 324 Masterpieces in Theatrical Production (2)**

Prerequisite: THEA 135. THEA 330 recommended. A survey of important plays that have had major impact on the evolution of the modern theatre through thematic concerns, social reflection, revolutionary genre, and production styles.

**THEA 330 History of Theatre I (3)**

The development of American and European Theatre from its classical roots through the mid-17th Century. Emphasis on research. (GenEd)

**THEA 331 History of Theatre II (3)**

A continuation of THEA 330, focusing on American, European and Eastern Theatre. Emphasis on research. (GenEd)

**THEA 332 Advanced Lighting Design for the Theatre (3)**

Prerequisites: THEA 149, THEA 210, THEA 230 or equivalent. Required laboratory arranged. Advanced work in stage lighting design with an emphasis on the artistic applications of lighting in plays, operas, musicals and tour shows.

**THEA 335 Advanced Voice Production (2)**

Prerequisites: THEA 190. Majors only. Acting emphasis only. Advanced study of the natural resources of the human voice and body as artistic resources for the performer. Designed to explore processes and products of vocal craft work.

**THEA 340 Workshop in Directing I (3)**

(2 lecture; 2 laboratory) Prerequisite: THEA 240. Basic directing techniques as applied to period styles. Focus on research for the director and application of period styles in scene work.

**THEA 341 Workshop in Directing II (3)**

Prerequisite: THEA 240. Basic directing techniques as applied to modern styles. Focus on various anti-realistic styles and their application to modern eclectic Theatre. Practical application in scene work.

**THEA 349 Intermediate Stagecraft (3)**

Prerequisite: THEA 149 or equivalent. Required laboratory arranged. A hands-on survey of the construction techniques and practices used in scenery construction, properties construction and rigging as well as drafting working drawings, problem solving and budgeting.

**THEA 350 Summer Theatre (10)**

Acceptance by Theatre Arts staff required. Eight weeks of eight-hour daily rehearsals for summer productions. Repeatable, maximum of 40 credits.

**THEA 360 Advanced Acting Styles I (3)**

Prerequisites: THEA 160, THEA 260 or consent of instructor. Acting Emphasis only. Focus on modern drama from early realism through contemporary eclectic styles in this advanced acting laboratory. Repeatable, maximum of six credits.

**THEA 361 Advanced Acting Styles II (3)**

Prerequisites: THEA 160, THEA 260 or consent of instructor, and THEA 360. For acting emphasis only. Concentration on period styles including Greek, Elizabethan, Commedia dell'Arte, English Restoration and French Neo-classic in this advanced acting laboratory. Repeatable, maximum of six credits

**THEA 375 Stage Management for the Theatre (3)**

Prerequisites: THEA 149. A class to teach the student how to work as a stage manager in the theatre and what to expect from the position. Focus is on problem solving.

**THEA 380 Design fundamentals for Secondary Education (4)**

Prerequisite: THEA 149. Theatre Education only. This course will include the basics of drafting; scenic, lighting and costume design; and scenic painting with a focus on research and creative exercises.

**THEA 385 Methods of Teaching Drama (3)**

PTEP prerequisite to student teaching. Learn teaching techniques, curriculum and classroom organization, testing and evaluation, procedures and materials and relationship of the subject area to the total program.

**THEA 401 Practicum in Theatre (1-4)**

Qualified undergraduates must have permission of instructor, advisor and department. Supervised and specialized field work involving theory and methodology in practice. Two copies of evaluation paper required, filed with instructor/department. Repeatable, maximum of eight credits.

**THEA 404 Summer Crew Work in Theatre (1)**

Backstage crew work on summer Little Theatre of the Rockies. If S/U grade is chosen, for a "S," a student must participate in a minimum of 30 hours for each hour of credit.

**THEA 410 Advanced Design and Technology (3)**

Laboratory required. Prerequisite: THEA 310. A survey of traditional and contemporary stage technology, including study of advanced techniques of scene design; model making and multimedia renderings; and problems in shifting the multiple set show. Repeatable, maximum of six credits.

**THEA 420 Advanced Costume Technical Design (3)**

(2 lecture, 1 laboratory) Prerequisites: THEA 149, THEA 320, THEA 330, THEA 331 or consent of instructor. Specialization on topics of design, patterns, materials and techniques of reproducing historical costume. Specific historical period determined by the instructor in consultation with the students in the course. Emphasis on research. Repeatable, maximum of six credits.

**THEA 422 Directed Research in Theatre (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**THEA 430 Lighting Seminar (3)**

Prerequisites: THEA 135, THEA 149, THEA 210, THEA 230, or equivalent. Required laboratory arranged. Advanced design with lighting, practical applications and theatrical use. Course continues from THEA 332 and concentrates on advanced lighting techniques, equipment, tour work and unique applications. Repeatable, may be taken two times.

**THEA 440 Directing the One-Act Play (3)**

Prerequisite: THEA 340 or THEA 341 or consent of the instructor. Produce a one-act play under instructor's supervision. Extensive promptbook and well-written self-analysis required.

**THEA 445 Advanced Sound Design (3)**

Prerequisites: THEA 149, THEA 245, or equivalent. Required laboratory arranged. Continued work on design, set-up, operate and repair of sound reinforcement and recording equipment on theatre practices to include digital audio and live performance mixing.

**THEA 449 Theatre Technical Seminar (3)**

Prerequisites: THEA 149, THEA 349. Majors only. Juniors or above. Required laboratory arranged. Advanced technical theatre class covering a wide range of topics including vacuum forming, hydraulics and pneumatics, budgeting, problem solving, special costume concerns, portfolios and resumes.

**THEA 450 Design and Technology Practicum (3)**

Prerequisites: THEA 100, THEA 149, THEA 300. Majors and minors only. Juniors or above. Consent of Advisor. Practicum focused on mainstage production work in students emphasis area: either design, technical direction or stage management. Typically done in the senior year. This project is assigned by advisor.

**THEA 464 Audition Techniques (3)**

Prerequisites: THEA 160, THEA 260. Acting Emphasis only. Covers various aspects of audition techniques. Units include: selection of material, preparing and presenting auditions, resume, and picture preparations and guest instructor information.

**THEA 480 Theatre Technical Director (3)**

Prerequisites: THEA 100, THEA 149, THEA 300. Consent of advisor. Majors and minors only. Practicum focused on mainstage production work in student emphasis area: either design, technical direction or stage management. Typically done in the senior year. This project is assigned by advisor. Repeatable, may be taken two times.

**THEA 500 Graduate Individual Performance in Theatre (1)**

Participation in Little Theatre of the Rockies productions. Open to graduate students. Students must participate in 90 hours. Repeatable, no limitations.

**THEA 508 Workshop (1-3)**

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

**THEA 513 Professional Renewal (1-3)**

Update skills and knowledge of professionals in the discipline. Goals and objectives will be specifically directed at individual professional enhancement rather than the acquisition of general discipline knowledge or methodologies. S/U or letter graded. Repeatable, under different subtitles.

**THEA 601 Graduate Practicum in Theatre (1-4)**

Qualified graduate, permission of instructor, advisor and department. This specialized, supervised field work course involves theory and methodology in practice. Copies of written evaluation must be filed with instructor and department. Repeatable, maximum of four credits.

**THEA 610 Seminar in Technical Theatre (3)**

Prerequisites: THEA 310, THEA 332 or THEA 420 or consent of instructor. A seminar to study specialized topics in scene design, stage lighting, theatre architecture, staging techniques or stage costuming. Emphasis is placed on research study. Repeatable, no limitations.

**THEA 622 Graduate Directed Research in Theatre (1-4)**

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

**THEA 650 Graduate Summer Theatre (10)**

Acceptance by Theatre Arts staff only. Graduate workshop in acting and technical theatre, with 8-hour daily rehearsals for 8 weeks for summer productions. Repeatable, maximum of 30 credits.

## WS — WOMEN'S STUDIES PROGRAM

### WS 101 Women in Contemporary Society (3)

Cultural analysis of social institutions and their effects on the lives of women. (GenEd)

### WS 240 Women, Race and Class (3)

Because systems of social inequity - operating simultaneously and inextricably intertwined - must be examined together, this course probes the intersecting dynamics and fundamental character of race, class and gender, and sexuality.

### WS 248 Introduction to Women's Studies (3)

Prerequisite: WS 101. Historical analysis of women's movement as (r)evolution.

### WS 300 History of Feminism (3)

An in-depth study of the history of feminist political movements and intellectual traditions, focusing primarily on Europe and North America.

### WS 308 Women's Studies Workshop (1-3)

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.

### WS 320 Representations of Women in Popular Culture (3)

Prerequisite: WS 101 or equivalent. Examine how media and cultural representations of gender, race, class and sexuality are implicated in identity formation. Informed by critical theories, students discover how popular cultural representations of women foreclose non-discursive identity options.

### WS 350 Feminist Theory (3)

Prerequisite: WS 101 or equivalent. Feminist theoretical approaches as applied to current personal, social and political issues.

### WS 380 Histories and Politics of Homosexuality (3)

An in-depth study of the history of gay, lesbian, bisexual, and transgendered identities, communities, and political movements; and theories of sexuality.

### WS 422 Directed Studies (1-3)

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

### WS 448 Women's Studies Seminar (3)

Prerequisites: WS 101, WS 248, WS 350 and 10 semester credits in approved Women's Studies electives. Seniors or above. This course will provide the opportunity to students to pursue individual research projects with the intent to re-construct the representations of Women.

### WS 460 Feminist Legal Studies (3)

Prerequisite: WS 101 or equivalent. Examines legal issues of particular importance to women; informed by critical legal theory. Topics may include family and marriage law, reproductive rights, employment, education, prostitution, pornography, rape and political participation.

### WS 492 Internship (2-10)

Prerequisite: WS 101 or equivalent and six additional semester hours in approved women's studies courses required. Supervised field practice on research relating to women's concerns and issues. Paper analyzing experience required. Maximum of 3 semester credits count toward requirements for the Women's Studies Minor. Repeatable, maximum 10 credits.

### WS 508 Workshop (1-3)

A variety of workshops on special topics within the discipline. Goals and objectives will emphasize the acquisition of general knowledge and skills in the discipline. Repeatable, under different subtitles.





# ADMINISTRATION AND FACULTY, 2003-2004

## BOARD OF TRUSTEES

In parentheses: the first year is the date of the first appointment; the second year is the expiration of the present term.

- Chair, Dick Monfort, Greeley (2001-2005)
- Kevin Smith, Vice Chair, Denver (2003-2007)
- Richard Blanke, Faculty Trustee (2003-2004)
- Jory Taylor, Student Trustee (2003-2004)
- Frances L. Schoneck, Treasurer
- Ron Lambden, Secretary
- Marcy Benson, Denver, (2003-2007)
- Jerry Bryant, Yuma, (2003-2007)
- Gilbert Carbajal, Ft. Collins (2001-2005)
- Jerry Morgensen, Greeley, (2003-2007)
- Gary Reiff, Denver, (2003-2007)

## GENERAL ADMINISTRATION

The UNC administration is listed with their name followed by their highest degree. The year in parentheses is the first year of employment at UNC followed by all degrees conferred.

### President

**Kay Norton, J.D.**  
(1998), President — B.A., Wellesley College; J.D., University of Denver

### Vice Presidents

**Allen Huang, Ed.D.**  
(1978), Interim Provost and Vice President for Academic Affairs, Research and Graduate Studies, and Dean of the Graduate School — B.A., National Chengchi University; M.A., Eastern Kentucky University; Ed.D. University of Alabama (G) (DR)

**Ken McConnellogue, M.A.**  
(1992), Vice President for University Advancement — B.S. University of Colorado; M.A., University of Northern Colorado

**Frances L. Schoneck, M.S., C.P.A., C.I.A.**  
(1982), Vice President for Administration — B.S., University of Northern Colorado; M.S., Colorado State University, C.P.A., C.I.A.

### University Counsel

**Ronald Lambden, J.D.**  
(2002), General Counsel — B.A., M.A., University of Delaware; J.D., University of Denver

### Associate Vice President

**Vincent A. Scalia, Ed.D.**  
(1977), Associate Vice President for Academic Affairs and Dean of the College of Health and Human Sciences — B.S., St. Peter's College; M.S., University of Arizona; Ed.D., University of Northern Colorado (G) (DR)

### Assistant Vice Presidents

**Thomas J. Gavin, Ph.D.**  
(1984), Assistant Vice President for University Planning and Enrollment Services, and Director of Institutional Research — B.S., Wisconsin State University-River Falls; M.A., Ball State University; Ph.D., University of Oregon

**Gary L. Hatch, M.B.A.**  
(1997), Assistant Vice President for Information Technology — B.S., M.B.A., Utah State University.

**Robert J. Hetzel, Ph.D.**  
(1990), Assistant Vice President for Auxiliary Services — B.A., M.B.A., M.S., University of Wisconsin; Ph.D., University of Northern Colorado.

**Tony Montoya, M.A.**  
(2002), Assistant Vice President for Multicultural Affairs — M.A., CUNY-Bernard Baruch College; B.S., Metropolitan State College of Denver

**Michelle F. Quinn, M.A., C.P.A.**  
(2001), Assistant Vice President of Finance — B.S., George Mason University; M.A., West Virginia University.

### Dean of Students

**Jean Schober Morrell, Ph.D.**  
(1974), Dean of Students — B.S., M.A., Bowling Green State University; M.A.T., Oakland University; Ph.D., University of Northern Colorado

### Internal Auditor

**Juilie Lorton, B.A.**  
(2001), Internal Auditor — B.A., Colorado State University

## COLLEGE ADMINISTRATION

### College of Arts and Sciences

**Sandra M. Flake, Ph.D., Dean**  
(1997), B.A., College of Saint Catherine;  
Ph.D., University of Wisconsin, Milwaukee

**Richard G. Trahan, Ph.D., Associate Dean**  
(1974), B.S., M.S., San Jose State University; Ph.D., University  
of Wisconsin (G)

**Curt M. Peterson, Ph.D., Interim Associate Dean**  
(1997), B.S., Moorhead State University; Ph.D., University  
of Oregon

### Kenneth W. Monfort College of Business

**Joe F. Alexander, D.B.A., Dean**  
(1990), B.B.A., Harding University; M.B.A., D.B.A., Memphis  
State University (G) (DR)

**Gerald Shadwick, B.S., J.D., Associate Dean**  
(1994), B.S., Kansas State University; J.D., George  
Washington University

**Timothy E. Jares, Ph.D., Assistant Dean**  
(2001) B.S. University of South Dakota; M.B.A., Ph.D.  
University of Nebraska (G) (DR)

### College of Education

**Eugene P. Sheehan, Ph.D., Dean**  
(1987), B.A., University of Dublin; M.S., Queen's University  
of Belfast; M.S., University of Dublin; Ph.D., University of  
California, Santa Cruz (G) (DR)

**Phillip M. Wishon, Ph.D., Assistant Dean**  
(1982), – B.S., M.A., Ph.D., Ohio State University (G) (DR)

### Health and Human Sciences

**Vincent A. Scalia, Ed.D., Dean**  
(1977), B.S., St. Peter's College; M.S., University of Arizona;  
Ed.D., University of Northern Colorado (G) (DR)

**Robbyn R. Wacker, Ph.D., Associate Dean**  
(1990), B.S., B.A., M.S., University of Northern Colorado;  
Ph.D., Iowa State University (G) (DR)

### College of Performing and Visual Arts

**Kathleen Rountree, D.M., Dean**  
(2001), B.M., East Carolina University; M.M., Southern  
Illinois University-Edwardsville; D.M., The Florida State  
University

**Charles Houghton, M.F.A., Assistant Dean**  
(1995), B.A., San Diego State University; M.F.A., Temple  
University

### Graduate School

**Allen Huang, Ed.D., Interim Provost and Vice President  
for Academic Affairs, Research and Graduate Studies, and  
Dean of the Graduate School**  
(1978), B.A., National Chengchi University; M.A., Eastern  
Kentucky University; Ed.D. University of Alabama (G) (DR)

**Teresa M. McDevitt, Ph.D., Assistant to the Provost for  
Graduate Studies**  
(1985), B.A., University of California; M.A., Ed.S., Ph.D.,  
Stanford University (G) (DR)

### University Libraries

**Gary M. Pitkin, Ed.D., Dean**  
(1987), B.A., M.A., University of Wisconsin, Milwaukee; Ed.S.,  
Appalachian State University; Ed.D., University of Northern  
Colorado

**Helen I. Reed, M.A.L.S., Associate Dean**  
(1990), A.B., Allegheny College; M.A.L.S., University of  
Michigan

# UNC FACULTY, 2003-2004

## A

### Mark S. Adams, M.A.

(2002), Assistant Professor of Gerontology — B.S. Brigham Young University; M.A., University of Arizona (G)

### Rick Adams, Ph.D.

(2002), Associate Professor of Biological Sciences — B.A., M.A., Ph.D., University of Colorado-Boulder

### Wendy Adams, M.S.

(2002), Lecturer in Physics — B.A., University of Northern Colorado; M.S. University of Colorado-Boulder

### Siaw Akwawua, Ph.D.

(2001), Lecturer in Geography — B.A., University of Ghana-West Africa; M.A., University of Windsor-Canada; Ph.D., University of Saskatchewan-Canada

### Janet K. Alcorn, Ed.D.

(2001), Director of Tointon Institute for Educational Change — B.A., Occidental College; M.A., Ed.D., University of Northern Colorado

### Mark B. Alcorn, Ph.D.

(1986), Associate Professor of Psychology — B.A., Occidental College; M.A., Ph.D., University of Southern California (G)

### Joe F. Alexander, D.B.A.

(1990), Professor of Marketing — B.B.A., Harding University; M.B.A., D.B.A., Memphis State University (G) (DR)

### Garth H. Allen, B.B.A., J.D.

(1973), Associate Professor of Finance — B.B.A., J.D., University of Iowa (G)

### Linda S. Allen, Ph.D.

(1992), Associate Professor of Speech Communication — B.A., Idaho State University; M.A., University of Wisconsin; Ph.D., University of Oregon (G)

### Michael Todd Allen, Ph.D.

(2003), Assistant Professor of Psychology — B.A., North Carolina State University; Ph.D., Indiana University

### Dean E. Allison, Ph.D.

(1993), Associate Professor of Mathematical Sciences — B.S., M.A., Ph.D., University of Missouri (G) (DR)

### Vergie Amendola, M.M.

(1991), Professor of Music — B.A., University of Northern Colorado; M.M., Northwestern University (G)

### Mark A. Anderson, M.L.I.S.,

(1994), Associate Professor of University Libraries — B.A., M.L.I.S., University of Iowa

### Margaret M. Andrews, Ph.D.

(2003), Professor of Nursing — B.S.N., Saint John College; M.S.N., Case-Western University; Ph.D., University of Utah

### David R. Aske, Ph.D.

(1997), Associate Professor of Economics — B.S., Mankato State University; Ph.D., University of Nebraska

### Michelle S. Athanasiou, Ph.D.

(1996), Associate Professor of School Psychology — B.A., Southeast Missouri State University; M.A., University of Memphis; Ph.D., University of Nebraska-Lincoln (G) (DR)

### Barbara Avila-Shah, Ph.D.

(2003), Lecturer in Hispanic Studies — B.A., Puerto Rico University; M.A., Ph.D., Cornell University

## B

### Megan L. Babkes, Ed.D.

(2001), Assistant Professor of Sport and Exercise Science — B.A., University of Washington; M.S., University of Oregon; Ed.D., University of Northern Colorado (G)

### Roiann M. Baird, M.L.S.

(1999), Assistant Professor of University Libraries — B.S., North Dakota State University; M.L.S., Emporia State University

### Tracy D. Baldo, Ph.D.

(1991), Professor of Counseling Psychology — B.S., M.S., Ph.D., Purdue University (G) (DR)

### Marilyn Banta, Ph.D.

(2002), Assistant Professor of Biological Sciences — B.A., Willamette University; M.S., Texas A&M University; Ph.D., University of Nevada-Reno

### Achilles N. Bardos, Ph.D.

(1990), Professor of School Psychology — B.S., Wright State University; M.A., Ball State University; Ph.D., Ohio State University (G) (DR)

### H. Gray Barrier, M.M.

(1983), Professor of Music — B.M.E., East Carolina University; M.M., Northwestern University (G)

### Frederick J. Bartelheim, Ed.D.

(1997), Professor of Foundations of Education — B.S., M.A., M.Ed., University of Nevada-Reno; Ed.D., University of San Francisco (G)

### Theodore R. Bashore, Ph.D.

(1991), Professor of Psychology — B.S., University of California; M.A., Ph.D., University of Colorado (G) (DR)

### Diane Bassett, Ph.D.

(1991), Professor of Special Education — B.S., University of Colorado-Boulder; M.A., University of Northern Colorado; Ph.D., University of New Mexico (G) (DR)

### Jeffrey W. Bauer, Ph.D.

(1990), Associate Professor of Educational Technology — B.A., University of Wyoming; M.B.A., California State University-San Bernardino; Ph.D., University of Wyoming (G) (DR)

### Joseph R. Bell, M.S., J.D.

(2000), Assistant Professor of Management — B.A., Bloomsburg University; M.S., Michigan State University; J.D., Cooley Law School

### Jonathan Bellman, D.M.A.

(1993), Professor of Music — B.A., University of California-Santa Barbara; M.M., University of Illinois-Urbana-Champaign; D.M.A., Stanford University (G) (DR)

### Ann T. Bentz, M.Ed.

(2002), Lecturer in Sport and Exercise Science — B.S., Southeastern Louisiana University; M.Ed., Colorado State University

### Mark Berrettini, Ph.D.

(2002), Assistant Professor of English and Film Studies — B.A., University of Notre Dame; M.A., Ph.D., University of Rochester

### Connie Bethards, M.A.

(2001), Assistant Professor of Visual Arts — B.S., M.A., Iowa State University (G)

### George T. Betts, Ed.D.

(1979), Professor of Special Education — B.S., Phillips University; M.A., Ed.D., University of Northern Colorado (G) (DR)

### Linda L. Black, Ed.D.

(2000), Assistant Professor of Counseling Psychology — B.A., B.S., University of Iowa; M.A., Lesley College; Ed.D., University of Northern Colorado (G) (DR)

### Monte Black, M.F.A.

(2000), Assistant Professor of Dance — B.S., University of Wyoming; M.F.A., University of Illinois

### Brook Blair, Ph.D.

(1998), Lecturer in Political Science — B.A., Colorado College; M.S., London School of Economics; Ph.D., University of Newcastle upon Tyne - United Kingdom

**Kathryn A. Blair, Ph.D.**

(1994), Professor of Nursing — B.S.N., Kent State University; M.S.N., University of Colorado; Ph.D., University of Missouri (G)

**Richard A. Blanke, Ph.D.**

(1979), Associate Professor of Philosophy — M.Ph., University of New York; M.A., Ph.D., City University of New York

**Lisa Blankenship, M.A.,**

(1989), Associate Professor of University Libraries — B.S., Oklahoma State University; M.A., University of Denver

**William L. Blubaugh, Ph.D.**

(1987), Professor of Mathematics — B.S., M.Ed., Kent State University; Ph.D., University of Colorado (G) (DR)

**Gayle Johnson Bohrer, M.S.**

(2001), Lecturer of Nursing — B.S., University of North Dakota; M.S., University of Northern Colorado

**Diane Bolden-Taylor, M.M.**

(1993), Associate Professor of Music — B.M., Milliken University; M.M., Indiana University (G)

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## V

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— P.U.C., Sarada Vilas College-  
University of Mysore, India; M.B.B.S.,  
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University of Mysore, India

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University of Idaho

**Julie Vonk**  
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## W

**Jerry Weil**  
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North Colorado Medical Center —  
B.A., M.D., University of Colorado

**John Welch**  
Affiliate Professor of Human  
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Medical College

**Laurie Wells**  
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Disorders — B.S., University of Iowa;  
M.S., University of Arizona

**Karen C. Wenzel**  
Affiliate Lecturer of Recreation - B.A.,  
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**Kim Westerlind**  
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University of Colorado

**Barbara Wisney**  
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B.S., M.A., Central Michigan  
University

**Michael Woods**  
Affiliate Professor of College Health  
— B.S., B.A., M.D., University of New  
Mexico

**John Wooster**  
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Human Rehabilitative Services —  
B.S., Oregon State University; M.S.,  
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**Gregory A. Worrell**  
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## X-Z

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— B.S., Abilene Christian University;  
M.D., University of Texas

**Walter Young**  
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Community Health — B.S.,  
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# EMERITUS FACULTY, 2003-2004

## A

**Donald K. Adams**  
(1993), Professor Emeritus of  
Educational Field Experiences — B.S.,  
M.A., Ed.D.; Appointed 1971

**William T. Agan**  
(1993), Associate Professor Emeritus  
of English — B.A., M.A.; Appointed  
1964

**A. Eugene Aitken**  
(2002), Professor Emeritus of Music  
— B.A., M.M., Ph.D.; Appointed 1976

**David L. Anderson**  
(1998), Associate Professor Emeritus  
of Journalism and Mass  
Communications — B.J., M.A.;  
Appointed 1976

**Hugo A. Anderson**  
(1979), Professor Emeritus of  
Business — B.A., M.S.;  
Appointed 1968

**James F. Anderson**  
(1987), Professor Emeritus of  
Economics — BPh, M.A., Ph.D.;  
Appointed 1970

**Mark W. Anderson**  
(2001), Assistant Professor Emeritus  
of Mathematics and Master Teacher  
in the Laboratory School — B.A.,  
M.A., Ed.S; Appointed 1975

**Rachel F. Anderson**  
(1975), Professor Emeritus of  
Business — B.A., M.A.;  
Appointed 1967

**Carol R. R. Andreas**  
(1995), Professor Emerita of  
Sociology — B.A., M.A., Ph.D.;  
Appointed 1988

**Patricia A. Applegate**  
(1987), Associate Professor Emerita of  
English — B.A., M.A.;  
Appointed 1964

## B

**Elmer V. Bachenberg**  
(1993), Associate Professor Emeritus  
of Library Science — B.A., M.S.;  
Appointed 1964

**Sandra C. Baird, Ed.D.**  
(2003), Professor Emerita of Nursing  
— B.S., M.S., Ed.D.; Appointed 1973

**Buddy Baker**  
(1998), Professor Emeritus of Music  
— B.M., M.M.; Appointed 1965

**Clifford D. Baker**  
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Exceptionalities and Bilingual/ESL  
Education — B.S., M.S., Ed.D.;  
Appointed 1974

**Richard F. Ball**  
(1977), Professor Emeritus of Art —  
B.S., M.A.; Appointed 1947

**William A. Barnard**  
(2002), Professor Emeritus of  
Psychology — B.A., M.A.;  
Appointed 1972

**Loren W. Bartlett**  
(1992), Professor Emeritus of Music  
— B.A. in Ed., B.A. in Music,  
M.M.Ed., Ph.D.; Appointed 1965

**Nancy Quinn Beardslee**  
(1996), Associate Professor Emerita of  
Nursing — B.S., M.S., Ed.D.;  
Appointed 1984

**John A. Beel**  
(1984), Professor Emeritus of  
Chemistry — B.S., Ph.D.;  
Appointed 1949

**Mary A. Behling**

(1988), Professor Emerita of Physical Education — B.S., M.A., Ph.D.; Appointed 1959

**Thomas R. Benich**

(1987), Professor Emeritus of Physical Education — B.A., M.A.; Appointed 1964

**Lois W. Bennett**

(1983), Professor Emerita of Vocational Teacher Education — B.A., M.A., Ed.D.; Appointed 1969

**Warren Best**

(1985), Associate Professor Emeritus of College Student Personnel Administration — B.S., M.A.; Appointed 1957

**Agnes Biegel**

(1990), Associate Professor Emerita of Nursing — B.S.N., M.S.N.; Appointed 1969

**James A. Bitter**

(2003), Professor Emeritus of Human Rehabilitative Services — B.A., M.S., Ed.D.; Appointed 1970

**Margaret T. Blake**

(1989), Professor Emerita of Counseling Psychology — B.S., M.S., Ph.D.; Appointed 1968

**Robert Blasi**

(1988), Professor Emeritus of Physical Education — B.S., M.A.; Appointed 1955

**Charles T. Blubaugh**

(1982), Associate Professor Emeritus of Art — B.F.A., M.A.; Appointed 1964

**George A. Boeck**

(1986), Professor Emeritus of History — B.A., M.A., Ph.D.; Appointed 1959

**Irene Engle Bogan**

(1964), Associate Professor Emerita of Library Science — B.A., B.S.L.S.; Appointed 1946

**Paul Bohrer**

(2001), Professor Emeritus of Accounting — B.S., M.S.; Appointed 1971

**John T. Bookman**

(1998), Professor Emeritus of Political Science — B.A., Ph.D.; Appointed 1966

**Richard R. Bond**

(1981), President Emeritus of the University — B.S., M.S., Ph.D.; (1988), Professor Emeritus of Zoology; Appointed 1971

**William W. Bosch**

(1998), Professor Emeritus of Mathematical Sciences — B.S., M.S., Ph.D.; Appointed 1970

**Adah Bossart**

(1984), Associate Professor Emerita of Nursing — B.S., M.S.; Appointed 1968

**Jack A. Bowen**

(1984), Professor Emeritus of Human Services — B.S., M.S., Ph.D.; Appointed 1968

**James K. Bowen**

(1994), Professor Emeritus of College Student Personnel Administration — B.S., M.S., Ed.D.; Appointed 1966

**Frank P. Bowles**

(1985), Associate Professor Emeritus of English — B.A., M.A., Ph.D.; Appointed 1970

**D. Harold Bowman**

(1983), Professor Emeritus of Education — B.S., M.Ed., Ed.D.; Appointed 1959

**Eugene Bowser**

(2001), Associate Professor Emeritus of Library Science — B.S., M.A., M.A.; Appointed 1969

**Wanda Brewer**

(1989), Professor Emerita of English — B.F.A., M.A., Ed.D.; Appointed 1962

**John M. Brand, III**

(1998), Professor Emeritus of English — B.A., M.Div., Ph.D.; Appointed 1969

**Bruce W. Broderius**

(1995), Professor Emeritus of Elementary Education and Reading — B.S., M.A., Ed.D.; Appointed 1966

**John C. Bromley**

(1999), Professor Emeritus of University Studies — B.A., M.A.; Appointed 1986

**Susan P. Bromley**

(2002), Associate Professor Emerita of Psychology — B.A., M.A., Psy.D.; Appointed 1985

**George H. Brooks**

(1982), Assistant Professor Emeritus of Social Studies — B.A., M.Ed., Ed.D.; Appointed 1961

**Glenda Brown**

(1998), Professor Emerita of French — B.A., M.A., Ph.D.; Appointed 1963

**Gerald N. Burns**

(1983), Associate Professor Emeritus of Education — B.A., M.A., Ed.D.; Appointed 1965

**Arnold Burrton**

(1998), Professor Emeritus of Elementary Education and Reading — B.S., M.A., Ed.D.; Appointed 1969

**C****Edward P. Caffarella**

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**Ronald S. Camp**

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**Shirley M. Carrier**

(1982), Professor Emerita of English — B.Ed., M.A., Ed.D.; Appointed 1958

**Betty Carlisle**

(1998), Professor Emerita of Visual Arts — B.S., M.A., Ed.D.; Appointed 1969

**Cynthia Carlisle**

(2002), Professor Emerita of Physical Education — B.A., M.E., Ed.D.; Appointed 1972

**Amos Lincoln Claybaugh**

(1978), Professor Emeritus of Elementary Education — B.A., M.A., Ed.D.; Appointed 1958

**Linda Cleeland**

(2003), Associate Professor Emerita of Communication Disorders — B.S., M.A., M.Ed.; Appointed 1976

**James W. Clinton**

(1999), Professor Emeritus of Management — B.S., M.B.A., Ph.D.; Appointed 1980

**Joseph B. Clithero**

(1988), Professor Emeritus of Marketing — B.S., M.S.; Appointed 1968

**L. Glen Cobb**

(1998), Professor Emeritus of Meteorology — B.A., M.S., Ph.D.; Appointed 1969

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**Roy Edward Colby**

(1972), Assistant Professor Emeritus of Spanish — B.A., M.A.; Appointed 1962

**David B. Cole**

(2001), Professor Emeritus of Geography — B.A., M.A., Ph.D.; Appointed 1975

**Ellis P. Copeland, Ph.D.**

(2003), Professor Emeritus of School Psychology — B.A., Ph.D.; Appointed 1975

**Charmaine P. Coppom**

(2000), Associate Professor Emerita of Music — B.M., Hastings College; M.A., University of Missouri; Appointed 1971

**William S. Cordiner**

(1994), Professor Emeritus of Visual Arts — B.A., M.A.; Appointed 1966

**Jose E. Cordova**

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**Roberto H. Cordova**

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**George L. Crockett**

(1983), Professor Emeritus of Science Education — B.S., M.S., Ed.D.; Appointed 1965

**John H. Cronin**

(1984), Professor Emeritus of Human Services — B.A., M.A., Ed.D.; Appointed 1970

**D****Thelma D. Damgaard**

(1973), Professor Emerita of Education — B.A., M.A., Ed.D.; Appointed 1968

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(2003), Professor Emerita of Sport and Exercise Science — B.A., M.S.S.E., Ph.D.; Appointed 1997

**James A. DeRuiter**

(1997), Professor Emeritus of Special Education — B.A., M.A., Ph.D.; Appointed 1974

**Robert C. Dickeson**

(1991), President Emeritus — B.S., M.A., Ph.D.; Appointed 1981

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**Glen Droegemueller**

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(1995), Dean Emeritus of College of Business Administration — B.A., M.S.Sc., Ph.D.; Appointed 1969

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**Robert D. Elton**

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**Carl O. Erickson**

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**William R. Erwin, Jr.**

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**Margaret E. Everett**

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**F****George E. Fay**

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**George M. Febinger**

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**Edgar E. Fielder**

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**Forest N. Fisch**

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**Augusta M. Fox**

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**Cynthia Frease**

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**R. John Freese, Jr.**

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**Rosemary Fri**

(1987), Assistant Professor Emerita of Physical Education — B.S., M.S.; Appointed 1961

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**Clara E. Funderburk**

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**Francis A. Griffith**

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(1967), Professor Emerita of Home Economics — B.S., M.A.; Appointed 1945

**Marvin Halldorson**

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**Robert G. Hamerly**

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**Beatrice E. Hansen**

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**Robert Harris**

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**Larry R. Harrison**

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**Marjorie Harkness**

(1977), Professor Emerita of Elementary Education — B.S., M.A., Ed.D.; Appointed 1950

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**J. Gilbert Hause**

(1989), Professor Emeritus of Higher Education — B.A., M.A., Ed.D.; Appointed 1951

**Jean A. Hedberg**

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**Ramon P. Heimerl**

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**William C. Heiss, Jr.**

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**Duane E. Henderson**

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**Peggy E. Henry**

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**Jack W. Herrick**

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**Tyrus Hillway**

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(1984), Professor Emeritus of Music — B.A., M.M.; Appointed 1961

**Sam L. Hofer**

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**Eugene Hoffman**

(2002), Associate Professor Emeritus of Visual Arts — Appointed 1987

**Kenneth E. Hogan**

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**Samuel R. Houston**

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**Christy A. Howard**

(2000), Assistant Professor Emerita of Kinesiology and Physical Education — B.A., M.S.; Appointed 1973

**Edna Mary Hoydar**

(1962), Professor Emerita of Public School Music — B.A., M.M.; Appointed 1937

**Joan T. Hurlock**

(1984), Associate Professor Emerita of Nursing — B.S., M.S.; Appointed 1970

**Rita J. Hutcherson**

(1973), Professor Emerita of Music — B.A., M.A., Ph.D.; Appointed 1946

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(2003), Assistant Professor Emeritus of Recreation — B.S., M.A.; Appointed 1970

**Marlynn R. James**

(1999), Professor Emeritus of Chemistry — B.S., M.S., Ph.D.; Appointed 1966

**William Jamieson**

(1998), Associate Professor Emeritus of Music — B.A., M.A.; Appointed 1967

**David L. Jelden**

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**Dana Johnson**

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**J. M. Johnson**

(1984), Professor Emeritus of Educational Field Experiences — B.A., M.A., Ed.D.; Appointed 1965

**Robert L. Johnson**

(1984), Professor Emeritus of Mathematics — B.A., M.S., Ph.D.; Appointed 1960

**H. Audrie Johnston**

(1981), Professor Emerita of Mathematics — B.A., M.S.; Appointed 1965

**Willard Jones**

(1995), Professor Emeritus of Special Education — B.A., M.S., Ed.D.; Appointed 1969

**K****Zahi S. Kamal**

(1995), Professor Emeritus of Sociology — B.S., M.S., Ph.D.; Appointed 1970

**Edward A. Kearns**

(2001), Professor Emeritus of English — B.A., M.A.; Appointed 1966

**Kevin C. Kearns**

(1996), Professor Emeritus of Geography — B.S., M.A., Ph.D.; Appointed 1966

**Edward J. Kelly**

(1980), Professor Emeritus of Elementary Education — B.A., M.A., Ph.D.; Appointed 1953

**Calvin E. Kennedy**

(1984), Professor Emeritus of Accounting — B.S., M.S., Ph.D.; Appointed 1965

**LeRoy Kerns**

(1974), Professor Emeritus of Education — B.A., M.A., Ed.D.; Appointed 1949

**David W. Kettel**

(1983), Associate Professor Emeritus of Anthropology — B.A., M.A., Ph.D.; Appointed 1973

**Rita B. Kiefer**

(2001), Professor Emerita of English — B.A., M.A.; Appointed 1970

**Bernard C. Kinnick**

(1997), Professor Emeritus of College Student Personnel Administration — B.A., M.A., Ed.D.; Appointed 1966

**Virginia Kinnick**

(1998), Professor Emerita of Nursing — B.S., M.S.N., Ed.D.; Appointed 1978

**Joyce C. Klierer**

(1984), Assistant Professor Emerita of Food, Nutrition and Dietetics — B.A., M.A., Ed.D.; Appointed 1970

**Ray B. Knapp**

(1984), Associate Professor Emeritus of Political Science — B.A., Ph.D.; Appointed 1966

**William G. Koch**

(1984), Professor Emeritus of Chemistry — B.S., M.A., Ph.D.; Appointed 1955

**Betty J. Kolstoe**

(1984), Professor Emerita of Special Education — B.A., M.A., Ed.D.; Appointed 1969

**Oliver P. Kolstoe**

(1984), Professor Emeritus of Special Education — B.A., M.S., Ph.D.; Appointed 1965

**Eugene Koplitz**

(1988), Professor Emeritus of Educational Psychology — B.S., M.A., Ph.D.; Appointed 1958

**Roger A. Kovar**

(1998), Dean Emeritus of Arts and Sciences and Professor Emeritus of Chemistry — B.A., Ph.D.; Appointed 1970

**Edward Krafft**

(1984), Assistant Professor Emeritus of Elementary Education in the Laboratory School — B.S., M.A.; Appointed 1967

**Roy T. Krosky**

(1983), Professor Emeritus of Education — B.A., M.A., Ph.D.; Appointed 1973

**L**

**Jack LaBonde**

(1984), Assistant Professor Emeritus of Health and Safety — B.A., M.A.; Appointed 1959

**Joyce C. Lackie**

(1997), Professor Emerita of English — B.S., M.A., Ph.D.; Appointed 1969

**Frank P. Lakin**

(1985), Professor Emeritus of Higher Education — B.A., M.A., Ed.D.; Appointed 1957

**Robert W. Larson**

(1990), Professor Emeritus of History — B.A., M.A., Ph.D.; Appointed 1960

**George Leach**

(1985), Professor Emeritus of University Studies — B.A., M.A., M.S., Ed.D.; Appointed 1965

**Rose Eileen Leacock**

(1968), Professor Emerita of Fine Arts — B.A., M.A.; Appointed 1945

**Carlos Leal**

(1998), Professor Emeritus of Hispanic Studies — B.A., Ed.S.; Appointed 1970

**Patricia A. Lee**

(2003), Associate Professor Emerita of Exceptionalities and Bilingual/ESL Education — B.A., M.S., Ed.D.; Appointed 1990

**Paul L. Lehrer**

(1993), Professor Emeritus of Geography — B.S., M.A., Ph.D.; Appointed 1966

**Lawrence A. Levenson**

(1989), Associate Professor Emeritus of Marketing — B.A., M.B.A.; Appointed 1973

**A. Juanita Lewis**

(1982), Professor Emerita of Elementary Education — B.S., M.A., Ph.D.; Appointed 1959

**Martha S. Lilly**

(2003), Professor Emerita of Accounting — B.S., B.F.A., M.B.A., Ph.D., C.P.A.; Appointed 1988

**Virgil Y. Lindahl**

(1982), Professor Emeritus of Physical Education — B.A., M.A.; Appointed 1953

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(1963), Professor Emeritus of Sociology — B.S., M.A., Ph.D.; Appointed 1946



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