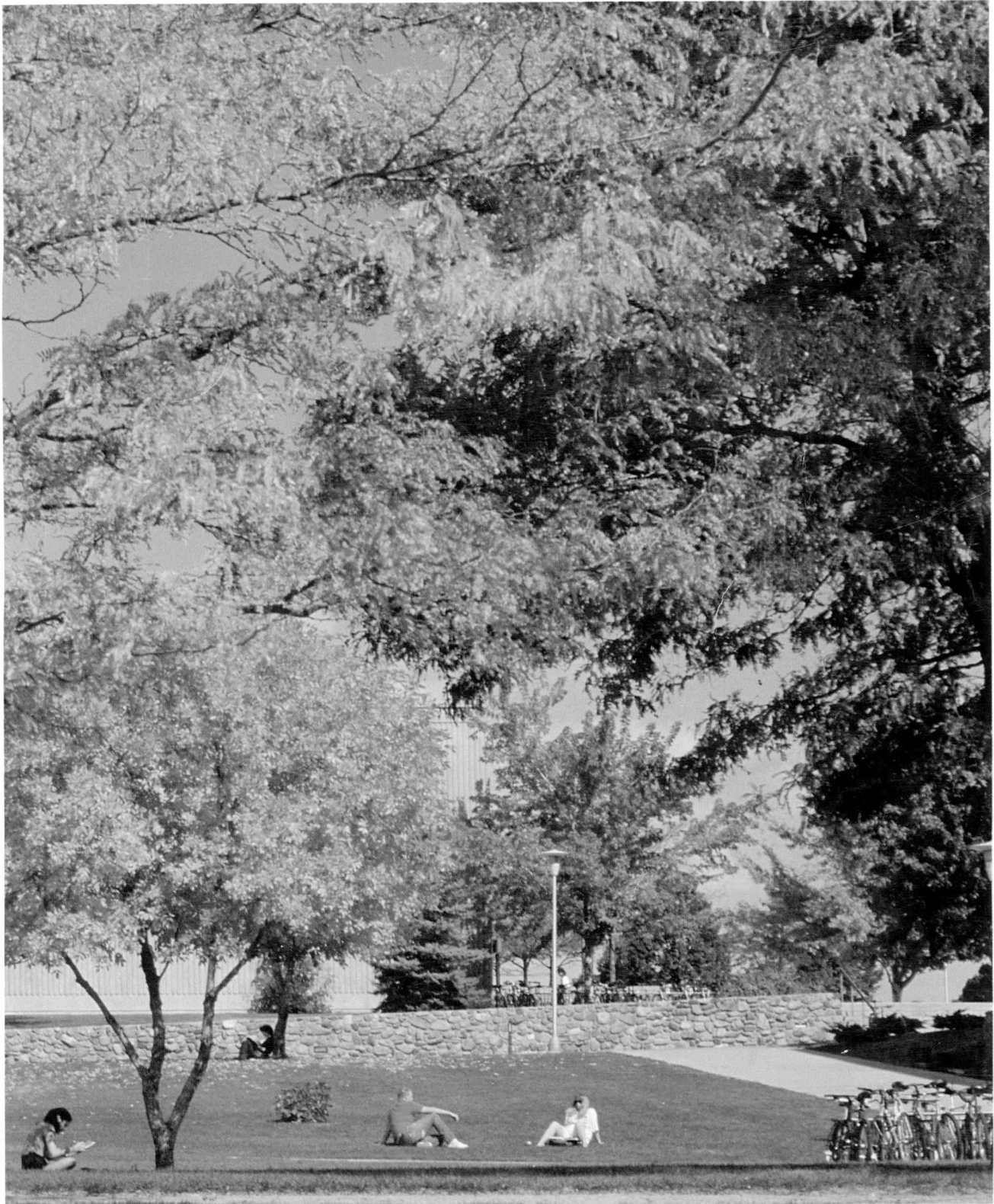


UNIVERSITY OF NORTHERN COLORADO



BULLETIN
1995 – 1996

UNIVERSITY OF NORTHERN COLORADO
GREELEY

UNDERGRADUATE AND GRADUATE
BULLETIN

EFFECTIVE DATES
SEPTEMBER 1, 1995
TO
AUGUST 31, 1996

Calendar

Summer 1995

Sunday, May 14
Residence halls open
Monday, May 15
Four-Week Session begins
Monday, May 29
University closed (Holiday)
Friday, June 9
Four-Week Session ends
Sunday, June 11
Residence halls open
Monday, June 12
One-Week Session begins
Friday, June 16
One-Week Session ends
Monday, June 19
Late registration, Eight-Week Session
Tuesday, June 20
Eight-Week Session begins
Tuesday, July 4
University closed (Holiday)
Friday, August 11
Eight-Week Session ends
Saturday, August 12
Commencement

Fall Semester, 1995

Sunday, August 20
Residence halls open
Monday-Tuesday, August 21-22
Late registration
Wednesday, August 23
Classes begin
Monday, September 4
University closed (Holiday)
Thursday-Friday, November 23-24
University closed (Holiday)
Monday-Friday, December 4-8
Final exam week
Saturday, December 9
Commencement

Spring Semester, 1996

Sunday, January 14
Residence halls open
Monday, January 15
University closed (Holiday)
Tuesday, January 16
Late registration
Wednesday, January 17
Classes begin
Monday-Friday, March 18-22
Spring Break (No classes)
Monday-Friday, May 6-10
Final exam week
Friday, May 10
Commencement (Graduate)
Saturday, May 11
Commencement (Undergraduate)

Summer, 1996

Sunday, May 12
Residence halls open
Monday, May 13
Four-Week Session begins
Monday, May 27
University closed (Holiday)
Friday, June 7
Four-Week Session ends
Sunday, June 9
Residence halls open
Monday, June 10
One-Week Session begins
Friday, June 14
One-Week Session ends
Monday, June 17
Late registration, Eight-Week Summer Session
Monday, June 18
Eight-Week Session begins
Thursday, July 4
University closed (Holiday)
Friday, August 9
Eight-Week Session ends
Saturday, August 10
Commencement

The University of Northern Colorado does not discriminate on the basis of race, color, creed, national origin, sex, age, individual handicap or veteran status in the recruitment and admission of students, the recruitment and employment of faculty and staff, and the operation of any of its programs and activities, as specified by federal laws and regulations. The designated official for University compliance is the Director of Affirmative Action/ Equal Opportunity, Carter Hall, University of Northern Colorado, Greeley, Colorado 80639.

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University of Northern Colorado
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The content of this document is provided for the information of the student. It is accurate at the time of printing but is subject to change from time to time as deemed appropriate by the University President or Board of Trustees in order to fulfill the University role and mission or to accommodate circumstances beyond their control. Any such changes may be implemented without prior notice, without obligation and, unless specified otherwise, are effective when made.

The calendar is a projection of the course of events of the 1995-1996 academic year 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 program offerings from semester to semester for educational, operational or financial reasons that are deemed sufficient to warrant such actions.

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Introduction

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

The teaching and administrative personnel of UNC have created a highly prized balance between the personal contact found typically in a small institution and the broad range of cultural, social and intellectual opportunities found in a large university.

The University offers approximately 2,700 academic courses annually and enrolls approximately 10,500 students.

UNC is located in the city of Greeley, Colorado, approximately one hour north of the city of Denver and approximately one hour east of Rocky Mountain National Park. Greeley is a mid-sized city of 65,000 people (counting UNC students). Greeley has a symphony, jazz and rock concerts, community and collegiate theater, as well as America's largest 4th of July rodeo. It has a dry, high desert climate with sunny days and cool nights. There is some snow and very little rain.

The 236-acre 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 high-rise buildings.

The University of Northern Colorado celebrated its 100th birthday during 1989 and 1990. The University was founded in 1889 when a bill was drafted in the Colorado legislature providing for a State Normal School. The law creating the school was signed on April 1, 1889. The citizens of Greeley raised the necessary money for the first building and the cornerstone was laid on June 13, 1890.

Designed to train qualified teachers for the state's public schools, the State Normal School began on October 6, 1890, 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.

The following Mission and Goals statement was unanimously adopted by the Board of Trustees on March 31, 1982.

Mission

The University of Northern Colorado is a maturing, multipurpose institution. Its primary mission is to provide quality instruction while simultaneously developing focused research and public service roles. The University is to be competitive with the best institutions of its type in the nation through a systematic devotion to excellence.

At the undergraduate level, UNC has evolved into a comprehensive university. A strong liberal arts and General Education core forms a foundation for a broad range of studies, for pre-professional preparation and for professional programs.

Building on its historically stated purpose, UNC will continue its distinctive statewide role of providing leadership in fields of education. The University will maintain a selected number of professional schools and colleges. The scope of professional programs will include education, business, performing and visual arts, health and human services and applied sciences. All graduates of professional programs will have a liberal arts foundation that will allow them to compete successfully for career opportunities in their respective fields as well as to pursue advanced educational opportunities.

At the graduate level, the University will offer a broad range of master's degree programs and a selected number of doctoral degree programs. The advancement of knowledge must be a key ingredient in graduate scholarship. Students receiving graduate degrees will be prepared to provide leadership and direction for the state, region and nation.

Centers of excellence in a few disciplines will be identified and enhanced. These centers will merit national recognition in their respective fields.

The University of Northern Colorado will serve the people of Colorado through a demanding, thorough, high-quality continuing education program. UNC will continue to be the unique resource to the State of Colorado with respect to professional education. The standards and quality demanded of on-campus students and programs will be required of all off-campus offerings.

The University will contribute to, as well as draw from, the fund of knowledge through scholarship, research and creative efforts; it will actively engage in public service to the people of Colorado; and most importantly, it will prepare its graduates to function in, adjust to and enhance their changing society.

Throughout all its endeavors, the University will continue to foster the human dimension of the educational process. Recognizing that education adds meaning to life and mindful of the individuality of each student, UNC pledges to maintain the spirit of concern for the student that distinguishes it among public universities.

Goals

1. The University of Northern Colorado seeks to provide its students a high-quality educational experience in an environment conducive to intellectual inquiry. Students will be expected to become familiar with research and problem-solving methods, to develop the ability to synthesize knowledge from many sources, to think critically, to communicate effectively and to attain a capacity for self-directed learning with a corresponding commitment to lifelong learning.

1a. At the undergraduate level, the University will provide students with a solid foundation of general knowledge in the liberal arts and sciences and specialized scholarly studies in subject-matter disciplines, professional programs and preparation for advanced scholarly work. Faculty providing undergraduate programs will remain current in their field through academic scholarship.

1b. The University will provide preparation and training for specific professional and career-oriented goals, opportunities for retraining or upgrading skills and assistance to students and alumni in career planning.

1c. The University will provide postgraduate education and advanced studies in specialized program areas. All graduate programs will have high standards, quality and rigorous expectations. Faculty providing graduate programs will be active professionally in research and well-versed in scientific methods pertaining to their disciplines. Students receiving graduate degrees will be capable of independent research and analysis.

2. UNC will assist students in maximizing their human potential and minimizing the waste of human resources. The University environment and services will help students develop a sense of self-worth, self-confidence, a respect for diverse cultures, an awareness of important social and moral issues and a concern about the welfare of others.

3. UNC will continue to attract and retain students and faculty from diverse racial, ethnic and socioeconomic backgrounds, so as to enhance the educational opportunities provided all students at UNC.

4. The UNC community will enjoy a cultural and aesthetic awareness entailing a heightened appreciation of a variety of art forms, a study of the humanities and encouragement of active participation in artistic activities.

5. UNC will seek, through a program of individual, departmental, sponsored and organized research and creative efforts, to extend the frontiers of knowledge. Research, both applied and basic, will form a basis for providing up-to-date undergraduate instruction; quality graduate programs; and solutions to societal problems.

6. The University will commit institutional resources to the solution of community, state and national problems. The public service commitment of the University will be achieved by conducting continuing education, serving as a cultural and information center, and engaging in direct services.

7. The University will recognize its interdependence as a community. Each unit, therein, will be successful to the degree that it contributes to the achievement of university-wide goals.

Values

1. The University shall operate in an open and candid manner, encourage a healthy exchange of ideas, concentrate on issues and develop an atmosphere of mutual trust and respect among students, faculty, staff and administrators.

2. The University shall foster a climate that promotes cultural and intellectual stimulation. This climate will encourage curiosity, innovation and experimentation seeking creative approaches and solutions.

3. As a state university, UNC shall operate with a high degree of public trust through efficient utilization of the human, fiscal and physical resources committed to its stewardship.

4. The University shall operate in compliance with state and national laws and within the highest professional standards of ethical conduct and behavior.

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; Board of Examiners, Speech Pathology and Audiology; Colorado Department of Education; Colorado State Board of Accountancy; Colorado State Board of Nursing; 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 Council for Accreditation of Teacher Education; The American Dietetic Association; the National League of Nursing; National Recreation and Park Association/American Association for Leisure and Recreation; and the Society for Public Health Education.

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

Services and Resources University Libraries

The **James A. Michener Library** is named for one of America's most popular authors, who is also a former UNC student and faculty member. In this modern facility, the Library maintains its primary collection of approximately 1,500,000 units of hardbound volumes, periodicals, monographs, government documents, archival materials, filmstrips, slides, maps, software programs, videos, and microforms.

The collections and the opportunities to borrow materials are available to all Colorado citizens. Services include bibliographic instruction, interlibrary loan, reference, circulation, reserves, off-campus programs, and access to information via CD-ROM and on-line formats.

The traditional card catalog has been replaced by an on-line Public Access Catalog through the Colorado Alliance of Research Libraries (CARL). In addition to the holdings of the UNC libraries, CARL provides access to the collections of more than

100 libraries throughout the country, including the major research libraries of Colorado. CARL also provides indexed access to more than 3 million journal articles and databases such as ERIC, plus full-text access to a major encyclopedia.

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.

Special services are available for handicapped students, including the Beyond Sight Computer System for the blind and visually impaired.

The **Music Library**, with comprehensive holdings (including scores and recordings) selected for music students, is located in Frasier Hall.

The **Laboratory School Library**, located in Bishop-Lehr Hall, provides approximately 27,000 volumes plus additional learning media focused on literature for children and young adults.

Information Services

Information Services, located in Carter Hall, supports the instructional, research and administrative programs of the University. This support includes systems design, programming and data analysis. It provides computing resources and technical support to the entire campus community. The usual languages are provided along with statistical packages such as SPSS, Minitab, SAS and SYSTAT. Also a computer-assisted/computer-managed instruction package, Phoenix, is provided with accessibility from student labs across campus.

The central facility houses a large HDS mainframe and several minicomputers. Additional equipment and student computer labs are strategically placed throughout central and west campus. Terminals and microcomputers (Apple and IBM) located in various buildings on campus are available seven days a week.

Academic Technology Services

Academic Technology Services (ATS) is an Academic Affairs service unit that provides consultation, media production and a variety of other services to support faculty and academic staff use of technology in direct instruction and research applications. This includes instructional design and assistance in course development and reconfiguration.

Professional staff assist faculty in creating original teaching material and in adapting existing materials with appropriate copyright clearances. Distance education program planning, consultation and support services coordination are available, as are teleconferencing services. ATS engineers offer consultation and technical assistance with learning environment design and installation in classrooms, laboratories and conference facilities.

ATS operates the University's on- and off-campus cable television distribution systems; maintains, installs or schedules installation of cable television outlets in all academic and administrative buildings, and is the University liaison with the local cable television provider.

Continuing Education

The College of Continuing Education provides quality educational opportunities by extending the resources of the University. The College offers a variety of programs including off-campus degree programs, workshop/professional renewal programs, independent study courses, special professional programs, certificate programs, Freshman Challenge, an English language program for international students, on-campus evening programs and an on-campus nationally recognized summer session.

Degree Programs. The Colorado Legislature designated UNC as Colorado's primary institution for undergraduate and graduate teacher education. Continuing Education works to satisfy that responsibility by providing access to complete graduate degree programs in education throughout the state. Classes meet during convenient weekend hours. Most students complete programs in 18-24 months of study. Degrees earned off-campus carry full academic recognition and are no different from degrees and certifications earned on the Greeley campus.

Workshop/Professional Renewal. Hundreds of fascinating graduate-level courses for college credit, career development and professional renewal at locations throughout Colorado can be offered at school districts, agencies and job-site locations by contracting with the University.

Independent Study. Credit courses from 15 University academic departments offer the flexibility for students to study at home or office.

Special Professional Programs. One- and two-day workshops focused on skills for working professionals and their practical applications in the workplace are offered.

Evening Division On-Campus. One-sixth of the courses within the UNC curriculum are offered between the hours of 4 and 10 pm, Monday through Thursday and on weekends. Students have an opportunity to take courses, start and/or finish a degree program.

A full range of University services is available to evening students including special evening registration, accounting services, student advising, and special bookstore evening hours.

Summer Session On-Campus. For more than 100 years the University has hosted a nationally-recognized summer session. It is an integral part of the academic program, allowing students to accelerate completion of degree programs. It also provides non-degree students an opportunity to enrich themselves and improve their professional standing.

Scheduled from mid-May to early August the summer session provides instruction in various course formats lasting from one day to ten weeks. Many of the same courses offered throughout the year are available; in addition, institutes and workshops are scheduled, many featuring prominent lecturers.

Continuing Education's Educational Technology Center extends academic technological capabilities to the community from its Downtown Center at 822 Seventh Street and serves as a link between the campus and the greater Greeley area.

Continuing Education is committed to providing lifelong learning opportunities. For more information call or write the College of Continuing Education, University of Northern Colorado, Greeley, CO 80639. Call 659-6778 from Metro Denver or 970-351-2944 in the Greeley area.

Laboratory School

The Laboratory School is a comprehensive pre-kindergarten through 12th grade program directed by the Tointon Institute for Educational Change. The total enrollment is approximately 600 students, representing all socioeconomic levels reflected in the Greeley community. Presently, the school is engaged in numerous activities for the enhancement of its total education program, with the goal of becoming the nation's finest experimental school. The Laboratory School serves as a research and development center and as a teacher development center in support of UNC's teacher education program.

Student 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. Information about any of these programs may be obtained from the

Office of the Vice President for Student Affairs, Carter Hall, phone 970-351-2303.

The **Dean of Students** serves as a University-wide problem-solving and information and referral service for UNC students. Students who withdraw from all their classes initiate the withdrawal process in the Dean of Students Office. The dean coordinates a recognition and awards program. The dean's office is located in Carter Hall 3005, phone 970-351-2796.

The **Admissions Office** provides information and assistance to undergraduate students seeking admission to the University. New freshmen and undergraduate students transferring from other institutions should contact this office in Carter Hall, phone 970-351-2881. (Graduate students wishing to start a program or transfer should contact the Graduate School Office in University Hall, phone 970-351-2831.)

The **Visitors Center** is located in the Admissions Office. Campus tours are available Monday through Friday four times daily. By contacting this center, a student can make arrangements for a visit to a residence hall, make an appointment with an admissions officer, visit the financial aid office, or schedule an appointment with a professor in the student's proposed field of study (request this one week in advance). To reserve a place in the tour van, call 970-351-2097, or toll free from the Denver metro area, 534-8312.

The **Office of Student Financial Resources** is committed to providing equal educational opportunities to the greatest number of students possible. Financial aid is awarded to assist students to meet college costs (tuition, fees, books, food, housing and transportation). This aid is available through loan, grant, scholarship and employment programs. Visit this office in Carter Hall, Room 1005 or phone 351-2502.

The **Department of Accounting Services** includes the Accounts and Loans Receivable office as well as the Cashier's office. These offices are responsible for the billing and collection of tuition, fees, room and board, and other student-related charges. These offices are located in Carter Hall, Room 1002, or phone 970-351-2201.

The **Registrar and Records Office** provides tuition classification, registration, maintenance of academic records, transcripts and performs the graduation check for undergraduate students. This office also answers questions for undergraduate students about University policies and procedures. Contact this office in Carter Hall, phone 970-351-2231. Graduate students with questions regarding University policies and procedures should contact the Graduate School in University Hall, phone 970-351-2831.

The **Academic Advising Center (AAC)** provides four major services to undergraduates: academic advising for students who have not declared a major; increased academic support available through the Intensive Advising Program; orientation for new students and their parents/spouses; and information about, and assistance with meeting academic standards. Qualified professional staff and peer advisors assist undeclared students with information regarding course selection, general education requirements and other academic questions and concerns. The AAC monitors academic standards established by the faculty and suspends students who fail to meet those standards. Staff are available to answer questions regarding scholastic standards and provide assistance to students experiencing academic difficulties. Contact this office in the University Center (second floor), phone 970-351-1391.

The **Career Services Office** provides current and prospective students the opportunity to explore educational and occupational options, as well as prepare them for entry into the world of work. Its four major functions are:

1. Career Counseling — Assists students in selecting majors and career paths.
2. Cooperative Education/Internship Program — Offers students the opportunity to gain

professional work experience while still in school. The intent of the program is to provide academically relevant full- or part-time work experience that complements the student's studies and enhances their career potential.

3. Testing Service — Provides more than 40 career personality, and national standardized tests that include the SII, MBTI, ACT, ACT-PEP, NLN, MCAT, SAT, CLEP, GRE, GMAT and LSAT, to list a few.

4. Employment Assistance — Includes assisting students with their search for full-time employment after graduation by providing a 24-hour job hotline, on-campus interviews, referrals, job fairs, establishment of credential files, workshops, and literature on job search preparation.

Career Services staff also provide more than 100 workshops and presentations annually on such topics as: Career Planning, Resume Writing, Interviewing Skills and Job Search Strategies. All students can benefit through the use of Career Services. To further explore the possibilities for yourself, contact Career Services in Kepner Hall, Room 0010, or call 970-351-2127 to arrange an appointment with a career counselor.

The **Center for Human Enrichment (CHE)** provides academic advising, skill development classes, tutoring and personal and career advising to referred students. The CHE Learning Center, located in Michener L120 offers computers, tutoring and study skills workshops. Contact this office at Michener L77, phone 970-351-1905.

The **Student Health Center** provides a variety of medical and nursing services, emphasizing preventive medicine, first aid and specific referrals for health care. Appointments are strongly encouraged and can be scheduled with physicians, nurse practitioners, nurse specialists and mental health professionals. The center manages a Certified Drug Outlet and is fully accredited by the Accreditation Association for Ambulatory Health Care, Inc. Contact this office in Decker Hall, phone 970-351-2412.

The **University Counseling Center** provides psychological services to UNC students. In addition to individual and group counseling, the Center provides biofeedback training and test-anxiety management programs. These services are confidential and free to students. Contact this office in Gordon Hall, phone 970-351-2496.

Disabled Student Services provides academic support, which includes academic aides (interpreters, note takers, library research assistants, test administrators, tutors), counseling, special test arrangements, learning lab-study area, preregistration and registration assistance, telecommunications device for the deaf (TDD), housing adaptation and accessibility, limited campus transportation, orientation and mobility training and a reader program. For computer access, adaptive computer hardware and software are available. Training for the adaptive technology is provided in the High Tech Training Center. Contact this office in Bishop-Lehr 1520, phone 970-351-2289.

The **Re-Entry Students Office** provides information, advising and hospitality to undergraduate students, ages 23 and over, who are returning to the educational system.

Orientation, informational workshops and a drop-in center are provided in the Johnson House, 1905 10th Avenue, phone 970-351-2941.

Student Life

Residence Life. The Residence Life administrative office is located in Carter Hall 2007, phone 970-351-2721.

Economical and convenient accommodations are provided for more than 2,900 students, including graduate students and those with families. All residence halls and apartments are managed by professional staff who strive to provide a comfortable living environment conducive to academic success.

University residence halls are furnished. Phones and local service only are provided in all facilities

except Student Family Apartments. All other utilities are included in rental rates. Basic cable hookup for television is provided. Residents provide cooking utensils, linens, blankets, cleaning supplies and personal items. Students may bring small furnishings and decorations for their rooms. Recreation rooms, TV lounges, study areas and laundry facilities are standard in each building. Residence hall government and programming provide an opportunity for involvement for all residents. The Residence Hall Association (RHA) encourages students to take an active role in hall living.

Residence Life offers special services. Residence Life Academic Centers provide 24-hour computer labs, peer tutoring, and study sessions. Special interest floors are located on both West and Central campuses. Included are quiet lifestyle, education, performing arts, health enhancement, single gender, World House (promoting a global perspective of community living) and Option House (focusing on drug- and alcohol-free lifestyles).

A \$100 deposit is required to hold housing space for all residence halls and apartments.

Central Campus Residence Life. Belford, Sabin, Snyder, Tobey-Kendel, Wiebking and Wilson Residence Halls are located within five minutes walking distance from the University Center. These six halls house 750 students and are popular because of the strong sense of community that results from hall-sponsored programs, events and shared living experiences in a small-scale setting.

Rooms and suites accommodate two, three or four students. Each room contains beds, desk areas, bookshelves, closet and drawer space. Halls are coed room to room or floor to floor with the exception of Belford, which is an all female hall. Non-freshmen and freshmen age 20 or more may live in Sabin. Students living in Belford, Sabin, Snyder, Tobey-Kendel, Wiebking or Wilson Halls are required to carry a meal plan.

West Campus Residence Life. Housing over 2,000 students, it includes two large residence halls and two apartment complexes. West Campus classroom and sports buildings are within a five-minute walk.

Harrison and McCowen Halls offer four-person suites with two bedrooms. Harrison has private baths connecting bedrooms. McCowen has vanity areas connecting bedrooms with community bath facilities on each floor. Both halls are coed. Harrison Hall has specially designed rooms for physically-challenged students. Residents are required to carry a meal plan. Air-conditioned dining rooms adjoin each facility.

Turner Hall is an air-conditioned, 13-story coed apartment complex. Most apartments accommodate four students with a living-study room, private bath, two bedrooms and a small kitchen. Non-freshmen may purchase meal plans for use in any dining room.

Lawrenson Hall is limited to students who are at least 20 years of age or who have lived in college/university residence halls at least two semesters. It is a 17-story coed complex with one floor reserved for graduate and reentry (minimum age 25) students. Some efficiency units are available for two persons; two-bedroom units accommodate four students. Each apartment is furnished and has a living-dining area, private bathroom, bedroom(s) and kitchen. This facility is air-conditioned. Meal plans may be purchased for use in any dining room.

Student Family Apartments. Located at 509 18th Street within five minutes walking distance from Central Campus. These apartments accommodate families of up to five persons. One apartment resident must be registered or enrolled for at least 6 hours each semester. The 93-unit complex provides economical living with community facilities including a playground, individual storage units, recreation room and laundry facilities. Apartments include furnished or unfurnished units with all utilities (except phone). A limited number of apartments for physically-challenged students are available.

Residents must provide cooking utensils, linens and a shower curtain. Maintenance is handled by University personnel. For additional information, phone 970-351-2651.

Graduate Houses for Women. Located close to campus, Warren and Harper Graduate Houses offer economical living. Each facility houses seven women. Most of the rooms are single occupancy.

Dining on Campus. The award winning UNC Dining Services provides convenient and economical dining opportunities on campus. Students may choose from a wide variety of meal plans. Three dining locations and Arnie's Snack Shop offer a variety of selections such as Chinese, Mexican and Italian entrees. Gourmet to Go is available at all residential units. Freshmen under age 20, living on campus are required to carry a full meal plan (19 meals per week). UNC Dining Services, the largest student employer on campus, provides a variety of job opportunities from delivery person to student supervisors. For more information contact 970-351-1967.

Student Activities

Students can become actively involved at UNC through the Student Activities Office. Located in the University Center, this office provides students the opportunity to gain valuable experience, meet new and interesting people and participate in activities that have a lasting effect on both the campus and the individual. Phone 970-351-2871.

Greeks. The University recognizes chapters of nine national fraternities and five national sororities. The fraternities are Delta Chi, Delta Sigma Phi, Delta Upsilon, Omega Psi Phi, Sigma Alpha Epsilon, Sigma Chi, Sigma Pi, Sigma Phi Epsilon and Tau Kappa Epsilon. The sororities are Alpha Delta Pi, Alpha Phi, Alpha Sigma Alpha, Delta Zeta and Sigma Kappa.

Student Government. The Student Representative Council (SRC) is the governing body of the students at UNC. In addition to providing a voice for students on campus, SRC oversees several student services: Center for Personal Education (C.O.P.E.), Legal Services, Off-campus Housing, Center for Alcohol Resources and Education for Students (C.A.R.E.S.), National Student Exchange (NSE) and Resume Service.

University Program Council. The University Program Council (UPC) provides the majority of the entertainment on campus for students. This student-run, student-funded group sponsors lectures, movies, comedians, concerts and other special events at low or no cost to students.

Student Clubs and Organizations. UNC charters over 100 clubs and organizations for students to participate in. Included are academic societies, international student groups, religious groups, social organizations, departmental groups and honorary organizations. The Organization of Hispanic Students, QQLBA, and Residence Hall Association have offices located in the Student Activities Area and each of the 100 clubs has its own mailbox in the area. The Special Projects Office also provides a co-curricular transcript, Leadership Conferences, and a New Student Mentor Program.

Athletics. At the intercollegiate level, 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, volleyball and

wrestling. Athletically-related financial aid is available in all intercollegiate sports. This assistance is based upon athletic ability and academic eligibility.

• Golf is a club-varsity sport and is eligible for NCAA championships.

• Club sports include lacrosse, men's soccer, rugby, golf, Shotokan karate, volleyball, and racquetball. These sports are not eligible for NCAA championships.

• Intramurals support more than 25 sports with hundreds of teams formed by residence halls, fraternities, sororities and independent groups.

Student Media Corporation. The Student Media Corporation (SMC) is the organization that oversees UNC student publications. The Mirror, the student newspaper, is published three times a week.

Graphic Services. The Student Activities Office maintains a graphic services and sign shop. Students can commission a professional artist to develop promotional materials and print signs at a nominal cost.

Drug/Prevention Education Program. The UNC Drug Prevention/Education Program recognizes that college students are emerging adults who are faced with the task of making personal choices about the use of alcohol and other drugs. To facilitate healthy lifestyle choices, the staff work with individuals, campus departments and organizations, and the Greeley community to provide programs that educate students about alcohol and other drugs, support healthy choices around alcohol and other drugs and provide resources for information and referrals for assistance.

Student Centers

The **University Center** is the show place of the UNC campus. As the community center of the campus, the UC staff, along with the student leaders, strives to make the Center an extension of a student's education by providing cultural, social, leisure, recreational and co-curricular activities for the campus. The diversity of the UNC student body and the surrounding community is a prime consideration in the programming and services offered.

The UC houses the Advising and Registration Centers and is the home base for over 100 student clubs and organizations.

Located in the lower level is the UC Mall, where twelve merchants serve the campus and community. Zachariah's Food Court, the Walk-Up Window, Taco Bell Express and Club Bentley provide a variety of food offerings from upscale dining to fast food. The University Bookstore offers collegiate clothing gift items, CD's and supplies in addition to textbooks. A travel center, computer store, convenience store, and hair salon serve the many needs of students. A full-service copy center, ice cream and gourmet coffee shop and the student ID/UNC Card office round out the mall.

Lounges, meeting rooms and other facilities are available for special scheduling. The University Center hosts an exceptional range of events and programs throughout the year and attendance at UC events approaches 200,000 annually.

Hispanic Cultural Center is a resource center whose mission is to enhance recruitment and retention by providing personal, social, cultural and academic support, programming and referral to UNC/Greeley community. Their goal is to help

foster an environment that will result in a positive and successful experience at UNC. Everyone is welcome and encouraged to take part in their activities and events. Contact this office at 928 20th Street, phone 970-351-2424.

Marcus Garvey Cultural Center provides a support network for black students and the University through its programs of academic and personal assistance and social and cultural activities. Contact this office at 928 20th Street, phone 970-351-2351.

International Student Services provides support through ongoing orientation, advising, cultural, social and educational activities for students from other countries. The office provides services related to immigration. Cross-cultural programming is offered for the entire University community. Contact this office at 1855 10th Avenue, phone 970-351-2396.

The Women's Resource Center provides educational programs, speakers, performers, resources and opportunities for students interested in gerand and women's issues. Contact the Women's Resource Center at 225A-B Candelaria, phone 970-351-1492.

University Resources

University News and Publications. This office exists to communicate effectively and regularly with the University's major constituencies. It responds to requests from the media for information on a variety of subjects by calling on the resources and expertise of the faculty and professional staff. The news operation of University News and Publications prepares the UNC Report, a weekly newsletter of events and stories about the faculty and staff, and announcements and events for faculty and staff. Through this office, the Division of University Affairs produces the University of Northern Colorado Spectrum, a magazine that focuses on events, faculty, staff, alumni and friends of the University.

Alumni Relations. Housed in the Alumni and Foundation Center, Alumni Relations provides a link between the University and its graduates, offering news and information of other graduates and current campus events, coordinating the efforts of local chapters nationally and keeping records on members.

Office of Development. Located in the Alumni and Foundation Center, the Office of Development is responsible for coordinating University efforts to secure financial support from the private sector and to serve as the receiving point for gifts of dollars, securities, works of art, land and equipment.

University Police Department. UNCPD is the campus law enforcement agency, staffed by professional, full-time, state-certified peace officers. This office is responsible for the police and security patrol 24 hours a day, seven days a week. Duties include traffic and parking enforcement, all emergency medical calls, as well as criminal investigations. UNCPD is accredited by the Colorado Association of Chiefs of Police on professional standards. UNCPD can be contacted at 970-351-2245 (all hours) or by dialing 911 from any campus telephone.

KUNC-FM. UNC owns and operates a 100,000-watt noncommercial public radio station located at 91.5 on the FM band. KUNC is a member of National Public Radio and broadcasts 24 hours a day, 365 days a year.

General Academic Policies

Academic 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 also is offered during the summer semester. Students enrolling in the University for the first time may do so before the beginning of any semester.

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 hours 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.

Basic Skills Courses

These courses are designed to teach academic skills and general competencies necessary to succeed in college.

These courses, numbered 001 through 099, do not count in term, cumulative or total credits and are not calculated into the GPA. Credits earned in these courses will not count toward meeting financial aid minimum credit hour requirements.

Grade System

The University assigns alphabetical grades. Superior is indicated by "A," above average is "B," average is "C," below average but passing is "D," and failure is "F." A course in which a "D" is earned will not be counted toward graduate degree credit.

Certain courses are graded with "S/U" (satisfactory/unsatisfactory). Grades of "S" and "U" are also used for theses, dissertations and educational field experience courses. They may be used for certain workshops, practica, performance or activity courses when indicated in the Schedule of Classes and in the course descriptions in the bulletin. S/U grades are not equivalent to any other letter grade and are not computed as part of the student's grade point average.

A grade of "W" indicates an approved withdrawal from the course and is assigned only when the student has completed the official withdrawal processes outlined in this bulletin. This grade is

not computed in the student's grade point average.

The grade of "UW" indicates an unauthorized withdrawal and is assigned when the student has never attended the class for which he or she enrolled. The grade is not computed in the student's grade point average.

A grade of "I" is assigned when coursework is incomplete at the end of the academic term and is used only when a student cannot fulfill his or her academic responsibilities during the last week of a term or because he or she missed the final examination due to sickness, an emergency in the family, etc. To amend a grade of "I" with an earned grade on a student's transcript, the student must complete all coursework by the last day of the next semester of attendance including summer term, or within one calendar year, whichever occurs first. If a student does not complete the academic requirements within these time limitations, the grade will be recorded as "I/F" or "I/U" on the academic record. "I/F" will be computed into the student's grade point average as an "F" grade.

The grade of "NR" indicates no report. This is used for honors courses, theses, dissertations and other courses that have been granted approval before the semester that the grade is to be awarded. (There is a difference between a grade of "NR" and "incomplete." The "NR" is prearranged due to the unique nature of the course, i.e., completion of coursework requires longer than a semester to complete. The "I" grade is assigned due to unanticipated circumstances that make the student unable to complete course requirements within the allotted time.)

The grade of "NC" indicates no credit was earned for this course because the student enrolled for no credit (audit).

Computing Grade Averages

The University operates on a 4.0 grade point system. A grade of "A" has a value of four grade points, "B" equals three points, "C" equals two points, "D" equals one point. No points are given for an "F."

"S" (credit granted) or "U" (no credit granted) and "W," "UW," "NR" and "NC" are not used in computing the grade point average. "I" is not used for computing the grade point average unless the time for completion of the work has expired. In this case the "I" is computed as an "F" or "I/F" is recorded on the transcript.

To compute a semester grade point average, first remove all basic skills courses numbered 001 through 099 and all courses that carry the grades listed previously, "S," "U," "W," "UW," "NR," "NC." Then multiply the credit hours for each remaining class by the number equivalent to the letter grade and add those numbers together to obtain the total number of points for the semester. Then divide the total number of points earned by the total number of credit hours attempted. For example, 3 credit hours of "A" (12 points) plus 5 credit hours of "B" (15 points) plus 3 credit hours of "C" (6 points) equals 33 points. If 11 credit hours were attempted (enrolled for), divide 33 points by 11 credit hours attempted that equals a

grade point average of 3.0. If the same grades were received but 14 credit hours were attempted (i.e., received an "F" for 3 credit hours), 33 points divided by 14 credit hours equals a grade point average of 2.35.

The same principles apply when computing the cumulative grade point average. Add the total number of points earned in all classes except basic skills courses numbered 001 through 099 and all courses that carry grades of "S," "U," "W," "UW," "NR," and "NC." Divide this number by the total credit hours attempted. For example, 75 total grade points earned over two semesters divided by 30 credit hours attempted in the same two semesters equals a cumulative grade point average of 2.50.

With the exception of courses numbered 001 through 099, all grades with a numerical value are used to compute the grade point average whether or not the credits count toward graduation or the courses have been repeated.

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.

Courses may be repeated for credit only when that fact is listed in the course description section of the appropriate bulletin and only up to the maximum number of credits and other specifications as shown in the bulletin. Repeated courses are recorded on the transcript separately for each time the student registered, with all letter grades counting toward the cumulative grade average. A non-repeatable course may be counted in total credits toward graduation only once.

For 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 drop/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 removal from a course being taken for no credit with assignment of a "UW" grade.

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 GPA.

- **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 by special permission of the instructor, but no undergraduates may be admitted to course numbers above the 500 range.

- **Doctoral level courses** — the 700 range.

Occasionally, courses that do not appear in the bulletin 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

For all students, nine credit hours is considered full time for health insurance requirements and tuition charges. For financial aid and verification of enrollment purposes (other than for health insurance), full-time enrollment is considered 12 credit hours for undergraduate students and nine credit hours for graduate students. A normal undergraduate course load, however, is 15 credit hours of academic credit in each semester. This information may vary during summer terms; see 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.

More than 18 credit hours per semester for undergraduates and 17 credit hours for graduates is considered an overload and requires the payment of a tuition surcharge based on the number of credit hours taken (see chapter on Expenses). Beginning the first day of classes through the drop/add deadline, undergraduate students with a 2.75 or higher cumulative grade point average may enroll for additional courses, with approval from the Academic Advising Center located in the University Center, phone 970-351-1391. Additional requirements are:

- Music or business majors receive overload approval from their department.

- Overloads during the semester of student teaching are approved by PTE.

- Overloads of 22 credit hours or more require a letter from the student's advisor approving the overload in addition to the approval from Academic Advising.

- Graduating seniors can obtain overload approval before the first day of class through the Academic Advising Center.

- Graduate students receive overload approval from their academic advisor.

Course load limitations for graduate students refer to all courses taken while enrolled as a graduate student in a graduate degree program, a non-degree certification program, or any combination thereof. The maximum load for a graduate student is 17 hours per semester.

During the summer term maximum credit loads may vary. See the Summer Schedule of Classes.

The course load limitations refer to work completed in either the on-campus or off-campus programs or in a combination of the two types of programs.

Class 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.

Undergraduate Academic Advising

Academic planning is best achieved by the student working with a qualified advisor. Students who declare majors are assigned advisors in their departments. Undergraduate students who have not declared majors are advised by the Academic Advising Center located in University Center.

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 appropriate to his or her needs and University requirements.

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.

Every student is 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 from their academic advisors before registration unless the personal access code is printed on their course selection forms.

Additional information about the undergraduate advising system may be obtained from the Academic Advising Center, University Center, phone 970-351-1391.

Off-Campus Activity and Field Trip Disclaimer

Students at the University of Northern Colorado are encouraged to take advantage of the many diverse educational opportunities offered by the University and/or available within the vicinity of the University. 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 circumstances, however, the University presumes its students are of sufficient age and maturity to be responsible for their conduct and activities at all times, on or off campus. The University expects and requires its students to comply with all laws and to assume all responsibility and liability for their actions and conduct while attending, involved in or traveling to and from any off-campus activities, whether for required or voluntary activities.

General Policies

Full-Time and Part-Time 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.

Full-time for financial aid purposes, directory information 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. However, any student registering for nine credit hours or more in a semester is considered full-time for the UNC student health insurance requirement and tuition charges.

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 (hereafter "Act"), 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.

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.

3. The right to prevent disclosure without consent, with certain exceptions, of personally identifiable information from the student's educational records.

For example: Parents of dependent students as defined by Internal Revenue Code of 1954, Section 152, as amended, are exceptions. All students under age 21 shall be assumed dependent unless the student notifies the Registrar's Office in writing when they consider themselves to be of independent status. To establish dependent status of a student 21 years of age or older or one who has notified the Registrar's Office of his/her independent status, a certified copy of the parent's most recent federal income tax form shall be required before any educational records or components thereof shall be released to the parents of the student.

4. The right to secure a copy of the University's policy.

5. 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.

Each of these rights, with any limitations or exceptions, is explained in the University's policy statement, a copy that may be obtained in 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 concerning any student for any purpose at the discretion of the University unless a written request for nondisclosure is on file:

Category I: Name, addresses, telephone number, dates of attendance, student classification.

Category II: Previous institution(s) attended, major field of study, awards, honors, degree(s) conferred, degrees pursued or being pursued.

Category III: Past and present participation in officially recognized sports and activities, physical factors of athletes (height and weight), date and place of birth.

Currently enrolled students may prohibit general disclosure of this *Directory Information* by notifying the Registrar's Office in writing, specifying the categories to be withheld, 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 to *Directory Information*. The student should carefully consider the consequences of any decision to withhold any category of *Directory Information*. Regardless of the effect upon a 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.

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.

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 further information, students should obtain a copy of the Student's Rights and Responsibilities statement found in the Student Handbook from the Office of the Vice President for Student Affairs, Carter Hall 3005, phone 970-351-2303.

Academic Standing

A student's academic standing is determined by the grade point average. An undergraduate student's academic status, whether currently or formerly enrolled, is one of the following:

- "Good Standing" — Having a semester and cumulative grade point average above the University minimum.
 - "Academic Probation" — An intermediate status between good standing and academic suspension (dismissal). Students on probation have failed to meet University standards of achievement as explained in this bulletin. Academic probation serves as a warning to the student and is not intended to be a penalty. No notation of academic probation is made on the student's official transcript.
 - "Academic Suspension" — Involuntary separation from the institution. Suspended students may seek readmission to the University. The suspension notice states a time when such readmission may be appropriate. Academic suspension is noted on the student's official transcript.
- For requirements regarding graduate students, see the Graduate School portion of this bulletin.

Academic Probation and Suspension

All undergraduate students are expected to maintain a semester and cumulative grade point average of 2.0, which is also the required minimum for graduation.

A student will be placed on academic probation if that student fails to attain a 2.0 semester grade point average and/or cumulative grade point average.

A freshman attaining less than a 1.50 grade point average in any semester or less than a 1.75 cumulative grade point average at the end of the freshman year may be suspended upon a review of the student's academic record.

Sophomores, juniors, or seniors attaining less than 1.75 in any semester or less than 2.00 cumulative may be suspended upon a review of the student's academic record.

The minimum cumulative grade point average for graduation is 2.0. There are other minimum grade point averages for entrance into and/or continuation in certain programs at UNC. These additional requirements are explained in the program descriptions in this bulletin.

Readmission After Academic Suspension

Academic suspension may result from academic failure to attain or maintain the minimum semester or cumulative grade point average. An undergraduate student placed on academic suspension may not re-enroll at the University of Northern Colorado without the approval of the Academic Advising Center. Such approval may not be requested until the passage of one semester, not including summer, after the suspension was imposed.

The application for readmission must be submitted to the Academic Advising Center, University Center, phone 970-351-1391. The petition should include a detailed account of the reasons the student did not achieve his or her academic potential and a description of circumstances that have changed to now allow him or her to perform at a satisfactory level. The application should also contain a specific plan of action that the student will follow to ensure academic success. Readmission appeal forms are available through the Academic Advising Center, University Center, phone 970-351-1391. A student who has attended other institutions since suspension from UNC must furnish an official transcript from those institutions.

Fresh Start Programs for Freshmen and Continuing Students

These programs were designed to assist students who have experienced poor academic beginnings at UNC.

The Fresh Start Program for Freshmen is for students who have completed less than 30 semester credits at UNC and who have cumulative grade point averages below 2.00. To be eligible students must attend another institution and transfer at least 24 semester hours back to UNC with at least a 2.5 GPA.

The Fresh Start Program for Continuing Students is for students who have grades of "D" and/or "F" that are four calendar years old or older based on the most recently completed semester at UNC.

In both cases students must complete at least 30 semester hours of UNC coursework after the Fresh Start program has been applied and prior to graduation.

If you would like additional information, call the Academic Advising Center at 970-351-1391.

Academic Appeals Board

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, Carter Hall 3005, phone 970-351-2796.

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. Graduate students should contact the Academic Appeals Officer of the Graduate School.

Insurance

Students who register for nine or more academic credit hours during the regular academic year (fall and spring semesters) must have health insurance. Students currently enrolled in an acceptable health and accident insurance program may request a waiver of the UNC student 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 date.

Part-time students may request to purchase the health insurance from student health insurance

personnel. Insured students may enroll their dependents in the student health insurance by request from student health insurance personnel. The above enrollments must be completed no later than the 10th class day of the semester.

Student health insurance policy enrollment and waiver forms may be obtained from the Student Health Insurance Office, Decker Hall, phone 970-351-1915. The University does not require students registered only for summer session to purchase the University's student health insurance plan or demonstrate possession of an acceptable insurance plan. However, 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.

Procedures Registration

The University publishes the Schedule of Classes listing classes offered each semester. The Schedule of Classes is the basic guide for registering for classes. It provides information on drop/add/withdrawals, fee payment and other relevant policies, procedures, and deadlines for which students are responsible. The Schedule of Classes for the appropriate semester may be obtained from the Registration Center, University Center; the Academic Advising Center, University Center; or the Admissions Office, Carter Hall 3005.

Registration is a continuing operation. 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:

- Distribution of course selection materials and advising
- Selection of courses
- Receipt of statement of account and change of address form
- Payment (or arrangements for deferral) of student account

Provisions are made for new students to register during this regular process. In addition, since most new students enroll for the fall semester, the undergraduate orientation program during June, July and August provides academic advising and special assistance for new student registration. The Graduate School also conducts an orientation for new graduate students.

Late Enrollment

No student is permitted to enroll in a full-term course after the first eight class days. This deadline applies to students who have not selected any courses previously for the current semester. Consult the Schedule of Classes for the exact date each semester after which new enrollments will not be accepted.

Schedule Changes — Adds or Drops

During the beginning of each semester, students may add or drop courses from their schedule (see the Schedule of Classes for specific deadlines). This procedure is handled in the Registration Center, University Center, phone 970-351-2521 or by touch-tone telephone registration, 970-351-2825. 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. The drop/add deadline for a short-term class occurs when the class has held 15 percent of its meetings. The number of credits for which a student is registered at the time of the drop/add deadline determines tuition and fee charges. Drops differ from withdrawals since they are not recorded on the student's transcript as are withdrawals (see next section).

Withdrawal From Class

When a student registers for a class, he or she is considered to be a member of the assigned class section as certified by the forms completed at registration and the Class Schedule Confirmation form printed after registration.

The student may drop a class during the "Drop/Add" period, which is normally the first 10 class days of a semester for full term courses. The predetermined dates of the Drop/Add period of each semester are listed in the Schedule of Classes for each semester. A signature is not needed to drop a class.

The procedure for withdrawal requires the student to obtain the faculty member's signature on the Schedule Change form so the faculty member is aware of the withdrawal. The form may be obtained in the Registration Center, in the Academic Advising Center in the University Center, or from the Registrar's Office in Carter Hall. The first date to withdraw from an individual course is the first class day immediately following the drop/add 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 a short-term class occurs when the class has held 50 percent of its meetings. The grade of "W" appears on the transcript for each class from which a student withdraws.

Registration for a class creates a financial liability that may be eliminated only if the student removes herself/himself before the first class day and through the proper procedure.

Should the faculty member refuse or be unavailable to sign the Schedule Change form for a withdrawal, the student may ask for assistance from the department chairperson, or the dean of the appropriate college. When properly signed, the Schedule Change form is turned in at the Registration Center, University Center.

A faculty member may drop a student from a class during the drop/add period if the student has not attended the first two class hours. The student must notify the instructor if he or she cannot attend the first two hours during which the class meets. However, not all instructors will exercise this option; 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.

Final Examinations

All final examinations are 150 minutes in length. Examinations are conducted in the same classroom used throughout the semester unless alternative arrangements are made with the scheduling department of the Registrar's Office. Faculty should alert students to changes in final examination times or locations before the testing date.

The final examination may be eliminated by an instructor who considers it unnecessary, with the approval of the department chairperson.

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 it 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.

Grade Submissions and Corrections

Faculty must submit grades to the Registrar's Office by 4 pm of the third working day following the end of a course. Grade changes or corrections must be submitted within the first two weeks of the following semester. Grade change requests are submitted on special grade report forms signed by the instructor and department chairperson. Forms are available from the Registrar's Office and are supplied only to faculty and departmental offices. No grade change requests submitted by students will be accepted.

Transcripts

There is a fee charged for each transcript ordered. Official transcript orders placed with the Registrar's Office require the student's signature and a fee before processing each request. Transcripts may be ordered in person or by mail and are mailed out or can be picked up by the student.

Application for Graduation

Undergraduate students should apply for graduation upon completion of 75 semester hours of credit applicable to the degree program. The application is evaluated and processed by the Registrar's Office and the major, minor and certification departments. Applications for graduation are accepted through 4 pm Friday of the second week of the semester that the student expects to graduate. There is a graduation fee assessed for graduation the term the student initially plans to graduate.

After the application is filed, it is the student's obligation to inform the Registrar's Office of any change in graduation plans such as the proposed semester of graduation or course substitutions.

Graduate students should review graduation requirements and graduation procedures in the Graduate section of this bulletin.

Withdrawal from the University

A student may withdraw completely from the University at any time during the semester. Students who wish to withdraw completely must start and finish the process at the Dean of Students Office, Carter Hall 3005. Depending upon the date the withdrawal is initiated, a percentage of tuition and fees will be assessed. See the description of Withdrawals, Drops, or Cancellation from Classes within the University Tuition, Fees and Other Charges section of this bulletin.

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, Carter Hall 1005, phone 970-351-2502.

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. Undergraduate students who have two majors leading to different degrees (e.g., B.A. and B.S.) may receive a diploma indicating the awarding of two degrees simultaneously if they have satisfactorily completed a minimum total of 150 semester hours of credit. A student with less than 150 semester credit hours will receive one degree appropriate for the one declared as the first major.

Additional hours above the minimum requirement for a degree are incorporated into that degree program and may not be used to meet other requirements.

Coursework May Count for the Next Higher Degree

Students may, in the last semester of study for one degree, register for graduate courses that exceed the requirements for that degree, provided that their application for admission to the next higher degree program is accepted before the start of the final semester. If the student has been admitted to the program for the next higher degree, he or she must complete "A Petition to Count Work On the Next Higher Degree" that may be obtained from the Graduate School Office, University Hall, phone 970-351-2831. Students will be accountable for the final examination in the courses taken for the next higher degree.

Second Baccalaureate Degree

To declare an intent to complete a second baccalaureate degree, students must complete a change of major form available in each academic department. Upon completion of this application 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 tuition rates rather than the graduate tuition rates, the change of major form must be returned from the appropriate department to the graduation check office by Wednesday of the third full week of the first semester enrolled in courses toward the second baccalaureate degree. Students must complete a minimum of 30 in resident semester hours to qualify for the second bachelor's. Applications turned in after this point in the semester will not affect the student's classification (undergraduate, second baccalaureate degree) until the following semester.

Students who have completed their baccalaureate degree at another institution and seek a second baccalaureate degree at UNC must complete an application for admission through the UNC Admissions Office and are required to pay undergraduate tuition rates.

Other Academic Opportunities

Directed Studies

Directed Studies are available in most disciplines. These are identified within this bulletin by course numbers 422 and 622. The Directed Study course provides a vehicle that a qualified student may receive University credit for an individualized investigation under the direct supervision of a UNC faculty member. Since 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.

The investigation must be on a specific topic that is not duplicated by an existing course within the University's curriculum. 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.

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 Registration Center at the time of enrollment must bear the signatures of the

supervising faculty member and the department chairperson. 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 interested in the appropriate policy should consult with either the Graduate School, University Hall 2007, phone 970-351-2831, or the dean of the college in which the Directed Study is to be undertaken.

Credit by Examination

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 normally taken when the student is still in high school.

- 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, Kepner Hall, Greeley, Colorado 80639, phone 970-351-2127.

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 to challenge the course through examination from the course instructor.

- 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 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. In some cases proficiency examinations may provide evidence for teacher certification.

Graduation Requirements

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:

- earn a minimum of 120 semester credit hours.
- 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 certification requires a UNC cumulative grade point average of at least 2.50).

- have at least 40 credit hours in courses designated as General Education courses in the bulletin of the academic year in which the student first completes courses at the University. Community college transfer students may use the UNC Bulletin of the academic year in which the student first registered for classes at the community college. UNC Bulletins expire after six years. The General Education program is described later in this chapter.

- meet all requirements for the bachelor's degree in the student's major field of study, as listed in the current bulletin when the major is officially declared. In addition, Professional Teacher Education requirements must be satisfied if applicable.

- pass the UNC English Essay Examination.

UNC Bulletin Requirements

Requirements for graduation are checked as follows: requirements for completion of General Education as designated in the Bulletin of the academic year of which the student enrolls and completed his/her first course. The requirements for a major or minor are determined by the bulletin of the academic year in which the student declares a major. The undergraduate student has six years to complete his or her academic program using the appropriate bulletin. When the bulletin has expired at the end of the six-year limit, the student may select any subsequent bulletin up to and including the current one, providing the student was in attendance at the University during that academic year.

Other Requirements

Minimum Residence. A student must have earned a minimum of 30 semester credit hours in residence on the UNC campus. In addition, 20 of the last 30 semester credit hours of a degree program must be earned in on-campus courses at the University.

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.

Correspondence Credit. A maximum of 30 semester hours of credit in correspondence and/or continuing education courses from UNC and/or any other institution will be accepted toward graduation. Correspondence credit will not be counted toward the 30 semester credit hour residency requirement.

All correspondence courses and/or transfer work must be completed, received, graded and recorded before the semester of graduation.

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.

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 bulletin of the academic year in which the student declares a major.

A student must meet the General Education requirements as designated in the bulletin of the academic year in which the first term of completed, on campus courses occurs. Community college transfers may use the UNC Bulletin of the academic year in which the student first registered for classes at the community college.

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 40 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 bulletin of the academic year in which a student declares a 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 bulletin of the academic year in which the student declares a major.

To receive a major from UNC, a student is required to complete a minimum of nine upper division credits (300-400) in that major while in residence on the UNC campus. To receive a minor, a student is required to complete a minimum of six upper division credits (300-400) in that minor while in residence on the UNC campus. 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 bulletin that summarizes each academic department and the major and minor programs offered.

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.

English Essay Examination

All undergraduate students, except second bachelor's degree students, must pass the English Essay Examination at the University of Northern Colorado to graduate. The requirement may not be challenged or waived. This examination must be passed at least one semester before the semester the student graduates. The scheduled examination may be taken at any point, but students are expected to take it before the end of the first semester of their junior year. The examination is evaluated on a satisfactory/unsatisfactory basis and may be retaken any number of times. There is a fee to retake the examination. Additional information can be obtained from the UNC Writing Center, Michener L73, phone 970-351-2056.

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. Toward this end, placement examinations in mathematics have been established. During summer orientation all incoming freshman students take the exam and are placed accordingly.

The following are the most commonly followed sequences of mathematics courses. Choices depend on placement exam score, choice of major/minor and high school mathematics preparation.

1. If you have two full years of high school algebra with a grade of "C" or better:

To satisfy the
General Education
Category 2 only

MATH 190 or STAT 150

Business Majors

MATH 175-176
or MATH 124-176

Elementary
Education
Certification Majors

MATH 181-190
or MATH 181-182-190

Nursing and
some Health
Science Majors

STAT 250

Majors/minors
needing the
calculus sequence

MATH 124-125-131-132-233
or MATH 125-131-132-233
or MATH 127-131-132-233
or MATH 131-132-133

2. If you have one year or one-half year of high school algebra with a grade of "C" or better, you will need to complete MATH 190 to satisfy the General Education Category 2 only.

3. 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.

General Education

Students may satisfy their General Education requirement in either of two ways: 1) by satisfying the requirements of the regular General Education program that is described just below, or 2) by satisfying the requirements of the experimental pilot program in General Education described immediately following the Regular General Education Program.

Regular General Education Program

It is the conviction of the faculty at UNC that the University should provide its students with a solid grounding in the skills they must have in order to be personally independent in thought and action. It should also provide them with an introduction to the full range of concerns that must claim the attention of all those who are well-informed and reflective about the world in which they live.

Central among the skills that are essential for personal independence are self-expression, calculation, rigorous reasoning and the development of one's physical abilities. The courses in composition, mathematics and physical activity included within the program outlined below are designed to provide students with the necessary fundamentals in each of these areas.

A sound university education must, however, involve more than the acquisition of such basic skills. It must also broaden students' intellectual and aesthetic horizons by ensuring substantial familiarity with a wide range of the academic disciplines included within the arts and letters, the social sciences, the natural sciences and those interdisciplinary studies that aim at deepening students' understanding of both their own and other cultures. The courses that fulfill the

requirements listed under the heading "content" below have been selected primarily because they are suited to serve this purpose. In addition, these courses will enable students to develop further the skills upon which genuine intellectual autonomy depends.

With the background provided by the regular General Education program, students should be able to pursue their major studies confident that work in their fields of concentration will not leave them over-specialized. Special care should be given to the choice of electives, as these courses, if well-chosen, can do much to further broaden and deepen one's education.

Requirements

The Regular 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 four through seven.

Skills

1. Composition (6 credit hours minimum) Two courses, one that must be Elementary Composition. The other course can be chosen from among the Intermediate Composition courses listed.

a. Elementary Composition

ENG 122 College Composition3

b. Intermediate Composition

ANT 315 Life History and Culture3

BA 205 Business Communications3

BLS 305 Survey of African-American Literature ..3

ENG 123 College Research Paper3

ENG 223 Writing with Sources3

ENG 225 Communications on a Theme3

ENG 227 Technical Writing3

HIST 399 Introduction to Historical Research3

MUS 152 Writing and Scholarship in the

Performing and Visual Arts3

PHIL 101 Critical Thinking and Writing3

SCI 291 Scientific Writing3

2. Mathematics (3 credit hours minimum) One course, chosen from among these listed courses:

MATH 124 College Algebra4

MATH 125 Plane Trigonometry3

MATH 127 Elementary Functions4

MATH 131 Calculus & Analytic Geometry I4

MATH 175 Topics in Finite Mathematics3

MATH 190 Mathematics and Liberal Arts3

STAT 150 Introduction to Statistical Analysis3

STAT 250 Statistics for Health Sciences3

3. Physical Activity (1 hour minimum)

Lifetime and Leisure Skills

Team Sports:

PE 100 Basketball1

PE 101 Flag Football1

PE 102 Soccer1

PE 103 Softball1

PE 104 Volleyball1

Lifetime Sports:

PE 110 Badminton1

PE 111 Bowling1

PE 112 Fencing1

PE 113 Fly Fishing/Trap Shooting1

PE 114 Golf1

PE 115 Ice Skating1

PE 116 Water Safety Instructor2

PE 117 Racquetball1

PE 118 Swimming1

PE 119 Tennis1

Adventure/Risk Activities:

PE 125 Backpacking and Hiking1

PE 126 Canoeing1

PE 127 Cross Country Skiing1

PE 128 Cycling1

PE 129 Downhill Skiing1

PE 130 Kayaking1

PE 131 Orienteering and Wilderness

Survival Skills1

PE 132 Adventure Activities1

PE 133 Scuba Diving1

PE 134 Self Defense1

PE 135 Technical Climbing1

Exercise and Fitness:

PE 145 Activity for Stress Management1

PE 146 Aerobics1

PE 147 Aquacize1

PE 148 Exercise and Weight Control1

PE 149 Fitness and Conditioning1

PE 150 Jogging and Walking1

PE 152 Swimming Conditioning1

PE 153 Weight Training1

Dance and Movement Activities:

DNCE 166 Ballet1

DNCE 167 Ballroom Dance1

DNCE 168 Ethnic Dance1

DNCE 170 Jazz Dance1

DNCE 171 Modern Dance1

DNCE 173 Self-Awareness with Movement1

DNCE 175 Tap Dance1

PE 165 American Square and Folk Dance1

PE 169 Gymnastics1

PE 172 Rhythmic Gymnastics1

PE 174 Social Dance1

Content

4. Arts and Letters (6 credit hours minimum)

Two courses from two different areas with two different prefixes within the overall category:

a. Fine Arts

ART 181 History of Art I4

ART 182 History of Art II4

ART 190 Art Appreciation3

ART 210 Ceramics for Non-Art Majors3

ART 290 Visual Thinking and Visual Images3

DNCE 454 Dance History and Philosophy2

ENST 385 Art and the Environment2

HUM 320 The Art of the Film3

MIND 181 Great Traditions of Asia: India,

China and Japan3

(may be used to meet the requirement

in Fine Arts or History or Literature)

MIND 288 Contemporary Arts Connections3

MIND 297 Creativity in the Arts3

MIND 299 Great Ideas in the History of Arts3

MT 330 History of Musical Theatre3

MUS 140 Introduction to Music3

MUS 204 Music Fundamentals and Experiences3

MUS 241 Perceiving the Arts3

MUS 243 History of Music I3

MUS 244 History of Music II3

MUS 246 Music in American History and Culture3

MUS 340 Survey of History & Literature of Jazz3

THEA 130 Introduction to Theatre3

THEA 330 History of the Theatre I3

THEA 331 History of the Theatre II3

b. Foreign Language

CHIN 101 Beginning Chinese5

CHIN 102 Elementary Chinese II5

FR 100 Beginning French5

FR 101 Intensive Elementary French I3

FR 102 Elementary French II5

FR 201 Intermediate French I3

FR 202 Intermediate French II3

GER 100 Beginning German5

GER 101 Intensive Elementary German I3

GER 102 Elementary German II5

GER 201 Intermediate German I3

GER 202 Intermediate German II3

JAPN 101 Beginning Japanese5

JAPN 102 Elementary Japanese II5

JAPN 201 Intermediate Japanese I3

JAPN 202 Intermediate Japanese II3

RUS 101 Elementary Russian I5

RUS 102 Elementary Russian II5

SPAN 101 Elementary Spanish I5

SPAN 102 Elementary Spanish II5

SPAN 201 Intermediate Spanish I3

SPAN 202 Intermediate Spanish II3

c. History

BLS 201 Afro-American History I3

BLS 202 Afro-American History II3

HIST 100 Survey of American History from

its Beginnings to 18773

HIST 101 Survey of American History from

1877 to the Present3

HIST 120 Western Civilization from Ancient Greece to 16893

HIST 121 Western Civilization from 1689 to Present3

HIST 267 Age of Revolution since the 17th Century3

MIND 180 Great Ideas of the Western Tradition (may be used to meet the requirement in History or Literature or Philosophy)3

MIND 181 Great Traditions of Asia: India, China and Japan3
(may be used to meet the requirement in History or Fine Arts or Literature)

MIND 290 Search for Meaning3
(may be used to meet the requirement in History or Philosophy)

d. Literature

ENG 131 Introduction to Literature3

ENG 138 Modernism in Literature3

ENG 260 Masterpieces in English Literature3

ENG 261 Masterpieces in American Literature3

ENG 262 Masterpieces in World Literature3

HISP 111 Introduction to Hispanic Literature3

MIND 180 Great Ideas of the Western Tradition (may be used to meet the requirement in Literature or History or Philosophy)3

MIND 181 Great Traditions of Asia: India, China and Japan3
(may be used to meet the requirement in Literature or Fine Arts or Philosophy)

MIND 285 Idealism and Despair in the American Renaissance3
(may be used to meet the requirement in Literature or Philosophy)

MIND 293 Play as a Route to Insight and Creation3
(may be used to meet the requirement in Literature or Philosophy)

e. Philosophy

MIND 180 Great Ideas of Western Tradition (may be used to meet the requirement in History, Literature or Philosophy)3

MIND 285 Idealism and Despair in the American Renaissance3
(may be used to meet the requirement in Literature or Philosophy)

MIND 290 Search for Meaning3
(may be used to meet the requirement in History or Philosophy)

MIND 293 Play as a Route to Insight and Creation3
(may be used to meet the requirement in Literature or Philosophy)

PHIL 100 Introduction to Philosophy3

PHIL 110 Figures in Western Philosophy3

PHIL 305 Ethics in Theory and Practice3

5. Social Sciences (6 credit hours minimum)
Two courses from two different areas with two different prefixes within the overall category:

a. Anthropology

ANT 100 Introduction to Anthropology3

ANT 120 World Archaeology3

b. Economics

ECON 103 Introduction to Economics: Macroeconomics3

ECON 105 Introduction to Economics: Microeconomics3

MIND 286 Value Issues in Political Economy (may be used to meet the requirement in Economics or Political Science)3

c. Geography

GEOG 100 World Geography3

GEOG 110 Geography of the United States and Canada3

GEOG 200 Human Geography3

d. Political Science

BLS 420 Black Urban Politics3

MIND 286 Value Issues in Political Economy (may be used to meet the requirement in Economics or Political Science)3

PSCI 100 United States National Government3

PSCI 105 Introduction to Political Science3

PSCI 203 Colorado Politics3

PSCI 220 Introduction to International Relations3

e. Psychology

CH 336 Human Sexuality3

CMDS 160 Introduction to Human Communication and its Disorders3

PSY 120 Principles of Psychology4

PSY 230 Human Growth and Development4

PSY 265 Social Psychology3

f. Sociology

CH 205 Issues in Health3

NURS 318 Health Care Systems3

SOC 100 Principles of Sociology3

SOC 120 Marriage and the Family3

SOC 141 Introduction to Criminal Justice3

SOC 170 Social Problems3

6. Science and Mathematics (7 credit hours minimum) Two courses from two different areas with two different prefixes within the overall category. At least one course must have an L (laboratory) designation:

a. Earth Sciences

AST 100 General Astronomy (L)4

ESCI 265 Earth Science Concepts for Elementary Teachers (L)3

GEOL 100 General Geology (L)4

GEOL 110 Geology and Society3

MET 110 Climate and Humans3

MET 205 General Meteorology (L)4

MIND 294 Revolutions in Science (may be used to meet the requirements in Earth Science, Life Science or Physical Science)3

OCN 110 Oceans and Humankind3

OCN 200 General Oceanography (L)4

b. Life Sciences

ANT 130 Introduction to Physical Anthropology3

BIO 100 Exploring Biology3

BIO 110 Principles of Biology (L)4

BIO 111 Survey of Organismal Biology (L)5

BIO 265 Biological Sciences Concepts for Elementary Teachers (L)3

BOT 270 Economic Botany (L)3

FND 250 Principles of Nutrition3

MIND 294 Revolutions in Science (may be used to meet the requirements in Earth Science, Life Science or Physical Science)3

ZOO 115 Human Biology (L)3

c. Mathematics

MATH 132 Calculus and Analytic Geometry II4

d. Physical Science

CHEM 101 Chemistry for Citizens3

CHEM 102 Consumer Chemistry for Citizens Laboratory (L)1

CHEM 108 Fundamentals of Chemistry I (L)5

CHEM 111 Principles of Chemistry I (L)5

CHEM 114 General Chemistry I (L)4

ENST 235 Chemistry and the Environment2

MIND 294 Revolutions in Science (may be used to meet the requirements in Earth Science, Life Science or Physical Science)3

PHYS 220 Introductory Physics I (L)5

PHYS 240 General Physics I (L)5

SCI 103 Physical Science for the 21st Century3

SCI 106 Introduction to Spaceflight3

SCI 109 The Cosmos3

SCI 265 Physical Science Concepts for Elementary Teachers (L)4

7. Interdisciplinary, Multicultural and International Studies (6 credit hours minimum) Two courses, one Multicultural course and one course from either Interdisciplinary Studies or International Cultures:

a. Interdisciplinary Studies:

ENST 100 Introduction to Environmental Studies3

ENST 225 Energy and the Environment3

GERO 205 Introduction to Gerontology3

HUM 111 The Classical Period Through the Middle Ages3

HUM 112 The Renaissance to the Present3

HUM 331 Images of Women in Literature and the Arts3

FD 208 Feminism: An Interdisciplinary Analysis3

ID 300 Global Futures3

ID 325 Human Sexuality3

NURS 200 Women's Health Care3

SOC 221 Sociology of Sex Roles3

b. Multicultural Courses:

ANT 317 Contemporary Native American Issues3

BLS 100 Introduction to Black Studies3

BLS 101 Crisis of Identity3

CH 236 Health and Lifestyle Among the Elderly3

ENG 236 Ethnic American Literature3

HISP 101 Introduction to Mexican American Studies3

HISP 102 Hispanic Cultures in the United States3

HIST 290 American Immigration3

HRS 290 Introduction to Human Rehabilitative Services3

MCS 101 Multiculturalism in the United States: Concepts and Issues3

MIND 182 Confluence of Cultures3

SOC 237 Sociology of Minorities3

WS 120 Women and Men in Perspective3

c. International Cultures Courses:

ANT 110 World Cultures3

ANT 314 Sex Roles in Cross-Cultural Perspective3

FR 116 Contemporary France3

GEOG 335 Geography of Middle America3

GEOG 365 Russia and Eurasia3

GER 116 Contemporary Germany3

HISP 121 Spanish Civilization and Culture3

HISP 131 Latin American Civilization and Culture3

HISP 141 Mexican Civilization and Culture3

HIST 110 African Civilization3

HIST 112 Asian Civilization I: From Prehistory to the 1600's3

HIST 113 Asian Civilization 1600 to Present3

HIST 118 History of Mexico3

HIST 131 Middle East History II3

HIST 283 Russian Civilization3

HUM 115 Literature and Arts of the Orient3

JAPN 116 Contemporary Japan3

MIND 289 Coming of Age in the Twentieth Century3

MIND 292 Ideas in Conflict3

MUS 247 Music Cultures of the World3

SPCO 323 Intercultural Communication3

- 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 both General Education and the major requirements, 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 bulletin as a General Education course will not count for General Education.

- Exceptions to 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. However, every student must pass the UNC English Essay Examination before graduation. This requirement may not be challenged or waived.

- If a student presents an ACT score of 30.0 or higher in English, 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, he or she is exempt from the mathematics area (Skill 2).
- 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 in Kepner Hall, phone 970-351-2127, for information relative to the CLEP program.

Elementary Education Licensure Requirements

The following liberal arts courses are required to meet the requirements in the Regular General Education Program for Elementary Education Licensure students:

Category 1: Composition	6
a. Elementary Composition ENG 122	
b. Intermediate Composition (one course)	
Course to be chosen from 1b of General Education	
Category 2: Mathematics (one course)	3
Course to be chosen from 2. of General Education	
Category 3: Physical Activity (one course).....	1
Category 4: Arts and Letters	
(two courses required).....	6
a. ART 190	
b. HIST 100 or HIST 101	
Category 5: Social Sciences	
(two courses required).....	6
c. GEOG 100 or GEOG 110	
d. PSCI 100	
Category 6: Science and Mathematics	
(two courses required).....	7
a. or b. BIO 265 or ESCI 265	
d. SCI 265	
Category 7: Interdisciplinary, Multicultural and International Studies	
(two courses required).....	6
a. or c. Interdisciplinary or International Culture Course	
b. Multicultural Course (BLS 100, BLS 101, HISP 101, HISP 102, HIST 290, SOC 237 or WS 120)	
Subtotal credit hours.....	35
Additional courses required to complete General Education:	
MUS 204.....	3
ENQ 131 or PSY 230.....	3-4
Subtotal credit hours.....	41-42
Additional courses required to complete elementary education requirements:	
MATH 181.....	3
EDF 201.....	3
Total credit hours.....	47-48

Note that Honors students may make the following substitutions in their General Education program:

- MIND 180 or MIND 181 for HIST 100 or HIST 101
- MIND 286 for PSCI 100
- MIND 294 for BIO 265 or ESCI 265

Life of the Mind Project

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 twentieth 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 and a number have done so, with profit to themselves and to the Mind classes.

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 University and the city of Greeley.

Experimental Pilot Program in General Education

The General Education pilot is designed to provide students with a solid and challenging alternative to the regular General Education program by way of a course of studies that will nurture both breadth and depth of understanding and that will foster insight into the connections that exist among the various areas of knowledge.

The skills courses will give students a solid grounding in composition, mathematics and oral communications skills and will encourage them to develop intermediate (i.e., 201-level) proficiency in a foreign language.

The content area courses and capstone courses will afford students a wide variety of opportunities to develop these skills further. In addition, the content area courses will:

- provide students with a substantial sense of their intellectual and artistic heritage by means of studies conducted within a historical framework that is both global in scope and gender-inclusive,
- train them in the methods of natural science inquiry and introduce them to work within at least one of the natural sciences,
- train them in the methods of social science inquiry and introduce them to work within at least one of the social sciences and,
- give them an enhanced sense of the contributions that have been made to our common heritage by different cultures.

The required content area courses (GEP 101, 102 and 103 in the World of the Liberal Arts, GEP 110 in the Natural World and GEP 120 in the Social World) have all been newly designed by interdisciplinary teams. The same is true of the three capstone courses (GEP 301, 302 and 303). In these capstone courses—which have been designed to ensure that any student in the pilot can choose and flourish in any of the capstones regardless of his or her major—students will utilize the skills in writing, speaking, computation, information literacy, computer literacy, multicultural awareness and critical thinking that they will have developed in earlier courses in the pilot while examining in depth, from an interdisciplinary point of view, one or more contemporary issues.

Requirements

The pilot program requires a minimum of 40 semester credit hours selected from four skills areas and five content areas (including the capstone). At least 28 of these credit hours must be taken in content areas five through nine.

Skills

1. Composition (6 credit hours minimum) Two courses: Elementary Composition (ENG 122) and a course chosen from the Intermediate Composition courses listed below.

a. <i>Elementary Composition</i>	
ENG 122 College Composition	3
b. <i>Intermediate Composition</i>	
ANT 315 Life History and Culture	3
BA 205 Business Communications	3
BLS 305 Survey of African-American Literature..	3
ENG 123 College Research Paper	3
ENG 223 Writing With Sources	3
ENG 225 Communications on a Theme	3
ENG 227 Technical Writing	3
HIST 399 Introduction to Historical Research ..	3
MUS 152 Writing and Scholarship in	
Performing and Visual Arts.....	3
PHIL 101 Critical Thinking and Writing.....	3
SCI 291 Scientific Writing.....	3

2. Mathematics (3 credit hours minimum) One course, chosen from among these listed courses:

MATH 124 College Algebra	4
MATH 125 Plane Trigonometry.....	3
MATH 127 Elementary Functions	4
MATH 131 Calculus & Analytic Geometry I.....	4
MATH 175 Topics in Finite Mathematics	3
MATH 190 Mathematics and Liberal Arts.....	3
STAT 150 Introduction to Statistical Analysis.....	3
STAT 250 Statistics for Health Sciences.....	3

3. Oral Communication (3 hours) The two courses listed below are to be taken concurrently:

SPCO 100 Basics of Public Speaking.....	1
SPCO 103 Speaking Evaluation	2

4. Foreign Languages (3 hours) Any course from the following list:

FR 201 Intermediate French I	3
GER 201 Intermediate German I.....	3
JAPN 201 Intermediate Japanese I	3
SPAN 201 Intermediate Spanish I.....	3

Content

5. World of the Liberal Arts (9 credit hours)

The following three courses are required:

GEP 101 Antiquity and the Classical Age.....	3
GEP 102 Evolutions of Cultures	3
GEP 103 The Modern World	3

6. The Natural World (7 credit hours

minimum) Two courses are required — the foundations course (GEP 110) and a laboratory course carrying at least four hours of credit in one of the natural sciences:

a. <i>Foundations Course</i>	
GEP 110 Science: A Way of Knowing	3

b. Laboratory Course

Earth Sciences

AST 100 General Astronomy (L).....4
 GEOL 100 General Geology (L).....4
 MET 205 General Meteorology (L).....4
 OCN 200 General Oceanography (L).....4

Life Sciences

BIO 110 Principles of Biology (L).....4
 BIO 111 Survey of Organismal Biology (L).....5

Physical Science

CHEM 101 Chemistry for Citizens.....3
 CHEM 102 Chemistry for Citizens Laboratory (L).....1
 CHEM 108 Fundamentals of Chemistry I (L).....5
 CHEM 111 Principles of Chemistry I (L).....5
 CHEM 114 General Chemistry I (L).....4
 PHYS 220 Introductory Physics I (L).....5
 PHYS 240 General Physics I (L).....5
 SCI 265 Physical Science Concepts for Elementary Teachers (L).....4

7. The Social World (6 credit hours minimum)

Two courses are required, the foundations course (GEP 120) and a discipline-based course:

a. Foundations Course

GEP 120 Social Science Methods of Inquiry.....3

b. Discipline-Based Course

ANT 100 Introduction to Anthropology.....3
 ANT 120 World Archaeology.....3
 BLS 420 Black Urban Politics.....3
 CH 205 Issues in Health.....3
 CH 336 Human Sexuality.....3
 CMDS 160 Introduction to Human Communication Disorders.....3
 ECON 103 Introduction to Economics: Macroeconomics.....3
 ECON 105 Introduction to Economics: Microeconomics.....3
 GEOG 100 World Geography.....3
 GEOG 110 Geography of the United States and Canada.....3
 GEOG 200 Human Geography.....3
 NURS 318 Health Care Systems.....3
 PSCI 100 United States National Government.....3
 PSCI 105 Introduction to Political Science.....3
 PSCI 203 Colorado Politics.....3
 PSCI 220 Introduction to International Relations.....3
 PSY 120 Principles of Psychology.....4
 PSY 230 Human Growth and Development.....4
 PSY 265 Social Psychology.....3
 SOC 100 Principles of Sociology.....3
 SOC 120 Marriage and the Family.....3
 SOC 141 Introduction to Criminal Justice.....3
 SOC 170 Social Problems.....3

8. The Multicultural World (3 credit hours minimum)

At least one course from the following list:

ANT 317 Contemporary Native American Issues 3
 BLS 100 Introduction to Black Studies.....3
 BLS 101 Crisis of Identity.....3
 CH 236 Health and Lifestyle Among the Elderly.....3
 ENG 236 Ethnic American Literature.....3
 HISP 101 Introduction to Mexican American Studies.....3
 HISP 102 Hispanic Cultures in the United States.....3
 HIST 290 American Immigration.....3
 HRS 290 Introduction to Human Rehabilitative Services.....3
 MCS 101 Multiculturalism in the United States: Concepts and Issues.....3
 MIND 182 Confluence of Cultures.....3
 SOC 237 Sociology of Minorities.....3
 WS 120 Women and Men in Perspective.....3

9. Capstone (3 credit hours minimum)

At least one of the following courses:
 GEP 301 World of the Liberal Arts Capstone: The Present Age.....3
 GEP 302 Natural World Capstone: Global Systems.....3
 GEP 303 Social World Capstone: Conflict, Cooperation and Change.....3

Pilot Notes

- Students may only select the Experimental Pilot in General Education at the beginning of their freshman year.
- 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 both General Education and the major requirements, 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 bulletin as a General Education course will not count for General Education.

Exceptions to Pilot Program

Requirements

- If a student presents an ACT score of 30.0 or higher in English, 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, he or she is exempt from the mathematics area (Skill 2).
- 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 in Kepner Hall, phone 970-351-2127, for information relative to the CLEP program.

Professional Teacher Education (PTE)

All students preparing to be teachers must be admitted to and successfully complete, the Professional Teacher Education (PTE) program. Admission to the program may be sought after 30 semester hours of university coursework. All professional education programs are coordinated and administered through the School for the Study of Teaching and Teacher Education within the College of Education.

Admission

All students aspiring to be teachers must formally apply for admission to PTE. Admission to the Professional Teacher Education program is based upon the student's academic record and a number of other relevant measures of academic and professional achievement and potential. Students are not assured admission based solely on attainment of minimum course and grade requirements or test scores. EDFE 270, Field-Based Experience, is the entry-level course in the PTE program. Immediately after completion of 30 semester credit hours or, if a transfer student, upon entering UNC with 30 semester credit hours (45 quarter hours), the student should enroll in EDFE 270, Field-Based Experience. Students enrolled in EDFE 270 will be required to attend weekly seminars, during which they will be given instructions for completing the PTE application process and will complete 50 hours of field experience in a public or private school classroom. The full PTE application process must be completed during the semester the student is enrolled in EDFE 270. The following are minimal requirements for application to PTE:

- 30 semester hours of college study
- 2.50 cumulative grade point average

Following are requirements students must complete before being given full admission to PTE:

- Speech/hearing screening, self-assessment battery and attendance at weekly seminars.
 - Documented evidence of 25 contact hours of experience with children or young people (EDFE 170 or equivalent), including a positive recommendation from the supervisor of this experience.
 - Recommendation of the major department(s), including compliance with departmental minimum grade point average(s).
 - Demonstration of competencies in oral and written English, English composition (including spelling) and mathematics computation and application.
 - The student must demonstrate competence in basic skills by passing a state-mandated basic skills test. Students who wish to take this test must register for the Program of Licensing for Colorado Educators directly with National Evaluation Systems. Test bulletins, testing dates and more information are available from the School for the Study of Teaching and Teacher Education.
 - Competency in oral English is demonstrated by attaining:
 - A grade of B or better in SPCO 103, Speaking Evaluation (2). This course, or an equivalent that must be specifically approved, is required of all students in a teacher education program. Note that SPCO 100, Basics of Public Speaking (1), must be taken concurrently with SPCO 103.
 - Students enrolled in a non-degree licensure or graduate licensure program who have not completed an approved speech course as an undergraduate and students who completed SPCO 103 or an equivalent but did not attain a grade of B or better may demonstrate competency in oral English by making an oral presentation before a panel of three qualified judges. Special arrangements to demonstrate oral English competency in this way must be made by contacting the Office of Professional Services in the School for the Study of Teaching and Teacher Education.
 - Competency in written English is demonstrated by attaining:
 - A grade of B or better in ENG 122, Elementary Composition: Exposition. This course, or an equivalent that must be specifically approved, is required of all students in a teacher education program.
 - Additional PTE admission requirements may be specified by some programs. See the section on teaching major/licensure program requirements for additional information.
 - Note that a student must maintain a minimum cumulative grade point average of 2.50 at UNC, in addition to other specified requirements listed above, to be fully admitted to PTE.
 - The application form for PTE requires a declaration of a teacher licensure area. If a student desires dual licensure, application must be made for each area. If a student changes areas or adds additional endorsements, application must be made again for each new area.
- PTE Core**
- The PTE core represents that set of courses and instructional experiences within the professional education curriculum that all students seeking licensure must complete, regardless of the major emphasis, program area or chosen specialty. The core ensures that quality and consistency will be available and required of all who wish to teach. Note that at the time of publication of this bulletin, a major redesign of the UNC teacher education programs was underway. Students should check with the School for the Study of Teaching and Teacher Education for current information regarding changes in program requirements. Upon implementation of new program requirements by the University, all students not yet admitted to the Professional Education program will be held to the requirements of the redesigned program.

Course No.	Title	Semester Hours
EDPE 270	Field-Based Experiences.....	2
EDPE 345	Educational Psychology	3
EDF 364	Foundations of Education	4
EDF 385/ ELPS 385	Law and the Classroom Teacher	2
ET 401	Classroom Applications of Educational Technology	2
EDSE 408	Exceptionality (elementary)	3
	or	
EDSE 409	Exceptionality (secondary)	3
	or	
*EDSE 410	Exceptionality (K-12).....	2
EDRD 410	Reading (elementary)	3
	or	
EDRD 423	Reading (secondary and K-12).....	3
EDLS 362	Clinical (or approved departmental or 363 equivalent)	2
EDPE 444	Student Teaching (minimum)	12
Total		32-33

*Available only to students in K-12 licensure programs (art, music, physical education). Students in K-12 programs must also complete related courses in their major (ART 248, MUS 414, PE 432). Graduate students may use EDSE 506 in lieu of EDSE 408, 409, or 410.

Notes

A student must obtain a grade of "C" or better in all professional teacher education provisional and full-admission courses before recommendation for licensure. This policy does not override policies already in place within specific education programs that require a grade higher than "C."

Any student seeking dual licensure in middle school and secondary education will complete two credits of EDLS 362 or EDLS 363 in grades seven, eight and/or nine.

Additional Requirements

In addition to the PTE core, students seeking licensure are required to take a course or unit dealing with (1) public speaking (SPCO 103) and (2) multiculturalism/cultural diversity (MCS 101, SOC 237 or EDF 201).

The student also must complete methods courses specified by their major department. See the major program listing for details on this requirement.

Supervised Teaching

Application forms and information are part of the Teacher Education Notebook available in the University Bookstore. Information is available in the School for the Study of Teaching and Teacher Education: Office of Professional Services, McKee Hall 103.

Student teaching assignments are made by the School for the Study of Teaching and Teacher Education: Office of Professional Services in cooperating schools in Colorado and out-of-state under the policies of the Professional Education Council and in cooperation with academic departments. Students should be prepared to move to the area of their assignments regardless of campus or personal commitments.

The following requirements must be met before a student may report to the field assignment: Full PTE admission (including demonstration of competencies in oral and written English and attainment of passing scores on the state-mandated assessment of basic skills in the student's area of licensure) 2.50 cumulative grade point average; clearance (a current TB test on file) by the UNC Health Center and compliance with all specific departmental requirements for entering student teaching including completion of the required "methods" course(s) and appropriate clinical experiences and any other required demonstrations of competency. (See requirements for the teaching major/licensure program for specific additional requirements.)

Licensure

A student must have a minimum cumulative grade point average of 2.50 in order to receive institutional recommendation for licensure.

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.

Minors are not approved by the Colorado State Board of Education for licensure/endorsement. However, completion of a minor or a specific set of courses is expected by some school districts for teachers to have assignments in a second academic area. Students are encouraged to consult the Colorado North Central Association Office in McKee 418B for information on recommended coursework in a second area.

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 School for the Study of Teaching and Teacher Education: Office of Professional Services (McKee 103) or correspond with the respective State Department of Education early in their program to learn of any additional requirements.

Near the end of the semester in which the program is to be completed, the student should complete licensure application forms available in the School for the Study of Teaching and Teacher Education: Office of Professional Services, McKee Hall 103. Applications are processed as soon as official transcripts, ordered by the applicant, are received from the Registrar.

The following programs have been approved by the Colorado State Board of Education for licensure/endorsement:

- Audiologist, K-12
- Bilingual/Bicultural Endorsement, K-6 (Requires completion of elementary teacher licensure program)
- Communication (Speech), 7-12
- Elementary Teacher, K-6
- English, 7-12
- Foreign Languages, 7-12 — French, German, Spanish
- Mathematics, 7-12
- Middle School Teacher
- Music, K-12
- Physical Education, K-6, 7-12
- Reading Teacher, K-6, 7-12
- Reading Specialist, K-12
- School Administrator — Principal, K-6, 7-12
- School Administrator — Superintendent, K-12
- School Counselor, K-6, 7-12
- School Library Media, K-12
- School Nurse, K-12
- School Psychologist, K-12
- Science, 7-12 — Biological Science, Chemistry, Earth Science, Physical Science, Physics
- Social Studies, 7-12 — Geography, History, Social Science
- Special Education Director, K-12
- Special Education Teacher — Early Childhood Special Education, ages 0-5; Moderate Needs, ages 5-21; Orientation and Mobility, K-12; Profound Needs, ages 0-21; Severe Needs-Affective, ages 5-21; Severe Needs-Cognitive, ages 5-12, 12-21; Severe Needs-Communication, ages 5-21; Severe Needs-Hearing, ages 0-21; Severe Needs-Vision, ages 0-21
- Speech/Language Pathology, K-12
- Theatre Arts (Drama), 7-12
- Visual Arts (Art), K-12

Exit Testing

The Colorado Department of Education implemented the following requirements (as quoted from "Rules of the Colorado State Board of Education"): "To be eligible for the initial Colorado licensure, candidates must present scores at or above the qualifying score as set by the State Board of Education on a board adopted general knowledge test and professional education knowledge test and any subject area assessment that may be adopted." For information, contact the School for the Study of Teaching: Office of Professional Services, McKee Hall 103.

Standards of Professional Practice

Students seeking admission or having been admitted to Professional 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 admission to and continuation in their Professional Education program. Students who do not attain or uphold such standards are subject to academic sanctions, including denial, suspension or dismissal from the Professional Education program.

Assessment

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 University to meet the mandates of the State of Colorado.

Honors Program

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 stimulate them to ask: "How should I act?"

Students are urged to join the Honors Program as freshmen, but they may enter up to the second semester of their junior year. Entering freshmen should be in the top 10 percent of their graduating class academically, or should have scored in the top 10 percent on the ACT or SAT exams. Prospective Honors students already enrolled at UNC or transferring from another college need a minimum GPA of 3.25. All applications must be accompanied by two letters of recommendation from teachers and a written statement of intent. Students with a GPA of less than 3.25 may be accepted on probationary status. If, after two semesters of academic work, they have maintained a GPA of at least 3.25 and have received a grade of at least "B" in two MIND-designated courses, they can earn formal acceptance into the Honors program even if their cumulative GPA is still below 3.25. Applications and inquiries should be directed to the University Honors Program, University of Northern Colorado, Greeley, Colorado 80639, phone 970-351-2940 or 970-351-2948.

The Honors Program of study has two general categories. First, the General Education core asks students to take MIND classes which emphasize an interdisciplinary approach to the analysis and discussion of great books and significant ideas. Students will also take one of two Honors Connections Seminars, which are open exclusively to Honors participants. The second category of study for the Honors Program concerns enrichment work and a senior thesis within a student's chosen discipline.

Honors Program General Education Core

Honors students are urged to take either Package I or Package II of General Education courses as listed below:

Package I — 11 Semester Hours

MIND 180 Great Ideas of the Western Tradition3
 MIND 181 Great Traditions of Asia3
 MIND 294 Revolutions in Science3
 HON 100 Honors Connections Seminar I2

Package II — 11 Semester Hours

MIND 180 Great Ideas of the Western Tradition
 or MIND 181 Great Traditions of Asia
 or MIND 294 Revolutions in Science3

A MIND course dealing with "knowing yourself and your values." Among the courses suggested for this category are:

MIND 286 Value Issues in Political Economy3
 MIND 290 Search for Meaning3
 MIND 293 Play as a Route to Insight and Creation3

A MIND course dealing with "knowing your world and times." Among the courses suggested for this category are:

MIND 288 Contemporary Arts Connection3
 MIND 289 Coming of Age in the 20th Century3
 MIND 292 Ideas in Conflict3

HON 200 Honors Connections Seminar II2

Junior and Senior Honors Program

Enrichment Work

Honors students are required to take both of the following within their chosen discipline:

HON 351 Junior Honors Seminar2
 HON 451 Senior Honors Research Thesis4

Summary of Honors Program

General Education courses in either
 Package I or II5-9
 Honors Connections Seminar I or II2
 Junior Honors Seminar2
 Senior Honors Research Thesis4
 Total Semester Hours for Honors17

Honors students are expected to register for a full-time program and to maintain at least a 3.25 GPA. A student who falls below that level for two successive semesters will be removed from the program.

Graduating Honors students will be given recognition during commencement ceremonies. On their transcript there will be a notation that they have graduated from the University Honors Program.

Recognition of Academic Excellence

Dean's List for Academic Recognition

Students will be placed on the Dean's List of Distinction 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 if they complete a minimum of 24 credit hours and achieve a 3.5 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 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 cumulative GPA for summa cum laude will be determined by the lowest cumulative GPA of the students in the top two percent of the previous year's school/college graduating class. The criterion for magna cum laude will be determined by the lowest cumulative GPA of students in the top four percent of the previous year's school/college graduating class. The criterion for cum laude will be determined by the lowest cumulative GPA of the students in the top six percent of the previous year's school/college graduating class.

The Graduate Dean's Citation

The Graduate Dean's Citation is awarded each semester to students nominated by their division/department in recognition of superior achievement in their graduate studies. Each division/department may recommend graduate students completing their programs during a specific term (summer, fall or spring) provided that they meet these minimum criteria: (a) a cumulative graduate grade point average of at least 3.75 and (b) documented evidence of superior accomplishment while a graduate student at UNC.

Procedures for Nomination. The nomination should be supported by (a) written recommendations from graduate faculty of the academic program outlining the student's accomplishments, (b) outstanding dissertation/thesis/creative project nominated by the academic unit and/or (c) special recognition by an agency or organization (outside of UNC) for scholarly accomplishment, academic achievement, or contributions to society. Awardees are selected by the Graduate Dean.

Reserve Officer Training Corps (ROTC)

Students may earn a minor in either Aerospace Studies or Military Science. 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.

Minor in Aerospace Studies

General military credits8
Professional officer credits12
Total credits required for this minor20

Required Credits — 8 semester hours

AS 101 The Air Force Today I2
 AS 102 The Air Force Today II2
 AS 201 Development of Air Power I2
 AS 202 Development of Air Power II2

Professional Officer Credits — 12 semester hours

AS 301 Air Force Leadership and Management I3
 AS 302 Air Force Leadership and Management II3
 AS 401 National Security Forces in Contemporary American Society I3
 AS 402 National Security Forces in Contemporary American Society II3

Notes

Students normally complete a four-week Field Training Course with four semesters remaining for graduation and prior to entering the professional officer program (AS 300 and 400 level courses). Students can complete a six-week Field Training Course and receive up to eight hours of transfer credit for the general military course credits.

Students must complete a mathematical reasoning course. The General Education mathematics courses satisfy this requirement. Scholarship cadets must take an English composition course, which is satisfied by the General Education English composition requirement. Scholarship cadets must also demonstrate proficiency in an accepted foreign language or take one year of a foreign language, such as Spanish, French, German or other language approved by the Department of Aerospace Studies.

Minor in Military Science

Required credits13
Required elective credits8
Additional credits6-15
Total credits required for this minor27-36

Required Credits — 13 semester hours

HIST 250 War in Historical Perspective: Topics3
 MS 311 Leadership Assessment3
 MS 321 Applied Leadership3
 MS 401 Staff Functions and Leadership Principles1
 MS 421 Role and Ethics of the Officer3

Required Elective Credits — 8 semester hours

Select the following:
 MS 111 Introduction to Military Skills I2
 MS 121 Introduction to Military Skills II2
 MS 211 Contemporary Management Principles2
 MS 221 Dynamics of Military Operations2
 or
 MS 287 Leadership Development and Introduction to Military Operations8
 or
 MS 387 Practicum in Leadership and Military Operations8

Complete 3 additional courses approved by the Professor of Military Science6-15

Notes

All recipients of military scholarships will complete one course in a foreign language during first year of scholarship.

The required elective skills courses are designed to give cadets a well rounded theoretical knowledge base for military operations and include current training manuals, techniques, and equipment.

To complete the ROTC program, students must also take one undergraduate course in written communication skills (i.e., advanced English composition, creative writing, etc.), one course in human behavior (i.e., general psychology, sociology, ethics, etc.), one course in math reasoning and one course in computer literacy.

Undergraduate Policies

Office of Admissions
 Location: Carter Hall 3006;
 Telephone: 970-351-2881
 Fax: 970-351-2984;
 Denver Line (no toll): 575-1379

Admissions Philosophy

Admission to the University is based upon standards developed by the Colorado Commission on Higher Education (CCHÉ). Criteria considered include: the secondary school academic record, rank in class, standardized test scores (ACT or SAT) and the academic record at any 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 regionally accredited 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 55 or above.

Freshmen are required to have completed two years of college preparatory mathematics in a secondary school, e.g., two years of algebra or one year of algebra and one year of geometry.

Applicants are expected to have a cumulative GPA of 2.8 or above and to have a minimum composite ACT score of 22 or a minimum SAT combined score of 1000 (890 if SAT was taken before April 1995).

However, each applicant is evaluated on an individual basis. Students having higher GPA or class rank may not be required to have standardized test scores as high as those required of students with lower GPA or class rank. Students with higher standardized test scores may not be required to rank as high in their graduating class. Admission standards are subject to change by the Colorado Commission on Higher Education (CCHÉ).

Applicants for freshman admission are encouraged to earn secondary school credits in at least the following distribution:

- English — four units with emphasis upon courses in composition.
- Mathematics — three units. All freshmen must have earned credit for at least two years of higher mathematics.
- History/social science — two units.
- Natural science — two units including a laboratory science.

Freshman Application Procedures

Applications and supporting credentials may be submitted at any time after completion of junior year of high school. However, they should be received at the Admissions Office no later than three weeks before the academic semester that the student intends to enroll. Prospective students are encouraged to submit applications as early as possible.

Send an Application for Admission, the appropriate secondary school transcripts and a \$30 non-refundable processing and evaluation fee to the Office of Admissions, University of Northern Colorado, Carter Hall, Greeley, Colorado 80639.

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 an additional application to the School of Music. The music application and appropriate instructions are 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 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 970-351-2678.

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 970-351-2454.

Freshman On-Campus Living Requirements

Full-time freshmen are required to live on campus and carry the 19 meal plan which includes Breakfast, Lunch, Dinner, Monday-Friday and brunch and dinner, Saturday and Sunday.

Any student with less than 24 semester credits earned 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 living at and commuting from the home of a parent or legal guardian 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: Residence Life Coordinator for Contract Release, University of Northern Colorado, Carter Hall, Greeley, Colorado 80639. This letter should include name, social security 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 Residence Life Office, phone 970-351-2721.

Transfer Students

Transfer Policy

A student who intends to transfer to UNC must submit an official academic transcript of work from each college or university attended. 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 under 12 semester hours of college work must submit high school transcripts and ACT/SAT test scores: The admission decision will then be based on freshman admission requirements. Transfer applicants who have completed 12-29 semester hours of 18-44 quarter hours at other institutions are required to have maintained a cumulative grade point average of 2.5 or better and submit an official copy of their high school and college transcripts as well as a copy of ACT or SAT results. A student who has 30 semester credit hours (45 quarter hours) of transfer credit is required to have maintained a cumulative grade average of "C" or better to be admitted.

Transfer Application Procedures

An Application for Admission and a non-refundable \$30 processing and evaluation fee must be submitted to the Admissions Office. Applicants must also submit an official transcript from EACH college or university previously attended. Transcripts are to be sent directly from the other institution(s) to the Admissions Office. Final admission status cannot be determined until official transcripts have been received from each institution attended. **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.**

All transfer applications and official transcripts must be received by the Admissions Office no later than 12 weeks BEFORE the semester that the student wishes to enroll.

Transfer students planning to major in music are required to submit a separate application to the School of Music. Auditions are required of all applicants to the School of Music.

Information concerning auditions for the School of Music is obtained by contacting the School of Music, University of Northern Colorado, Frasier Hall, Greeley, Colorado 80639, phone 970-351-2678.

Transfer students planning to major in musical theatre are required to submit a separate application to the Musical Theatre Program. The College of Performing and Visual Arts provides a musical theatre application and instructions when receiving an inquiry or an Application for Admission that specifies a musical theatre major. Auditions are required of all applicants to the Musical Theatre Program.

Information concerning auditions for the Musical Theatre Program is obtained by contacting Jeannette Triomphe, Coordinator of Musical Theatre, University of Northern Colorado, Frasier Hall, Greeley, Colorado 80639, phone 970-351-2454.

Transfer students planning to major in Nursing are required to submit a separate application to the School of Nursing. Application information can be obtained by contacting the School of Nursing, University of Northern Colorado, McKee Hall, Greeley, CO 80639, phone 970-351-2293.

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 64 semester or 96 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, 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 skills area are evaluated course by course. However, every student must pass the UNC English Essay Examination before graduation. This requirement may not be challenged or waived.

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.

UNC does not accept credit from other colleges and universities for grades below "C" unless the course for which the grade was given was an integral part of an earned liberal arts-based Associate of Arts degree or Associate of Science degree.

Credit for vocational and certain other specialized courses does not transfer to UNC.

College work earned 10 years before the baccalaureate degree is 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 admissions purposes only and are not carried forward to the student's academic record at UNC. New transfer students begin a new grade point average that does not reflect grade point averages earned at other institutions.

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 at UNC off-campus courses. If a community college program corresponds to the requirements of the first two years in a similar program of study at UNC, graduation after two additional years is possible.

Transfer Guide

UNC does not allow transfer of credit from institutions not accredited by a regional association of colleges and secondary schools.

Complete 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 from the Admissions Office in Carter Hall, phone 970-351-2881, 573-1379 (toll free from Denver), or from the Denver Admissions office, 303-831-8850.

Transfer Status

Transfer students will utilize in the bulletin in existence in the Admissions Office at the time of acceptance for their General Education requirements.

For the student's major requirements, the bulletin 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 Students

An international student is a student who is not a citizen of the United States or not classified by U.S. Immigration as a resident alien. There are approximately 200 such students currently enrolled at UNC. International students must meet English proficiency, as well as academic and financial requirements, before being fully admitted. These requirements are met by providing all the normal documents required for admission (see description of admission requirements in the Graduate and Undergraduate sections of this bulletin). In addition, information concerning the ability to meet financial requirements must also be provided.

The English proficiency standard may be met by:

1. Submitting either a Test of English as a Foreign Language (TOEFL) score of 520 or above with a score of no less than 52 on any of the three sections (students applying to the College of Business Administration must score at least 540 on the TOEFL), or
2. Submitting test scores of at least 85 from the Michigan Test of the English Language.

Information concerning these tests may be obtained from the Educational Testing Service for TOEFL, Box 899, Princeton, New Jersey 08541, or from the University of Michigan Press, Ann Arbor, Michigan 42104, for the Michigan Test of the English Language.

Individual schools or departments of the University may have higher proficiency requirements than those stated above. If in doubt about special requirements, international undergraduate students should contact the Admissions Office 970-351-2881; international graduate students should contact the Graduate School, 970-351-2831.

The Application for Admission and all related credentials except the English proficiency scores must be received by UNC no later than 90 days before the semester that the student wishes to enroll. The scores for the English Proficiency Exam must be received no later than 40 days before the beginning of the student's initial semester at UNC.

Specific inquiries concerning undergraduate foreign student admission should be addressed to the Admissions Office, Carter Hall, Room 3006.

Inquiries regarding graduate admission should be sent to the Graduate School, University Hall. International Student Services (1855 10th Avenue, Greeley, Colorado 80639) is the office that administers the University's relationship to the Immigration and Naturalization Service, issues student visa applications and provides orientation information to new students.

Requirements for All Students

Insurance

UNC's Board of Trustees requires that all students registered for 9 credit hours or more have health insurance. This insurance is also available to students' dependents and part-time students upon request. 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 date. Further information on deadlines and procedures may be obtained from the Student Health Insurance Office, phone 970-351-1915.

Medical Examination

Medical history report and medical examination report forms are sent to each accepted student. Students planning to participate in intercollegiate athletics are required to submit both forms. While students are encouraged, but not required, to submit a medical exam, they must submit a Health History Report before they can receive services at the Health Center. For additional information, contact Student Health Services, Decker Hall, phone 970-351-2412.

Immunization Regulation

By Colorado State Statute and University Regulation, all individuals are required to complete and submit an immunization record form, completed by qualified medical personnel (nurse, physician, or school health official), to the UNC Student Health Center in order to register for classes. This record must certify that the individual has immunity to rubeola (measles), rubella (German measles) and mumps.

Individuals, who for medical, religious or personal reasons are unable to be immunized as required above, may be exempted if they provide a Certificate of Exemption with the exemption statement appropriately signed.

In the event of an outbreak, individuals who do not have proof of immunity against rubeola, rubella or mumps and have a signed exemption will be subject to exclusion from school and quarantine. The University is not responsible for any liability the student may incur because of an exemption and resulting exclusion and/or quarantine. For additional information, contact Student Health Services, Decker Hall, phone 970-351-2412.

Parking Regulations

If students, faculty, or staff wish to park a vehicle on Campus, the University requires that a University Parking Decal be purchased from Parking Services located in Gray Hall. Vehicles parked on campus in violation of UNC parking regulations may be ticketed and/or towed. Parking Services is a self-supporting program that receives no state funds. All funds from decal sales and parking fines are used to build and maintain UNC parking lots. For additional information, students are encouraged to call 970-351-1971 or stop by Gray Hall.

On-Campus Living Requirement

All freshmen with less than 24 semester hours earned and under 20 years of age are required to live in a residence hall. See Freshman On-Campus Living Requirements in this chapter.

Undergraduate students must be enrolled in a minimum of six semester hours to live on campus.

New Student Orientation

The University offers Discover UNC, an orientation program for entering freshmen and transfer students. This program provides essential information about the University, its academic policies and requirements, academic advising, and assists students in registering for classes. Newly-admitted students are invited to an orientation program by separate mailing. Every new student is strongly encouraged to participate in the orientation program. For information concerning the orientation program contact the Academic Advising Center, phone 970-351-1391.

The Graduate School conducts an orientation for graduate students after the semester begins. For information on the Graduate Student Orientation contact the Graduate School at 970-351-2831.

The Evening Division conducts an orientation during evening hours for entering students at the beginning of each semester.

Graduate School Policies

Location: University Hall, 1620 Reservoir Road
 Telephone: 970-351-2831
 Kyle R. Carter, Dean; William A. Barnard, Assistant
 Dean; Priscilla J. Kimboko, Associate Dean

Graduate Education

The first graduate degree, a master's degree, was offered by UNC in 1913. In 1929 the Doctor of Education was added, and in 1934 the Doctor of Philosophy and the Doctor of Arts were approved. Later, the University added the Doctor of Music Education and, the most recent degree, the Doctor of Psychology in 1984.

Graduate study at UNC involves the graduate student studying under the direction of a qualified member of the Graduate Faculty. 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 by the By-Laws 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.

The 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. Upon appointment, the Graduate Faculty are authorized to teach graduate courses, act as Program Advisors for graduate students, serve on doctoral oral and research committees, and serve on other University committees pertaining to graduate education at UNC. Graduate credit is 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 is 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 of the Graduate Faculty may receive a Doctoral Research endorsement. Only faculty who have the Doctoral Research endorsement may serve as research advisors on doctoral student research committees.

Upon approval by the department/division, the academic dean, and the Vice President for Academic Affairs, the Dean of the Graduate School may appoint, for a two-year period, selected individuals as Graduate Lecturer Faculty. These faculty may teach specific courses that are approved and/or perform other designated graduate responsibilities.

The 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 Graduate School

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.

Graduate Degrees

Master's degrees (MA, MM, MME, MPH, MS) 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.

Specialist in Education (Ed.S.) degrees 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. Candidates for the degree will culminate their programs by writing a specialist's practicum report.

Doctor of Arts (D.A.) degrees are 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 practice in college teaching, interdisciplinary seminars 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 Music Education (D.M.E.) degree programs are designed to prepare comprehensively trained educator-musicians. The program provides expertise in teaching, supervising, consulting, and administering within elementary and secondary schools, colleges and universities, music education programs, and community cultural projects and programs.

Doctor of Education (Ed.D.) degree programs are 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 (Ph.D.) degrees are research degrees granted only to students who 1) have mastered 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) have demonstrated a capacity to do original and independent scholarly investigation or creative work in their specific field, and 3) have the ability to integrate their specific field or specialization with the larger domains of knowledge and understanding.

Doctor of Psychology (Psy.D.) degrees are given in 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.

Graduate Programs

Emphasis areas indented

College of Arts and Sciences

Applied Statistics and Research Methods, M.S.
 Operations Research
 Applied Statistics and Research Methods, Ph.D.
 Measurement
 Biological Sciences, M.A.
 Non-Thesis
 Thesis
 Biological Education, Ph.D.
 Chemical Education, Ph.D.
 Chemistry, M.A.
 Research
 Education
 Communication, M.A.
 Communication Education
 Thesis Option
 Non-Thesis Option
 Human Communication Theory
 Thesis Option
 Non-Thesis Option
 Earth Sciences, M.A.
 Educational Mathematics, Ph.D.
 English, M.A.

Foreign Languages, M.A.
 Spanish Teaching
 History, M.A.
 Interdisciplinary Studies: Secondary Science
 Teaching, M.S.
 Mathematics, M.A.
 Liberal Arts
 Teaching
 Psychology, M.A.
 Human Neuropsychology
 Social Science, M.A.
 Clinical Sociology

College of Education

Agency Counseling, M.A.
 Agency Counseling, M.A.
 Marriage and Family Therapy
 College Student Personnel Administration, Ph.D.
 Counseling Psychology, Psy.D.
 Counselor Education, Ed.D.
 Educational Leadership, M.A.
 Educational Leadership, Ed.S.
 Educational Leadership, Ed.D.
 Educational Media, M.A.
 Educational Psychology, M.A.
 Educational Psychology, Ph.D.
 Educational Technology, M.A.
 Educational Technology, Ph.D.
 Elementary Education, M.A.
 Elementary Education, M.A.
 Middle School
 Elementary Education: Early Childhood
 Education/Primary Education M.A.
 Elementary Education, Ed.D.
 Elementary Education: Early Childhood
 Education, Ed.D.
 Elementary School Counseling, M.A.
 Interdisciplinary Studies, M.A.
 Education
 Reading, M.A.
 Elementary
 Secondary
 Reading, Ed.D.
 School Psychology, Ed.S.
 School Psychology, Ph.D.
 Secondary and Post Secondary School
 Counseling, M.A.
 Secondary and Post Secondary School
 Counseling, M.A.
 College Student Personnel Administration
 Special Education, M.A.
 Early Childhood Special Education
 Moderate Needs
 Profound Needs
 Severe Needs: Affective
 Severe Needs: Cognitive
 Severe Needs: Communication
 Severe Needs: Hearing
 Severe Needs: Vision
 Teaching the Gifted and Talented
 Special Education, Ed.D.

College of Health and Human Sciences

Communication Disorders: Audiology, M.A.
 Certifying
 Non-Certifying
 Communication Disorders: Speech/Language
 Pathology, M.A.
 Certifying
 Non-Certifying
 Gerontology, M.A.
 Direct Service
 General Studies
 Management/Administration
 Graduate Certificate Program (non-degree)
 Human Rehabilitation, Ph.D.
 Nursing, M.S.
 Education
 Family Nurse Practitioner
 Physical Education, M.A.
 Coaching
 Kinesiology
 Outdoor/Adventure

Pedagogy
 Sport Administration
 Physical Education, Ed.D.
 Kinesiology
 Pedagogy
 Sport Administration
 Public Health, M.P.H.
 Community Health Education
 Recreation, M.A.
 Rehabilitation Counseling, M.A.
 Vocational Evaluation

College of Performing and Visual Arts

Music, M.M.
 Choral Conducting
 Instrumental Performance
 Music History and Literature
 Theory and Composition
 Vocal Performance
 Wind/Orchestra Conducting
 Music, D.A.
 Conducting
 History and Literature
 Music Performance
 Music Theory and Composition
 Performance and Pedagogy
 Music Education, M.M.E.
 Music Education, D.M.E.
 Visual Arts, M.A.

Graduate Interdisciplinary Degree Programs

(See Programs of Study)
 Individually Designed Programs, M.A., M.S., Ed.S.,
 D.A., Ed.D.

Post-Doctoral Programs

Programs of research and advanced study are available in selected areas to persons holding the earned Doctor of Arts, Doctor of Education, Doctor of Music Education, Doctor of Philosophy, or Doctor of Psychology degree. Work at the post-doctoral level may be taken in areas such as administration, college student personnel administration, educational psychology, counseling psychology, elementary education, special education, 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.

General Graduate Admission

Graduate Application Procedures

Admission to Graduate School is granted by the Graduate Dean based on an evaluation of eligibility and a recommendation from the program faculty. No one is admitted to the University of Northern Colorado Graduate School until they receive an official letter of admission from the Graduate Dean.

Individuals must apply to the Graduate School for admission to specific degree and/or certification programs of interest. The applicant must meet minimum admission standards, as established by the Graduate Council, for admission to the UNC Graduate School. The UNC Graduate School has instituted a "student-administered" application procedure in which each applicant is required to collect all the materials required for admission and submit them at one time to the Graduate School. These completed applications are then expeditiously reviewed by the Graduate

School, and prepared for screening by the appropriate academic department/division/school. Departments/Divisions/Schools may require additional materials or procedures beyond the Graduate School requirements, listed below. It is the responsibility of the applicant to contact the department/division offering the degree or certification program to which he or she is seeking admission to determine what additional materials or procedures will be required.

To apply for admission, the student must:

1. Complete the appropriate application forms, which are included in the Graduate Application packet available from the Graduate School unless otherwise noted:

- Graduate School Application for Admission, required of all U. S. citizens who are applicants for degree or certification programs. The International Student Application for Graduate Admission is required of all applicants for degree programs who are not U.S. citizens. This packet, available separately from the Graduate School, includes special sections related to financial resources, and immigration information required of all foreign nationals who plan to study in the United States.

- Plan to Seek Institutional Recommendation for Certification, required of all applicants seeking teacher certification or other professional endorsement.

- Notice of Intent to Apply, required only of applicants who plan to seek admission to a degree program offered at an off-campus site under the UNC College of Continuing Education. Because not all degree programs are offered off campus, the student must check to be sure the program selected will be offered at the particular site where he or she plans to enroll (list available from the College of Continuing Education site coordinators or the Greeley office, phone 800-776-2434).

2. Obtain Transcripts. Two official transcripts must be obtained from every accredited college or university, including the University of Northern Colorado, attended since completion of high school. The student must request that the registrar of each school attended send the two official copies directly to him or her. The student must have the original official transcripts from each college, even if courses taken at one institution are listed on another school's transcript. This accreditation requirement of the University will not be waived. If the transcripts show a maiden name or a name different than that on the UNC Application for Admission, all names used should be included on the UNC application.

3. Obtain test scores for Graduate Record Examination, as applicable, or other standardized test scores required for admission by the program or the Graduate School (e.g., MAT, GMAT, TOEFL, etc.). The student must request official GRE scores to be sent to the Graduate School from the administering organization, if seeking admission to any doctoral program: **NO DOCTORAL STUDENT APPLICATION WILL BE PROCESSED UNLESS IT INCLUDES GRE SCORES LESS THAN FIVE YEARS OLD.** The Graduate School may evaluate the completed application from an unofficial copy of the scores, with a written request to do so. A regular admission can occur only after the official scores are received from the Educational Testing Service. Master's applicants to programs requiring the GRE can be evaluated by the Graduate School for admission without the test scores, but may have admission decisions by the department/division delayed until the test scores are available. International applicants must have official copies of their GRE test scores sent to UNC, and these scores will remain in the applicant's file as part of the permanent admission record.

4. Obtain THREE Letters of Recommendation if the applicant seeks admittance to a doctoral program. A doctoral applicant must have three letters of recommendation from persons who can evaluate the applicant's ability to succeed in doctoral study. Similarly, persons seeking the Non-Baccalaureate Graduate Admission, or admission to the Graduate Interdisciplinary Degree program

must have appropriate letters of reference. General recommendation forms are included with the Application for Admission. However, many programs have developed their own preferred forms. Be sure that you have your reference individuals complete the form required by the program to which you seek admission.

5. Submit ALL of the required application materials with the processing fee to the Graduate School, UNC, Greeley, CO 80639. All materials required for admission screening must be collected, and then submitted in a single packet to the Graduate School to ensure timely processing. Applicants for special admissions categories, such as the Non-Baccalaureate or the Graduate Interdisciplinary Program, must provide all other materials as requested in Graduate School guidelines for each such special admission. Applicants must allow the Graduate School at least 20 working days for the materials to be processed, evaluated, and prepared for screening by the academic department/division. This is particularly important during the peak application period, December through April. Failure to submit all required materials may significantly delay the evaluation and screening.

6. Meet program requirements. It is the responsibility of the applicant to contact the chair or graduate coordinator for the program to which he or she is seeking admission to obtain the program-level admission standards and application requirements, particularly those in addition to the general Graduate School requirements. The student should not wait until he or she has submitted the application packet to the Graduate School to avoid incurring delays in the department/division/school admission screening.

Failure to submit the materials required by the specific program to which the student seeks admission may lead to a denial of admission due to an incomplete application.

7. Submit a Notice of Intent to Apply for an Off-Campus Degree Program. Individuals seeking admission to a degree or certification program offered at one of UNC's off-campus sites must submit a completed Notice of Intent to Apply to the UNC Continuing Education site office where they plan to enroll. Degree programs in Communication and Agency Counseling, offered in Denver and Colorado Springs, are continuous enrollment programs and applications and fees for these programs may be submitted at any time. However, most of the UNC off-campus programs have specific beginning and ending dates and are designed to enable a "cluster" of admitted students to move together through the same schedule of classes. The Notice of Intent to Apply must be submitted to the College of Continuing Education in order for the College to determine whether there are enough applicants to offer the program at the site. The student must contact the College of Continuing Education, phone 800-776-2434, for this form, for application deadlines, or for more information, and must allow at least 20 working days for the Graduate School to process application materials BEFORE the Continuing Education application deadline. Sending a separate copy of the completed application with all required materials plus any program-specific materials to the UNC Continuing Education site coordinator will ensure that all materials needed for advising are at the program site.

For more information, contact the Graduate School, UNC, Greeley, CO 80639, phone 970-351-2851 or 800-776-4723.

Admission Standards and Requirements

Admission Criteria. The Graduate Council, comprised of representatives from the Graduate Faculty, sets minimum standards for admission to the Graduate School. Faculty in each degree program establish admissions standards for their specific program, which often exceed the minimum. Applicants should consult program

brochures, departmental offices or faculty in degree program(s) of interest to obtain any additional admission requirements.

Master's Degree. Each applicant to a master's degree program must possess a baccalaureate degree from an accredited college or university with a grade point average from the baccalaureate degree of at least 3.0 on a 4.0 scale. The GPA will be taken from the transcript of the degree-granting institution and must be based on a minimum of 60 semester hours/90 quarter hours. If there is no GPA on the transcript or the GPA is based on fewer than 60 semester hours, the Graduate School will calculate the GPA on the last 60 hours of coursework in the undergraduate degree. Upon recommendation by the major department/division and approval by the Graduate School, an applicant with a grade average between 2.70 and 2.99 may be granted regular admission to a master's degree program. If such an applicant is admitted, he or she may not transfer work taken before admission to a degree program. At the Master's level persons with less than a 2.7 may only be admitted under a provisional status. No coursework taken prior to admission will count toward the degree.

Specialist Degree. Each applicant must possess a baccalaureate degree from an accredited college or university with a grade point average of at least 3.0 on a 4.0 scale from the prior degree and an adequate academic background in the proposed area of specialization as defined by the department/division that will award the degree. This GPA will be taken from the transcript of the degree-granting institution. The grade point average must be based on a minimum of 60 semester hours/90 quarter hours for a baccalaureate degree or a minimum of 30 semester hours/45 quarter hours for the master's degree. If there is no GPA on the transcript or the GPA is based on fewer than the minimum hours, the Graduate School will calculate the GPA on the last 60 semester hours/90 quarter hours of coursework in the most recently completed degree or on the total master's degree, whichever is less. In addition, the applicant must have completed at least 24 calendar months of appropriate work experience in the specialization as determined by the major department/division.

Any applicant who is admitted to a doctoral program and who completes any course in that program will not be allowed to earn a Specialist in Education degree in the same program area.

Doctoral Degree. Each applicant for the doctoral degree must:

1. possess a baccalaureate degree from an accredited college or university,
2. submit three letters of recommendation confirming that the applicant has the ability to do doctoral work in the proposed discipline(s),
3. have a minimum level of achievement combining GPA and GRE performance.
4. have a minimum 3.0 GPA on a 4.0 scale from the most recently completed degree, no less than 400 on each of the three sections of the GRE general test, and a combined GRE score of 1500 or above. The GRE must have been taken within five years of the term that enrollment is projected to begin. The GPA must be based on a minimum of 60 semester hours/90 quarter hours for a baccalaureate degree or a minimum of 30 semester hours/45 quarter hours for the master's degree. If there is no GPA on the transcript or the GPA is based on fewer than the minimum hours, the Graduate School will calculate the GPA on the last 60 semester hours/90 quarter hours of coursework in the most recently completed degree or on the total master's degree, whichever is less.

Consistent with the guidelines published by Educational Testing Service, the Graduate School does not apply a strict GRE cutoff score. Instead, it uses a decision matrix that combines GRE general test scores and GPA in order to allow higher performance in one area to compensate for lower performance in another. Although students may meet Graduate School criteria through multiple combinations of GPA and GRE scores, the following

"rule of thumb" can be used to determine admission: 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 each section of the three sections of the Graduate Record Examination general test and a combined GRE score of at least 1500. The actual determination is based upon the GPA/GRE matrix available from the Graduate School.

UNC doctoral programs do not utilize quantitative rating systems and standard criteria weightings as sole determining factors for doctoral acceptance decisions. Quantitative information, such as GPA or GRE or MAT scores, is considered in combination with qualitative information derived from letters of recommendation, applicant goal statements, as well as past academic and professional accomplishments. Due to the specialized nature of doctoral work, it is incumbent on the faculty to use their professional judgment in determining to what extent a student is qualified for entry into a particular program. The information requested by each of the departments/divisions, 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 deny a potential doctoral student admission must include thorough consideration of all information pertinent to the applicant's qualifications and must include 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/Divisions/Schools offering doctoral programs may recommend admission that is based upon supplemental/alternate criteria that they have established with approval of the Graduate Council. The student must check with the department/division/school regarding such alternative criteria.

Admission Deadlines. Departments/divisions may set deadlines for review of applications for admission for any term, but they must allow sufficient time for Graduate School handling and evaluation. This typically means students must 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 BEFORE sending application materials to the departments/division for screening. It is particularly important for programs requiring GRE scores and having early admission deadlines, to notify applicants of this requirement.

While the Graduate School will not set standard priority admission deadlines, each program is encouraged to determine program-specific deadlines they will use and to work closely with the Graduate School to ensure that these deadlines are feasible.

Admission Expiration Date. Admission to any graduate program remains 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 and if admission requirements have changed, the student will be required to satisfy the new admission requirements, or may be reviewed for admission again.

Conditional Admission. Conditional admission can be granted pending the receipt of application requirements specified by the Graduate School. However, 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 requirements are met during the first semester of the student's program.

Master's Provisional Admission

1. The department/division/school may recommend any applicant with a GPA below 3.0 for Provisional Admission. The program advisor must specify at least 9 semester hours of coursework for the applicant to complete. These courses must be the first taken by the student and must be completed in no more than two semesters. The student must earn a 3.0 GPA on these courses that may be upper division undergraduate or graduate courses.

2. The Graduate School places a "hold" on registration by a provisionally admitted student to ensure that the student is enrolled in the assigned courses and/or has met the terms of the Provisional Admission before he or she enrolls in other graduate courses.

3. Upon completion of the courses and receipt of grades, it is the student's responsibility to contact the program advisor or department chair to submit a recommendation for regular admission to the Graduate School. Grades will be verified and, if the required GPA is attained, the hold will be removed and the admission status changed to a "regular" admission by the Graduate School.

4. Coursework taken prior to the provisional admission may not be transferred into the master's degree program. Only graduate courses completed as specified in the provisional admission may be counted toward the degree.

5. Departments/Divisions/Schools requiring GRE scores or other supplemental information from students may NOT use the Provisional Admission status to "hold" students for missing application materials.

International Student Admission

An international student is one 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 or 60 working days before the semester that the student wishes to enroll. All international applicants must take the following 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 a non-refundable application fee.

3. Submit the Financial Statement for International Students and Affidavit of Support forms (evidence of adequate financial support). These 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. Document English proficiency by submitting one of the following:

- a. evidence that the applicant has obtained a current (within 180 calendar days of completing the test) TOEFL score of 520 or above with no score less than 52 on any of the three sections; or

- b. evidence that the applicant has obtained a current (within 180 calendar days of completing the test) Michigan Test of English Language score of no less than 85; or

- c. evidence of two or more years of full-time study or evidence of a completed degree program at a regionally accredited United States institution. If such work was completed more than six months before application to this university, additional evidence of English proficiency may be required.

Note that departments/divisions may have higher or additional English proficiency requirements

including departmental/divisional screening or testing for English proficiency. The applicant is responsible for determining whether or not the department/division has additional language requirements. UNC does offer an English enhancement course for applicants whose English proficiency is limited. The minimum score for a conditional admission is no less than 500 on the TOEFL.

Upon application approval, international applicants will be sent a letter of admission and the Form I-20 will be issued. International applicants should not plan to enter the United States without the Form I-20 and an admission letter from the UNC Graduate School. The admission letter is needed for a visa.

Deferred Admission Status. International applicants whose academic record is sound, but who have inadequate English Language proficiency (less than 500 on the TOEFL) can be granted Deferred Graduate Admission for a maximum of one year while they pursue study in an English language program. If an applicant is granted deferred admission pending completion of English language schooling and receipt of English proficiency scores, the I-20 will be issued by the English language school. Before Regular Admission or enrollment in graduate courses at UNC, such students must present evidence that they meet UNC's English language proficiency standards. UNC offers an English Language Program through the College of Continuing Education. The English language program need not be completed at UNC. After completion of the required English language study, the student must send an updated application verifying new TOEFL scores and recertifying financial resources to the Graduate School for a decision on admission. A student may not enroll in graduate program courses at UNC until granted a conditional or a regular admission.

Admission to the Non-Baccalaureate Master's Degree

An individual without a baccalaureate degree or with one from a non-accredited institution may be admitted to a master's degree program by submitting an application that shows the applicant has at least the equivalent of a four-year college education and the ability to do graduate work. Evidence must be included that the applicant has completed the General Education requirements of UNC or their equivalent, has an in-depth knowledge in the proposed area of study, and has the ability and preparation to pursue graduate work in the proposed major area. The applicant must follow the student-administered application procedure described under Graduate Application Procedures and submit the following materials:

1. Graduate School application for admission to a master's degree program, two complete sets of official transcripts, a non-refundable application fee to the Graduate School, and Graduate Record Examination test scores (50th percentile or above) or the Miller Analogies Test scores (50th percentile or above for intended majors).

2. A comprehensive written statement of career goals, objectives and rationale for pursuing a master's degree program.

3. Current resume summarizing academic and professional experience, publications, and activities. The applicant's resume must present evidence of in-depth knowledge in the proposed area of study and ability to pursue graduate study in the selected major as indicated by many years of work experience with progressively increased responsibility in a field related to the proposed degree program.

4. Three letters of recommendation attesting to the applicant's ability and qualifications to pursue graduate study from persons qualified to evaluate such qualifications.

General Education. An applicant must present evidence of completion of the current General Education requirements at UNC before applying to become a graduate student. All applicants should apply as UNC undergraduate transfer students prior to being considered for the Non-Baccalaureate Degree Program in order to receive official evaluations for General Education and of the courses required to complete an undergraduate degree in the proposed major. General Education at UNC is a program consisting of a minimum of 40 (semester) credit hours selected from three skill areas and four content areas. (Check this Bulletin for a listing of the approved courses.) Satisfaction of these criteria will be verified by the Graduate School.

Undergraduate Major Area. An applicant must give evidence of in-depth knowledge of the field in which he or she intends to do graduate work at the breadth and depth of an undergraduate degree program in the same or a closely related discipline. This evidence could include, but is not limited to, college level coursework with a 3.0 grade point average, vocational, industrial and military courses, advanced placement test scores, CLEP Subject Examinations, publications, performance and extensive work experience in the field of the proposed graduate degree. Satisfaction of these criteria will be verified by the Graduate School and the pertinent departments/division/school.

Potential for Graduate Study. An applicant must present evidence that he or she can function academically at the graduate level. This evidence would include the items listed above, as well as additional indications of academic potential such as: lectures presented, honors awarded, letters of recommendation attesting to the academic potential of the applicant, etc. The department/division/school in which the student proposes to study also may have additional graduate admission requirements.

Process of Review. Applicants are encouraged to consult with the Graduate Student Advisor or the Associate Dean of the Graduate School before submitting an application. The completed application will be reviewed by the Non-Baccalaureate Coordinating Committee and, if approved, it will be sent to the department/division/school offering the degree program for consideration for admission or denial.

Admission with Baccalaureate from a Non-Accredited Institution

Applicants holding baccalaureate degrees from non-accredited institutions will be considered for admission on the basis of the criteria used for the admission of applicants to the Non-Baccalaureate Degree Program (see above). "Non-accredited" refers to the accreditation status of the institution at the time the applicant attended the institution. Applicants applying under the provisions of this program may not take graduate-level courses until they are officially admitted.

Admission to the Graduate Interdisciplinary Degree Program

General Information. The Graduate Interdisciplinary Degree Program is designed to be a rigorous program of quality that will give an opportunity to qualified students to meet career goals by combining two or more disciplines into a single degree program. To ensure its quality, the program requires close supervision of students, participation, and coordination by all assigned committee members of each discipline concerned. It is imperative that the program be truly interdisciplinary and represent an integration of the subject matter of the component disciplines. Programs that parallel other degree programs are not acceptable as interdisciplinary degree

programs. Applicants are encouraged to consult with the Graduate Student Advisor or the Associate Dean of the Graduate School before submitting their applications. The applicant must follow the student-administered application procedure described earlier under Graduate Application Procedures. The complete application packet should include the following items:

1. The degree application located in Guidelines for Interdisciplinary Degree Programs, available from the Graduate School, and the non-refundable application fee.

2. Two official copies of the applicant's transcripts from all colleges or universities attended (including UNC) that contributed to previous degrees and any graduate work for which credit is intended to apply to the proposed program.

3. In applications for a doctoral program, one official copy of the applicant's GRE General Test scores (not more than five years old) 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. Provisional Admission will not be granted until the official report is received.

4. Three letters of recommendation from appropriate professional sources attesting to the applicant's ability to pursue the intended 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 can satisfy these goals.

6. Identification of two primary disciplines (departments/divisions) that 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, MS, Ed.S, DA, or Ed.D. Secondary disciplines also may be included.

7. A current resume that summarizes academic and professional experiences, activities, publications, and other pertinent information.

Preliminary Review. The Graduate Interdisciplinary Degree (GIDP) Coordinating Committee, comprised of interdisciplinary coordinators from each college, will conduct a mid-semester preliminary review of all completed applications that satisfy the minimum admission requirements of the Graduate School. Applicants who do not meet these will be denied admission.

If the Committee finds the application to have merit, the Graduate School will send the application materials to the appropriate GIDP college coordinator who will contact the disciplines (departments/divisions/schools) for their evaluation and recommendation. If the Committee finds the application to lack merit or compelling rationale for interdisciplinary studies, the Graduate School will notify the applicant of their concerns. Those applicants may resubmit their application materials after addressing the concerns.

Upon receipt of the application materials from the Graduate School, the GIDP college coordinator and the faculty in the appropriate disciplines will evaluate the application and recommend to the Graduate School that the applicant be granted or denied Provisional Admission. 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 such status.

Program Criteria. The plan of study must meet the criteria noted below.

1. If the Graduate Faculty advisors determine that a student has any deficiencies in his or her background, the proposal must list the coursework necessary to alleviate those deficiencies, and these courses must be completed at the earliest possible date.

2. EPRE 600 (master's) or EPRE 700 (specialist and 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. Master's degree proposed coursework must equal at least 30 semester hours of graduate-level courses plus any deficiency credits. Doctoral degree proposed coursework must equal at least 64 semester hours beyond a master's degree excluding any deficiency credits. If an applicant does not hold a master's degree, the proposed coursework must equal at least 94 semester hours.

4. For master's and specialist degrees, at least 12 semester hours of graduate-level coursework must be proposed in each of at least two primary disciplines (departments/divisions). Courses numbered 622, 699, and 701 may not be used to meet this requirement. For the doctoral degree at least 15 semester hours of graduate-level coursework must be proposed in each of at least two primary disciplines (departments/divisions). If an applicant does not hold a master's degree, the proposed coursework in each of at least two primary disciplines must equal a minimum of 18 semester hours. Courses numbered 622, 797, and 799 may not be used to meet this requirement.

5. Secondary disciplines (departments/divisions) are defined as those in which 9 to 11 semester hours of coursework are proposed at the master's and specialist levels or those disciplines in which 9 to 14 semester hours of coursework are proposed at the doctoral level. If identified in the program proposal, these disciplines must assign an advisor and approve the selected coursework.

6. 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 30-semester-hour program or three to four years for a 64-semester-hour program. Furthermore, research and library resources must be available to facilitate the completion of the thesis, if applicable, or dissertation.

7. No more than one-third of the proposed courses may be double-numbered courses offered simultaneously for undergraduate and graduate students.

8. No more than 9 semester hours, individually or in combination, of courses numbered 508, 513, or 622 may be proposed or counted in the degree program. If a thesis is proposed for the master's degree, it must be a minimum of 6 semester hours. The specialist degree program must include at least 5 semester hours in the DS or departmental prefix 701, Specialist Degree Practicum.

9. Doctoral degree must include 4 semester hours of dissertation proposal research (departmental prefix 797) and 12 semester hours of dissertation (departmental prefix 799).

10. Program proposals must conform to all other Graduate School policies and procedures, e.g., transfer of credit.

Program Advisors. For master's and specialist degrees, one of the designated advisors must be named the Program Advisor. For the doctoral degree when there are only two primary disciplines proposed, one of the two designated Graduate Faculty advisors must be named 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 or her department/division/school chairperson and the Dean of the Graduate School.

Before 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/division chairpersons. Until an approved Plan of Study form is filed with the Graduate School, a "hold" is placed on an interdisciplinary student's ability to register for classes.

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/divisions will be notified by letter regarding program approval or disapproval. If the proposal is approved, the student will be granted regular admission. 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 this 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 Dean.

ALL GRADUATE SCHOOL POLICIES APPLY TO INTERDISCIPLINARY STUDENTS.

Committees. The Specialist Degree Practicum shall be under the direction of a Practicum Supervising Committee. If the members of this Committee are not the same as the members of the Program Advisory Committee, they must be approved by the Graduate School before the start of the practicum.

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 Oral Comprehensive Examination 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 endorsement, and a Research Committee. A Dissertation Research Committee is not appointed until after successful completion of the oral comprehensive examination.

Comprehensive Examinations. Each interdisciplinary degree program student must pass a written comprehensive examination that 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 for more details).

All Graduate School policies related to comprehensive examinations are applicable to interdisciplinary program students except that a comprehensive examination permit will not be released if the student's grade point average is less than 3.00 in any primary discipline (department/division).

Special Admission Policies

On-campus or Off-campus Admission Criteria. Each department/division/school sponsoring on-campus and off-campus graduate programs will utilize the same criteria for admission to the program.

Enrollment During Unclassified Admission Status. Students who have not applied for admission to a graduate degree program at UNC are not permitted to enroll for more than 9 hours in a single prefix (department/program) as an unclassified student (no more than one semester of full-time enrollment).

The Graduate School places "holds" on the registration of such students, and they are not permitted to continue to enroll 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, a Provisional Admission or a denial of admission by the end of the first semester or 9 semester hours, whichever is later.

Admission to Next Higher Degree. A student may not pursue more than one degree simultaneously, with the following exception. Students who have applied for graduation for one degree and have been conditionally admitted to

the next higher degree may request that work completed before graduation be counted toward the next higher degree. He or she must complete a Petition to Count Work on Next Higher Degree form before starting any courses that are to count on the next degree. Such dual enrollment is limited to two consecutive semesters and a student may earn no more than 12 credits of graduate work applicable to 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.

Because all credits applicable to graduate degrees must be earned within the time limits specified for each degree program, the work toward the next higher degree must fall within the specified time limit in order to actually count in the degree program. The initial date for the next higher degree will be that of the first course credits counted toward that degree.

Deadline for Offers of Financial Support. Students are under no obligation to respond to offers of financial support before April 15. If a student accepts an offer before April 15 and subsequently desires to withdraw that acceptance, the student may submit in writing a resignation of appointment at any time through April 15. However, an acceptance given or left in force after April 15 commits the student not to accept another offer without first obtaining a written release from any previously accepted offer. All written offers of scholarship, fellowship, traineeship, and/or assistantship should include a copy of this policy.

Graduate Program Requirements

A Program Advisor is assigned by the department chair or program coordinator to each student upon being accepted into an academic program. It is the responsibility of the department to submit an Advisor Assignment form to the Graduate School. This completed form is entered into the student database and maintained with the student file. To change an advisor assignment, a new form must be submitted to the Graduate School so that the appropriate records can be updated. Only a member of the Graduate Faculty is authorized to serve as a Program Advisor for a graduate student.

The importance of the Program Advisor cannot be understated. Program advisement includes all aspects of a student's 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 professional goals and aspirations.

1. The Program Advisor is responsible for helping students understand the expectations and requirements of their academic programs and plan their programs to satisfy all requirements. 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.

2. 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 the department/division and/or University and Graduate School policies and procedures.

3. The Program Advisor also is responsible for professional advising and guidance including assisting students with planning for their academic and professional future. This responsibility is likely to involve extensive discussions of academic or professional goals well beyond the academic program.

Competency in English Usage and Speech Skills. A student is expected to have competency in English usage and speech skills that will enable him or her 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/division/school and/or advisor to enroll in English and/or a speech course(s).

Course Credits/Unclassified Credits. A maximum of 9 semester hours of coursework taken while in an unclassified status may be used toward a graduate degree program. Unclassified status refers to a student who has at least a baccalaureate degree and has not been admitted or is not seeking admission into a graduate degree program. Students who have been provisionally admitted to a graduate program due to a low GPA may not count any coursework completed before provisional admission toward the completion of the graduate program.

Enrichment Credits from Other Institutions (Colorado Reciprocal Course Agreement). At the request of the student or the department/division, 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.

The University has a reciprocal course agreement with the University of Colorado, Colorado State University, and Colorado School of Mines. A full-time graduate student on one campus may take one approved course per term without additional tuition at one of the other institutions. Such work will count as residence credit and will appear on the UNC transcript. Students interested in this arrangement may obtain the guidelines and the application form in the Registrar's Office. Forms must be completed and approved before the term that the student proposes to take the course.

Counting Work Toward Next Higher Degree. Students should be advised that it is beneficial to complete one degree before initiating coursework toward the next higher degree. However, to count work toward the next higher degree, the student must

1. have applied for, and been accepted in, the next higher degree program;
2. have applied for graduation in the current degree program; and
3. have 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.

Such dual enrollment is limited to two consecutive semesters, and the student may earn no more than 12 credits of graduate work applicable to 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.

Because all credits applicable to graduate degrees must be earned within the time limits specified for each degree program, the work toward the next higher degree must fall within the specified time limit in order to actually count the petitioned work in the degree program. The initial date for the next higher degree will be the date of the first course credits counted toward that degree.

General Transfer Credit Policies

Transfer work is not used in the calculation of the graduate grade point average. To transfer credit, the student 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 the transcript to the Graduate School for approval or disapproval by the Graduate School Dean or his or her designee. If the Graduate School Dean or designee approves and signs the petition, it will be sent to the Program Advisor for approval or disapproval. If the Program Advisor approves and signs the petition, it must be returned with the transcript to the Graduate School no later than three weeks before the end of the semester that the student plans to graduate.

Master's Degree. A student may transfer a maximum of 6 semester hours (9 quarter hours) of graduate credit from another accredited institution that offers master's degrees. Transfer credit will not be accepted if the work was used to obtain any degree at any institution or if the work was completed more than five calendar years before the completion of a student's master's program. Transfer credit must be compatible with the student's program and must be "A" or "B" work. Transfer credit cannot be used to meet any residency requirement and cannot be used to make up "D," "F," or "U" grades received in required courses.

Specialist Degree. A specialist student may transfer a maximum of 6 semester hours (9 quarter hours) of graduate credit from another accredited institution that offers specialist and doctoral degrees. Transfer credit will not be accepted if the work was used to obtain any degree at any institution or if the work was completed more than six calendar years before the completion of a student's specialist degree program. Transfer credit must be compatible with the student's area of specialization and must be "A" or "B" work. Transfer credit cannot be used to meet any residency requirement and cannot be used to make up "D," "F," or "U" grades received in required courses.

Doctoral Degree. A doctoral student may transfer a maximum of 9 semester hours (13 quarter hours) of graduate credit from another accredited institution that offers doctoral degrees. Transfer credit will not be accepted if the work was used to obtain any degree at any institution or if the work was completed more than eight calendar years before the completion of a student's doctoral degree. Transfer credit must be compatible with the student's program and must be "A" or "B" work. Transfer credit cannot be used to meet any residency requirement and cannot be used to make up "D," "F," or "U" grades received in required courses.

In some cases, additional transfer credit may be accepted after the student has passed both the written and oral examinations. The student may request to transfer a maximum of 24 semester hours including the original 9. A request to transfer more than the original 9 must be approved by the entire Program Committee.

Resident Credit Policies

Graduate credit is 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 is 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 Bulletin.

Credit According to Course Numbers. Courses at the University are sequentially numbered. Courses numbered 100 to 499 are for undergraduate credit, and courses numbered 500 to 799 are for graduate credit. Graduate students may not count courses numbered 100-499 toward graduate degree programs, and courses numbered 700-799 may be taken for specialist or doctoral credit only.

Upon prior written permission of the instructor, the major advisor, and the department/division/school chairperson, an upper division undergraduate student may take 500-level courses. Only those undergraduate students who have been previously admitted to a master's degree program and approved to count work toward the next higher degree will be permitted to take 600-level courses.

Maximum Course Load. Course load limitations for graduate students refer to all courses taken while enrolled as a graduate student in a graduate degree program, a non-degree certification program, or any combination thereof. The maximum load for a graduate student is 17 hours per semester during the academic year.

During the summer term, a graduate student may register for a maximum of 2 semester hours of coursework during the one-week session, 6 semester hours of coursework during the four-week session, or 10 semester hours of coursework during the eight-week session. If a summer term graduate student registers for a combination of courses during the various summer sessions, he or she may register for a maximum of 16 credit hours.

Course load limitations refer to work completed in either on-campus or off-campus programs or in a combination of the two types.

Requests for exception to the course load policy are made within the student's department/division. Forms can be obtained from department offices. The student is expected to explain the need for exception to the policy and how the overload would contribute to the quality of his or her academic program. The student must also provide evidence of noteworthy academic performance to assure continuation of quality academic work. Approval is not automatic and major consideration is given to maintaining the academic integrity of the student's program of study.

Variable Topics Courses. A maximum of 9 semester hours, individually or in combination, of courses numbered 508, 513, or 622 may be counted toward a graduate degree except for 1) Masters: A maximum of three semester credits of 513 (Professional Renewal) may be counted toward the master's degree and 2) Specialist: For a baccalaureate-only student, a maximum of 12 semester hours of 508, 513 or 622, individually or in combination, will be counted toward a specialist degree.

Correspondence (Independent Study)

Course Credit. No graduate credit is given for any correspondence course that, by virtue of the course delivery format, is not comparable to traditional delivery modes in purpose, content, objectives and quality. Graduate credit may be awarded for certain individually approved multimedia courses and independent study courses completed through the UNC College of Continuing Education.

Courses shall have a defined relationship and applicability to degree and/or certification programs as electives, support courses or courses that fulfill major and minor requirements. The Program Advisor, dean of the college, and the Graduate School shall have jurisdiction over applicability in the case of graduate courses.

Credit Hour Requirements

Master's Degree. The Graduate School requires a minimum of 30 semester hours for a master's degree. Departments/divisions may have requirements that exceed these minimum standards.

Faculty in master's programs are expected to identify deficiencies in the undergraduate coursework of students admitted to their degree program and to require students to remedy those deficiencies in the course of completing their master's degree.

Specialist Degree. 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. However, departments/divisions/schools may have requirements that exceed the minimum standards established by the University.

Doctoral Degree. 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-course semester hours of proposal research, and 12 semester hours of dissertation 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 coursework, 4 semester hours of proposal research, and 12 semester hours of dissertation credit.

A student who possesses a master's degree but who is attempting to obtain a second master's degree plus 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 program advisory committee. The departments/divisions may have requirements that exceed the minimums established by the University.

Change of Major

If a student is admitted to and begins work (registers for courses) in a degree program, but desires to change programs, the student must complete a Request for Change of Major form and receive appropriate departmental/division/school recommendations for admission. If the student is admitted to, but does not begin work in, a degree program (has not registered for courses), but desires to change programs, the student must request that the Graduate School cancel the original admission and send the applicant materials to a new degree program.

Double Major

Master's Degree. Students who desire a double major are advised that only one degree will be awarded (e.g., MA, MS, MM) 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. 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 if the student fails to successfully complete either major.

Note that 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. The student should consult with his or her Program Advisor or the Graduate School about declaring a double major or seeking two master's degrees.

Drop of Double Major. A student with a double major may drop one of the majors before taking either comprehensive examination only if he or 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, he or she cannot drop the other major.

Dual Doctoral Guidelines. A student may receive a second doctoral degree from UNC provided that the requirements for the first doctoral degree are completed before initiating the second degree program. No coursework from the first degree will be counted toward the second degree. Double majors are not permitted at the doctoral level. Emphases within a program area are considered different majors and may not be simultaneously completed.

Grading

Procedures. Grades of "A," "B," "C," "D," and "F" are used and are computed in the grade point average. Other marks used are:

- "I" for Incomplete
- "S" for Satisfactory
- "U" for Unsatisfactory
- "W" for Withdrawal
- "NC" for Audit
- "NR" for No Report
- "UW" for Unapproved Withdrawal

Grades of "S," "U," "UW," "W," "NC," and "NR" are not counted in determining grade point average. 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.

The work to remove an "I" must be completed and an official Grade Change form recorded in the Records Office by the last day of the next semester the student attends the University. This must occur within one calendar year of the grade's assignment. If the incomplete grade is not completed within the time limitations, the grade will be recorded on the academic record as "I/F" and will be computed as an "F."

Grades can be changed, using the Special Grade Report, within the first two weeks of the semester after receipt of the original grade by the Records Office. However, students wishing to appeal an assigned grade must follow the academic appeals procedure and must initiate the appeals process within the semester following receipt of the contested grade.

"NR" will be recorded for "x" number of hours in a master's thesis or creative project, a specialist degree practicum, a doctoral proposal, or a doctoral dissertation when a student has not completed the work by the end of the semester. The "NR" will be replaced by an "S" or "U" when the work is completed.

GPA Requirements. In order to remain in a graduate program, a student must maintain a cumulative grade point average of 3.00 in graduate-level courses. If the student's cumulative GPA drops below 3.00 after at least 9 graduate-level credit hours, a warning letter will be sent to the student. A graduate student may not graduate with a cumulative grade point average below 3.00. The degree program of a student who has been sent a warning letter will be terminated if the student's GPA 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 in which the ninth hour is earned are used in the GPA calculation.

External Degree Programs. Students admitted to external degree programs are expected to meet the same degree requirements as on-campus students. Additional policies regulating these programs can be found in the Statewide Extended Campus Policies and Procedures Manual available at the College of Continuing Education.

Program Termination. A student's degree program may be terminated for one or more of the following reasons:

1. Based on an overall evaluation of a student's progress, the major department/division recommends that the program be terminated. The department/division/school declines to issue a letter of encouragement/continuation.
2. An overall unsatisfactory evaluation is made of a specialist or doctoral student's progress.
3. The student fails to meet the prescribed standards/criteria of his or her Provisional Admission.
4. The student fails to maintain the cumulative 3.0 grade point average standard.
5. The student fails the retake of the written comprehensive examination or its approved equivalent.
6. The student fails the retake of the oral comprehensive examination.
7. The student submits an unsatisfactory thesis or dissertation.
8. The time limit established for the degree program expires before the degree requirements are completed.

Re-admission after Program Termination. A student whose degree program has been terminated may be admitted to a different degree program. The following policies apply:

1. The student must apply for admission to a different degree program.
2. If admitted, the student must complete all standard requirements of the program to which he or she has been admitted.

3. 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 qualifies for a regular admission.

4. 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.

Directed Study

Directed Study courses, available in most disciplines, are those for which a qualified student may receive credit for undertaking an individualized investigation under the direct supervision of a UNC faculty member. Courses numbered 622 are graduate level, Directed Study courses. The faculty member providing the supervision must be approved to teach graduate-level courses. However, no faculty member will be authorized to supervise a Directed Study course during a semester that he or she is not employed on the UNC campus.

Unless specifically recommended by the Program Advisor and the department/division chairperson and approved by the Graduate Dean, a Directed Study investigation must be on a specific topic that is not duplicated by an existing course within the University 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 to Directed Study courses:

1. No more than two Directed Study courses with a combined total of no more than 6 semester hours may be taken in a semester. Furthermore, each study is limited to no more than 4 graduate semester hours.
2. The student shall apply through the department/division/school in which the study is to be supervised.
3. Requests 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 chairperson of the major department/division.
4. All persons receiving 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 also may take the form of a report or a summary of the activities undertaken. The format and writing style of the final report must be in keeping with the style manual used by the discipline. It is the student's responsibility to acquire the appropriate style manual for reference.
5. The faculty member must submit one copy of the final report to the appropriate departmental/division office with the final grade assignment.

Program Time Limits

Master's Degree. 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, if a student has approval to count work taken before the first enrollment after admission, he or she must complete the degree within five calendar years beginning with the earliest work counted in the program.

Specialist Degree. 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, if a student has approval to count work taken before the first enrollment after admission, he or she must complete the degree within six calendar years beginning with the earliest work counted in the program.

Doctoral Degree. 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 or she begins a doctoral degree program and if the student is permitted to include 21 semester hours of his or 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.

Basic Research Requirement

Master's Degree. All students must register for EPRE 600, Introduction to Graduate Research, or one of the research-oriented substitute courses approved by the Graduate Council. The Graduate School will not waive this requirement unless recommended by the Program Advisor and unless the student has received a graduate degree from an accredited college or university within the last five years. The Program Advisor must provide an explanation of the requested waiver in writing. The departmental prefix 622 shall not be used as a substitute for the research course. The research-oriented courses listed below have been approved by the Graduate Council as substitute courses:

Applied Statistics (STAT 604), Audiology (HRS 610), Biological Sciences (BIO 694), Chemistry (CHEM 600), Community Health (HRS 610), Earth Sciences (ESCI 600), Educational Psychology (EPRE 670), English (ENG 600), Geography (GEOG 600), Gerontology (HRS 610), History (HIST 600), KPE (PE 602), KPE: Kinesiology (PE 602), Mathematics (MATH 510), Mathematics: Teaching (MED 672), Music (MUS 600), Music Education (MUS 610), Nursing (NURS 505), Psychology (EPRE 603), Reading (EDRD 645), Recreation (HRS 610), Speech Communication (SPCO 600), Speech Pathology (HRS 610), Visual Arts (ART 600).

Specialist and Doctoral Degrees. All students must register for EPRE 700, Advanced Research Methods, or one of the research-oriented substitute courses approved by the Graduate Council. This course should be taken during the first semester of enrollment. The Graduate School will not waive this requirement unless recommended by the Program Advisor and unless the student has received a degree at the same level from a college or university within the last five years. The Program Advisor must request in writing that this requirement be waived. A course that has been previously completed, and is judged to be the equivalent of the Advanced Research course, may be substituted for this requirement. Documentation for the substitute course must be provided to the Graduate Dean for approval. The departmental prefix 622 shall not be used as a substitute for the research course.

The research-oriented course, PPSY 781, has been approved by the Graduate Council as a substitute course for Advanced Research Methods for the School Psychology Specialist degree.

The research-oriented courses listed below have been approved by the Graduate Council as substitute courses for Advanced Research Methods for doctoral degrees:

Applied Statistics (STAT 614), Biological Sciences (BIO 694), Chemistry (CHEM 600), Elementary Education, Elementary Education: Early Childhood Education and Reading (EPRE 505, EPRE 603, EDEL 710, and EDEL 711), KPE (PE 703), KPE: Kinesiology (KPE 625), Mathematics Education (MED 701), Music and Music Education (MUS 700).

Doctoral Research Tools. All Ph.D. students must demonstrate competency in two acceptable research tools. The level and assessment of competency is established by each department/division and must be approved by the Dean of the Graduate School.

Acceptable research tools are foreign languages, applied statistics, mathematical statistics, and computer languages/applications. With the approval of the major department/division/school 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.

Student 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. 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. Data from human subjects are not to be collected until written approval is received from the IRB.

Applications for research approval are available in the Thesis and Dissertation Manual (1993 edition), which can be purchased at the UNC Bookstore. Faculty can request an IRB packet from the Graduate School.

Student Liability. The state of Colorado's Risk Management Division, 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 may be 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.

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.

Although 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 the student purchase liability insurance either through his or her professional association or an alternative source.

Plan of Study

Master's Degree. The description in this Bulletin 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 Bulletin are documented in their Graduate School file. Departments/divisions/schools are also encouraged to identify any deficiency courses a student must complete at the time of screening for admission.

Specialist Degree. A Supervising Committee consisting of two persons recommended by the department/division and approved by the Dean of the Graduate School, shall supervise a student's specialist degree program. In conjunction with the Supervising Committee, each specialist degree student must prepare a plan of study that clearly specifies core requirements, elective coursework, UNC coursework, transfer coursework, and double-numbered coursework. The plan must be formalized on a Plan of Study form and the completed form, including the signatures of the Supervising Committee members, 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 or her designee shall review the plan. If approved, the Plan of Study form will be filed in the student's folder. If disapproved, the form will be returned to the student for correction and resubmission.

Because the plan of study will be the basis for the graduation check, any deviation from it must be approved by the Supervising Committee and the Dean of the Graduate School or his or her designee.

Doctoral Degree. A Program Advisory Committee, consisting of at least three persons appointed by the major department/division, and, if applicable, by any supporting area department/division, shall supervise the planning of a student's doctoral degree program. In conjunction with this Committee, each doctoral student must prepare a long-range plan of study that clearly specifies core requirements, elective coursework, UNC coursework, transfer coursework, double-numbered coursework, and research tools (if applicable). The plan must be formalized on a Plan of Study form and the completed form, including the signatures of the Program Advisory Committee members, 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 or her designee shall review the plan. If approved, the Plan of Study form will be filed in the student's folder. If disapproved, it will be returned to the student for correction and resubmission.

Because the plan of study will be the basis for the graduation check, any deviation from it must be approved by the Program Advisory Committee and the Dean of the Graduate School or his or her designee.

Letters of Encouragement: Program Continuation

Departments/divisions/schools are specifically directed to evaluate each specialist and each doctoral student when the student has completed 9 semester hours in the degree program. The evaluation will be based on multiple criteria established by the department/division, but students may not assume that each criterion carries equal weight. Indeed, one criterion may outweigh all others. Based on this evaluation, the Program Advisor will notify the student and the Graduate School in writing that the student is a) encouraged to continue in the program, b) discouraged from continuing in the program, or c) placed on review for one semester. Although the semester after the notification that a student is to be placed on review is typically the review semester, the letter placing the student on review should stipulate the semester targeted as the review period. When a doctoral student has completed 18 semester hours in the degree program, the student's department/division will submit a written recommendation to the Graduate School that the student's program be continued or terminated. The Graduate School will notify the student in writing of that recommendation.

Committees

Master's Thesis Committee. Whether the master's thesis is to be completed as a program requirement or as a project in lieu of the written comprehensive examination, a Thesis Committee of at least two faculty members is required. The student must apply for a Permit to Take Comprehensive Examination with the Graduate School prior to defense or written approval of the project. Application forms are available at the Graduate School. At least two approval signatures from Graduate Faculty members must be obtained to indicate the successful completion of the thesis or project.

If the master's thesis is required in addition to the comprehensive examinations, no Comprehensive Examination Permit is required. The student needs only to submit the thesis upon completion signed by two faculty members to the Graduate School. The Graduate Dean will provide the final approval signature on the thesis.

Specialist Supervising Committee. A two-person Specialist Supervising Committee, recommended by the department/division and approved by the Dean of the Graduate School, will supervise a student's specialist degree program. This Committee will assist the student in preparing a plan of study, oversee comprehensive examinations where appropriate, and direct the student's practicum.

Doctoral Committees. Besides the doctoral Program Advisory Committee, each doctoral student will have two committees: 1) an Oral Comprehensive Examination Committee, and 2) a Research Committee. Students must submit separate requests for each committee. Each committee will include at least three members of the Graduate Faculty who have been recommended by the Program Advisor, approved by the major division/department chairperson, and appointed by the Dean of the Graduate School. The chair of the Research Committee (Research Advisor) must currently hold doctoral research endorsement. In addition, the Dean of the Graduate School or his or her designee will appoint a faculty representative from another department/division. The faculty representative must be present at the student's doctoral oral examination and dissertation defense. No faculty member will be appointed to a doctoral committee without his or her consent. University employees who are not members of the Graduate Faculty shall not be appointed as members of doctoral committees.

The student, the advisor or a committee member may present a request for a change in committee membership to the major department/division. Except in the case of the faculty representative, the department/division will rule on the request. Appointment of a replacement member will be subject to the approval of the Dean of the Graduate School.

If a committee member other than the faculty representative is to be absent during the semester that an oral examination or defense is scheduled, the major department/division will appoint a replacement subject to approval by the Dean of the Graduate School. If the faculty representative is to be absent during the semester that an oral examination or defense is scheduled, the advisor shall notify the Graduate School at least 21 calendar days before the exam or defense. The Graduate School will select an appropriate replacement for the faculty representative.

Oral Examination Committee Appointment. An Oral Comprehensive Examination Committee must be appointed before the student takes the written comprehensive examination. The Program Advisor will serve as the chairperson of the Oral Comprehensive Examination Committee that will be made up of at least two departmental representatives (including the chair), a representative from a supporting area if applicable or a third departmental/program representative, and a faculty representative assigned by the

Graduate Dean or his or her designated representative. The Oral Comprehensive Examination Committee shall be appointed no later than the end of the semester before the scheduled oral examination. The student will not be approved to take the written comprehensive examination until the Committee is appointed. The student will obtain signatures from all requested committee members.

The Program Advisor can nominate a faculty representative on the Request for Appointment of Doctoral Oral Committee form (available at Graduate School), which is to be submitted to the Graduate School. If approved, the requested faculty representative will then be assigned by the Graduate Dean or his designee. The recommended faculty member must hold Graduate Faculty status and should be in a tenure-track position in a department/division/program unit different from that of the student's program. A nomination for faculty representative should be based upon the potential content or methodological expertise of the recommended faculty member. A list of faculty by such expertise is available at the Graduate School. The student and all members of the committee will receive confirmation of the approved committee assignments.

Doctoral Research Committee. The dissertation proposal and the dissertation shall be under the supervision of 1) a Research Advisor who is a doctoral-endorsed member of the Graduate Faculty or is a Graduate Faculty member who is co-chairing the committee with a doctoral-endorsed Graduate Faculty, and 2) a Research Committee. The Research Committee will not be appointed until after the student has passed the written and oral comprehensive examinations. The student will obtain prior consent from all requested committee members.

The Research Advisor can nominate a faculty representative on the Request for Appointment of Doctoral Research Committee form available at Graduate School. The committee will be reviewed and, if approved, the requested faculty representative will then be assigned by the Graduate Dean or his or her designee. The recommended faculty member must hold Graduate Faculty status and should be in a tenure-track position in a department/division/program unit different from that of the student's program. A nomination for faculty representative should be based upon an assessment of the needs of the committee relative to the nature and potential topic of the dissertation research. The nominee should be selected to provide potential content or methodological expertise that is most needed to strengthen the overall committee expertise. A list of faculty by content and methodological expertise is available at the Graduate School. The requested membership of the Doctoral Research Committee will often be the same as the Oral Examination Committee although changes in membership can most easily occur at this point. All rules and regulations pertaining to the Oral Examination Committee apply to the Doctoral Research Committee.

Faculty Representative. The Graduate Dean or his or her designee, after considering recommendations from the Research Advisor and Research Committee, will appoint a faculty representative to all oral examination and research committees. The faculty representative must be a member of the Graduate Faculty and come from a department/division different than that of the student. The faculty representative must be present at the student's doctoral oral examination and the dissertation defense.

The faculty representative is to be considered a full voting member of the student's dissertation committee with all the rights and responsibilities of any other member. He or she is expected to contribute conceptual, theoretical, methodological and/or academic expertise from an alternative disciplinary perspective. The concerns and

recommendations of all committee members, including the Faculty Representative, are crucial to the dissertation approval process.

Faculty Committee Load Policy. An "active" student will be defined as one who is currently enrolled or is paying a continuous registration fee. Therefore, the doctoral committee load policy is based on the policy that an individual may serve on 10 active doctoral research committees at any one time and may serve as the dissertation director or research advisor for no more than 5 of these 10 committees. An individual department/division may elect to impose more stringent limitations on its faculty with respect to the number of committees on which they may serve.

Exceptions to the committee maximums would be permitted only if agreed to as follows:

1. The faculty member involved agrees that his or her load, current or projected, would allow adequate time to take on an additional student without adversely affecting the responsibility of the department/division to other students and to programs offered by the department/division.

2. The department/division chairperson approves the additional student. Approval would indicate that the chairperson had reviewed the current load of the faculty member and did not feel the additional load would adversely affect the responsibility of the department/division to other students and to programs offered by the department/division.

3. The Graduate Dean has been informed and has approved.

Written Comprehensive Examinations

Permits. In order to take a written comprehensive examination or otherwise demonstrate competency, all master's, specialist and doctoral students must obtain and complete the Written Comprehensive Request form appropriate for their program. Interdisciplinary students must obtain the signature of each discipline advisor on the permit form. This permit is valid only for the semester that it is issued. (Examinations may be given by a supporting area or minor department/division whenever the department/division chooses.)

A completed form must be received by the Graduate School no later than two weeks before the scheduled examination. After receiving the completed form and determining that a student is eligible to take the exam, the Graduate School will release an authorized Permit form to the department/division. Departments/Divisions are not authorized to allow a student to take the examination before receipt of the Permit from the Graduate School. Exams taken without authorization will not be accepted by the Graduate School.

Students are advised to check with their Program Advisors for information regarding examination format, procedures, date, time, and place.

Master's Degree. Each master's degree student must pass a written comprehensive examination or otherwise show competency in the discipline by successfully completing a departmental/division 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/division is responsible for scheduling the date, time, and place of the examination. Each student should check the departmental/divisional requirements at the beginning of his or her program. This examination or its approved equivalent may not be taken until the student a) has been granted regular admission to the program, b) has completed departmentally specified course requirements, c) has maintained a GPA of at least 3.0 in his or her program, and d) has obtained approval from the Program Advisor and Graduate School.

The student will obtain, complete and submit the Master's Written Comprehensive Examination Request form to the Graduate School no later than 14 calendar days before the scheduled examination. After determining that a student is eligible to take the exam, the Graduate School will send a Permit form to the student's advisor. Exams taken without authorization will not be accepted by the Graduate School.

Once the comprehensive examination session begins, it is considered a take of the examination. Students leaving the examination session and not returning will be determined as having taken the examination and will be evaluated accordingly.

The Program Advisor must return the signed Permit form to the Graduate School after the examination is evaluated or the thesis/project is defended indicating that the student passed, failed or did not take the examination on or before the date indicated on the form. If applicable, all committee members (minimum of two) evaluating an approved equivalent of written comprehensives or thesis must sign the report form.

A second permit is required for a retake, but it may not be scheduled during the same semester that the original examination was completed. If a student fails a retake of the examination or its equivalent, his or her degree program will be terminated. The student will have to fill out a new Permit each semester that he or she plans to take comprehensive exams.

Project Requirements. All academic units that desire the alternative of requiring a project in lieu of the comprehensive examination will clearly define what is meant by a project and submit guidelines regarding the specific method(s) of evaluation to the Graduate Council. In addition, a copy of the definition and evaluation guidelines will be distributed to students before their enrollment in a master's project.

A minimum/maximum of 6 credit hours is granted for a master's thesis or project in lieu of the comprehensive examination.

Filing of Thesis or Project. 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. The thesis must be signed by a minimum of two thesis committee members. If a project in lieu of the comprehensive exam is to be copyrighted, University Microfilms requires an abstract of the project. These items must be submitted to the Graduate School at least 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 graduation and to pay the current fees for binding, mailing, publishing, and microfilming, if 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.

Specialist Degree. 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 major department/division is responsible for scheduling the date, time, and place of the examination(s). Each student must check the departmental/divisional requirements at the beginning of his or her program. The written comprehensive examination may not be taken until the student

1. has been granted regular admission to the degree program,
2. has filed an approved plan of study,
3. has completed at least 20 semester hours (50 semester hours if baccalaureate only student) of work applicable toward the degree, not including the practicum,
4. has maintained a grade average of at least 3.00 in his or her graduate degree program,

5. has received a letter of continuance from the department/division and the Graduate School, and
6. has obtained approvals from both the supervising committee and the Graduate School.

Doctoral Degree. Each doctoral student must pass a written comprehensive examination that is designed, administered, and evaluated by the Graduate Faculty of the major department/division and by other qualified individuals as specified by the Program Advisor. This examination may not be taken until the student

1. has been granted regular admission to the degree program,
2. has filed an approved plan of study,
3. has completed at least 36 semester hours, 60 semester hours if baccalaureate only student, of work applicable toward the degree and that at least 24 semester hours have been completed on campus,
4. has maintained a grade average of at least 3.00 in his or her graduate degree program,
5. has received two encouragement letters from the department/division and one from the Graduate School after 18 semester hours,
6. has had an oral comprehensive examination committee appointed, and
7. has obtained approvals from both the Program Advisor and the Graduate School.

Record Files of Written Comprehensive Exams. 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 department/division faculty to address potential appeals and/or questions of administration and grading procedures. Although the department/division shall refuse permission to any student to examine past comprehensive examinations, it is not the intent of this policy to prevent any department/division from collecting, maintaining, and/or disbursing past comprehensive examination questions used by the department/division.

Doctoral Oral Comprehensive Examination

After passing the written comprehensive examination, each doctoral student must pass an 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 Program Advisor will notify the Graduate School by forwarding a completed Request to Schedule Doctoral Examinations form no later than 7 calendar days before the exam date. Requests submitted with greater advance notice are encouraged and appreciated. 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 Graduate School will approve and publicize the examination date, time, and place in UNC Report or in a bulletin published by the Graduate School. 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 also may attend with permission from the chairperson of the committee. 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.

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.

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.

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.

Practicum for the Specialist Degree. Under the direction of a Supervising Committee, each specialist student is required to complete at least 5 semester hours of the Specialist Degree Practicum (DS or Department Prefix 701). School Psychology students are authorized by the Graduate Council to take 12 semester hours of PPSY 789, Internship for School Psychology, as a substitute for the practicum requirement. If the members of the practicum Supervising Committee are not the same as the members of the specialist Supervising Committee, the members of the practicum Supervising Committee must be approved by the Graduate School before the start of the practicum.

Each student shall present a practicum proposal to his or her Supervising Committee for approval. No later than the last day of the semester preceding the practicum semester, the student must file the approved proposal with the Graduate School along with a signed, Non-plagiarism Affirmation form. In addition, the student must furnish copies of the approved proposal to his or her Program Advisor and Supervising Committee members.

Upon satisfactory completion of the practicum, the student must file an original and three copies of a written practicum report with the Graduate School. A signed, Non-plagiarism Affirmation form must accompany the report.

Doctoral Dissertations

A dissertation pertaining to a significant topic in the candidate's major subject field is required for each doctoral program. The dissertation proposal 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.

Registration for 4 semester hours of proposal research for the dissertation, as appropriate, shall be included in the requirements for admission to candidacy. These hours shall be recorded on the transcript as "NR" (no report) until the end of the semester in which the student has been admitted to candidacy. Upon admission to candidacy, the "NR" will be replaced by the appropriate grade. No doctoral student may register for dissertation or project in lieu of dissertation hours until he or she has been admitted to candidacy for a doctoral degree.

Admission to Doctoral Candidacy. Doctoral candidacy is awarded to doctoral students who have demonstrated their preparedness to engage in dissertation research. There are a series of accomplishments and program steps that need to be completed for the student to be nominated for candidacy. Upon satisfying these criteria, the student's name will be submitted to the Graduate Council for the official decision.

No student is allowed to register for departmental prefix 799 until he or she is admitted to candidacy, and no student will be graduated at the end of the

semester that he or she is admitted to candidacy.

To be eligible for admission to candidacy for a doctoral degree, each student must

1. have completed Introduction to Doctoral Research or an approved equivalent;
2. have earned at least 39 semester hours of credit applicable to the doctoral degree or 69 semester hours of credit applicable to the doctoral degree if the student has only the baccalaureate degree;
3. have a cumulative grade average equal to or greater than 3.00 in the graduate degree program;
4. have passed the written and oral comprehensive examinations;
5. have filed with the Graduate School an approved dissertation proposal containing the signatures of all committee members;
6. have registered for 4 semester hours of departmental prefix 797;
7. have met the research tools requirement, if applicable. If the student is substituting a collateral field for a research tool, the student may be admitted to candidacy before completing the requirements in the collateral field.

Doctoral Continuous Registration. Once a doctoral student has been admitted to candidacy, he or she is expected to be continuously enrolled each semester, including the summer term, until all degree requirements are completed or until the degree program is terminated. The continuous enrollment requirement may be met by enrolling in one or more hours of coursework or by paying a doctoral service fee. The doctoral service fee must be paid in the Accounting Office when billed. Any doctoral student who fails to be continuously enrolled or to pay the doctoral service fee will be subject to doctoral program suspension that includes revocation of candidacy, dissolution of the doctoral Research Committee, and denial of use of University resources, services, and facilities.

Students whose programs have been suspended may request program re-instatement that requires the permission of the department/division chairperson, the appointment of an appropriate Research Committee, and the approval of the Dean of the Graduate School. Availability of sufficient current resources will be the criterion for approving program re-instatement.

Re-instatement to candidacy shall require, in addition to program re-instatement, approval of an acceptable dissertation proposal by the new Research Committee.

Upon re-instatement, the student shall be continuously enrolled or pay the doctoral service fee until all degree requirements are satisfied or until his or her program is terminated.

Proposal for Defense of Dissertation

The student will complete and submit a Research Committee Request form to the Graduate School upon passing the oral comprehensive examination.

The student will register for dissertation proposal credits (797). A grade of "NR" will be reported for any semester in which the student has registered for proposal hours, but not completed and successfully defended the proposal.

The student will prepare the dissertation proposal in collaboration with the Research Advisor. Other Committee members are to be consulted when appropriate, but the major interaction and editorial work should be with the Research Advisor. Students should avoid sending portions of the dissertation proposal to Committee members for their review and comment. Unless otherwise agreed upon by all Committee members, only completed copies of the proposal or dissertation are to be distributed and reviewed by the Committee.

When the Research Advisor believes the dissertation proposal is ready for defense, the proposal is to be presented to the entire Committee. Students should allow at least three weeks before the scheduled hearing for Committee members to review and critique the proposal. The student and Research Advisor are to arrange for a

room and 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.

The student will revise the proposal, in consultation with the Research Advisor, according to Committee requirements. Unless otherwise agreed, it is the student's responsibility to make note of the Committee member's requests for change during the proposal defense. It is recommended that the student summarize the changes that have been incorporated into the revised proposal to assist Committee members in identifying and locating the changes.

The revised proposal will be circulated with a signature page to the Committee members for them to review and to sign 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. If all Committee members sign the proposal, it will be considered approved by the Graduate School.

A minimum of three Committee signatures are required. However, if one or more Committee member(s) refuses to sign, the Graduate School will attempt to determine the reasons, and the Graduate Dean will review them and the proposal before granting final approval.

The student will submit two copies of the approved proposal to the Graduate School. The Graduate School will consider the proposal to be accepted, the student will be recommended to the Graduate Council for advancement to candidacy (if all other requirements are completed) and, upon approval from the appropriate Institutional Review Board (IRB for human subject research and IACU Committee for animal research), the student may begin the data collection portion of the study.

The student will complete the project and write the dissertation in close collaboration with the Research Advisor.

The student will submit a copy of the final draft of the dissertation to the Graduate School along with a confirmed date, time and place for the dissertation defense. The Graduate School will send the Research Advisor a copy of the confirmed schedule, a Defense Evaluation form and special grade reports for dissertation hours for which the student previously registered and received "NR" grades. The scheduled defense date must be at least 14 calendar days after 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 28 calendar days before the anticipated graduation date or the student will not be allowed to 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 draft manuscript will be reviewed by the Graduate School Dean or designee and any comments or concerns will be communicated to the Research Advisor, all committee members and the student.

Dissertation Defense. The Research Advisor should discuss the nature and purpose of the dissertation defense with the candidate. Generally, the candidate 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 candidate is expected to understand all aspects of the study, including the data analyses even if he or she contracted the services of a statistical consultant to complete the analyses. The Committee will expect the candidate to demonstrate that he or she is an expert on the topic and thesis of the dissertation. It should be recommended that the candidate bring copies of the signature pages for the dissertation. If the Committee approves the defense and dissertation

with no corrections, they can then sign the evaluation form and the signature pages.

The Dissertation Committee will evaluate the candidate'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.

If the candidate passes the defense, the Research Advisor will 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 candidate 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 Research Committee requires the candidate 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 candidate 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 candidate 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 candidate 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 candidate that the degree program is terminated.

If a candidate 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 candidate that the degree program is terminated.

Objection to the Dissertation. If a dissertation is filed with all but one of the signatures of the Research Committee members, the Dean of the Graduate School or designee will ask the non-signing member if he or 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 candidate must take appropriate steps to modify the dissertation in order to gain the approval of the original Dissertation Committee. The official document explaining the formal objection procedure is available in the Graduate School.

Filing of Dissertation. Upon completing any necessary revisions and obtaining successful approval of the dissertation by the candidate'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 and spelling. The candidate will then be asked to make revisions 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 copy must contain an originally signed approval sheet and a 350 word abstract. (University Microfilms will not publish an

abstract that exceeds the 350 word limitation.) Furthermore, the candidate 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 28 calendar days before the candidate's anticipated graduation date, the candidate may not graduate until the following semester.

Upon filing the dissertation, the Graduate School will require each doctoral candidate to complete specific forms related to the dissertation and graduation and to pay the current fees for binding, mailing, microfilming, and publishing the dissertation. All four copies of the dissertation will be bound. 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 candidate's Research Advisor, and one copy will be sent to the candidate.

Plagiarism. The student shall sign the Non-plagiarism Affirmation when the proposal is filed and shall be told that the Affirmation must be signed and filed in the Graduate School Office with the corrected dissertation following the defense.

The following is the approved definition of plagiarism in UNC Codification (2.8.6.2, Ch 2):

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 that are a result of paraphrasing or summarizing the work of another, and other information that 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 or 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.

Doctoral Residency. Although departments/divisions may have more stringent residency requirements, the Graduate School requires each student to complete at least two academic terms of full-time study in residence after the student has been admitted to the doctoral degree program. A term in residence is defined as a term that a student completes 9 or more credit hours of on-campus coursework applicable to the doctoral degree. Courses numbered 601, 622, 701, and 797 will not be counted in the 9 or more credit hours unless a student also completes at least 6 other credit hours of on-campus coursework applicable to the doctoral degree. Departmental prefix 799 may not be used under any circumstances to meet the residency requirement.

If a University of Northern Colorado or Aims Community College employee cannot meet the above prescribed residency requirement due to employment restrictions, he or 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 or her immediate supervisor and a recommendation from his or her major department/division to fulfill the residency requirements in this manner. The

supervisor's permission and the department/division recommendation must be filed with the Graduate School.

Graduation

Graduation Check. All master's, specialist and doctoral students must apply for graduation at least 30 calendar days before the beginning of the semester that the student plans to graduate. Graduation requirements are checked in accordance with one specific *University Bulletin*. The *Bulletin* 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 *Bulletin* under which he or she wishes to be evaluated and must meet all requirements in that *Bulletin*. The student may select any subsequent *Bulletin* 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 *Bulletin* and other requirements in another *Bulletin*.

The University reserves the right to modify or change *Bulletin* provisions from time to time in order to fulfill the University role and mission or to accommodate circumstances beyond its control. Any such changes or modifications may be implemented as applicable to all or some students without prior notice, without obligation, and unless specified otherwise, are effective when made. The University reserves the right to terminate or modify program requirements, content, and the sequence of program offerings from time to time for educational or financial reasons that it deems sufficient to warrant such actions.

Graduation Procedures. Formal application for graduation must be filed with the Graduate School at least 30 calendar days before the beginning of the semester that a student plans to graduate. Applications filed after this date will be considered late applications. Late applications will be accepted no later than 4:00 p.m. of the Friday of the second week of the semester that the student expects to graduate. A late fee, payable at the Accounting Office, will be charged for late applications. The student has the responsibility for determining that the application has been filed with the Graduate School.

Students are expected to review their academic records with their Program Advisor and obtain the Program Advisor's approval signature signifying completion of program requirements. The Graduate School will not accept 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 or she wishes to appear again on the tentative list of graduates. 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. No diploma will be issued until all requirements for graduation have been met.

Doctoral Hooding. The candidate's Research Advisor shall hood the candidate at the graduation ceremony.

Letter of Completion. Usually, an official transcript is your proof of completion of your degree. If you need proof of your degree with degree indicated before official transcripts are available, you may contact the Graduate School for a letter of completion, which can only be issued after all degree requirements have been officially verified as completed including posting of grades for the current semester by the Registrar.

Costs and Financial Aid

In-State and Out-of-State Classification

Students who are classified as in-state are permitted to enroll in the University at a significantly lower tuition rate because the University is primarily supported by the taxpayers of Colorado rather than by 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 1973 as amended. A person who has been domiciled in Colorado for one year or more immediately preceding registration is 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 she or he intends to remain and that she or he expects to return when she or he 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 of establishing a Colorado domicile only if the person is 21 years of age or if the person 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 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, she or he may petition for a change in tuition classification. Petitions must be submitted to the Registrar's Office 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 Registrar's Office no later than ten days after the negative decision 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 in the Registrar's Office (Carter Hall 3002, phone 970-351-2231). 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 Registrar's Office for information regarding qualifications for the lower in-state tuition rates.

Rates

All rates quoted in this Bulletin are approved by the Board of Trustees and are subject to change.

The following rates relate to the 1994-95 academic year. Rates for the 1995-96 academic year, which begins with fall semester 1995, are not available as of the publication of this document.

Updated information about tuition and fees is available from the Accounts Receivable Office in Carter Hall, phone 970-351-2201, after June 15 of each year.

1994-95 In-State Student Tuition

(Colorado Resident Status)

Per Semester Credits Taken	Under-graduate	Graduate
8.9 credit hours or less, tuition per credit hour	\$101	\$ 120
9-18 credit hours, total tuition (full-time enrollment)	\$914.50	\$1,081.50
Surcharge per credit hour for credits above 18 hours	\$101	\$ 120

1994-95 Out-of-State Student Tuition

(Not Qualified for Resident Student Status)

Per Semester Credits Taken	Under-graduate	Graduate
8.9 credit hours or less, tuition per credit hour	\$ 429	\$ 457
9-18 credit hours, total tuition (full-time enrollment)	\$3,865.50	\$4,114
Surcharge per credit hour for credits above 18 hours	\$ 429	\$ 459

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.

1994-95 General Fees

Per Semester		
8.9 hours or less, per credit hour		\$ 22
9 or more credit hours		
Student service fees		\$199
Health insurance fee		\$298
Total		\$497
Technology Fee per credit hour		\$ 3
Optional CoPIRG fee*		\$ 4

*The CoPIRG fee may be waived by the student at the time of registration.

General University fees, student fees 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 or she makes use of the privileges and activities underwritten by the fee. However, student service fees for full-time students enrolled in the summer session may be set at a rate lower than that charged during the regular academic year.

Fees for classes taken through the College of Continuing Education will differ from on-campus charges and are subject to the Colorado Commission on Higher Education Extended Studies policies. Fee information is available from the College of Continuing Education, Frasier Hall 11, phone 970-351-2944.

Room and Board

The University operates eight residence halls and three apartment complexes. Rooms and apartments hold two, three or four persons per unit. Freshmen under age 20 who live on campus are required to carry the Breakfast, Lunch, and Dinner (Monday through Sunday) meal plan. Brunch replaces Breakfast and Lunch on Saturday and Sunday. All other residents of Central Campus, McCowen Hall, and Harrison Hall must carry the Breakfast, Lunch and Dinner (Monday through Friday) meal plan or the Lunch and Dinner (Monday through Sunday) meal plan.

The following rates relate to the 1994-95 academic year. Rates for the 1995-96 academic year, which begins with fall semester 1995, are not available as of the publication of this document.

Semester Room and Board Rates

Freshmen Under Age 20

Breakfast, Lunch and Dinner (Monday through Sunday) Meal Plan	
• McCowen, Wilson, Wiebking, Belford, Tobey-Kendel, Sabin, Snyder Halls (\$914 room + \$1150 board)	\$2,064
• Harrison Suites (\$940 room + \$1150 board)	\$2,090
• Turner Apartments (\$991 room + \$1150 board)	\$2,141

All Other Student Residents

Breakfast, Lunch and Dinner (Monday through Sunday) Meal Plan	
• McCowen, Wilson, Wiebking, Belford, Tobey-Kendel, Sabin, Snyder Halls (\$914 room + \$1150 board)	\$2,064
• Harrison Suites (\$940 room + \$1150 board)	\$2,090

Breakfast, Lunch and Dinner (Monday through Friday) Meal Plan	
• McCowen, Wilson, Wiebking, Belford, Tobey-Kendel, Sabin, Snyder Halls (\$914 room + \$1017 board)	\$1,931
• Harrison Suites (\$940 room + \$1017 board)	\$1,957

Lunch and Dinner (Monday through Sunday) Meal Plan	
• McCowen, Wilson, Wiebking, Belford, Tobey-Kendel, Sabin, Snyder Halls (\$914 room + \$1000 board)	\$1,914
• Harrison Suites (\$940 room + \$1000 board)	\$1,940

**Room Only Rates Per Semester —
No Meal Plan**

- Turner Apartments (per person)\$991
- Lawrenson Apartments (per person)\$1,116
- Harper and Warren Graduate
Women's Houses (per person)\$700
- Student Family Apartments (per month)\$384
- Peek House (per month)\$200

Semester Optional Meal 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.

UNC Dining Services offers 10 meal plan choices to residents of Lawrenson, Turner (excluding freshmen under age 20), Student Family Apartments and off-campus students.

Students totally withdrawing from their classes during a semester will be assessed room and board charges according to the same pro rata percentage assessment as follows:

Time Period (two weeks before term begins)	Percentage of the tuition and fees assessed
1-15 class days	15%
16-20 class days	40%
21-25 class days	50%
26+ class days	100%

Note that 100% of nonrefundable 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.

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 specific majors and courses that have extraordinary costs associated with them, e.g., class materials. Also, fees are assessed for employment opportunity assistance services, transcripts, etc. Refer to the current *Schedule of Classes* for more specific information on these fees.

**Paying Student
Account**

It is the student (not a parent, guardian, spouse, agency of a foreign government, or other third party) who is responsible for the payment of tuition, fees, and other charges. THE STUDENT MUST BE PREPARED TO PAY THE FULL AMOUNT AT THE BEGINNING OF THE TERM OR PAY 1/3 OF THE CURRENT TERM CHARGES PLUS ALL OF THE PRIOR TERM BALANCES TO BE DEFERRED AS EXPLAINED BELOW. A student who is registered for classes two weeks before the first class day of the semester is mailed his/her Statement of Account and Change of Address form to the permanent (home) address. A student registering after this date is required to pick up his/her Statement in either the Aspen Suite of the University Center or Carter Hall.

EACH STUDENT'S FINANCIAL OBLIGATION TO THE UNIVERSITY MUST BE PAID BEFORE THE END OF THE TENTH DAY OF CLASSES EACH SEMESTER. Failure to make payment by this deadline results in the cancellation of the selected classes. In addition, the student will be assessed a cancellation fee of 15 percent of the tuition and fees. Those students not planning to attend the University after registering for classes MUST notify the Registration Center, 970-351-2521, of their intent two weeks before the first class day to avoid the 15 percent assessment. See *Schedule of Classes* for exact date.

Payment is the fourth step of the registration procedure as outlined in the *Schedule of Classes* and is to be made at a number of locations throughout campus depending on the following method of payment:

- Payment in full (Carter Hall, University Center, drop boxes at various locations around campus).
- Payment through financial aid as approved by the financial aid authorities in the Department of Student Financial Resources (Carter Hall).
- Payment through the deferral plan of at least one-third of the total current bill plus a deferral fee on the unpaid balance. A second one-third payment plus deferral fee is due the seventh week of the semester. The final one-third payment is due the fourteenth week of the semester (Carter Hall, University Center, and various drop boxes).
- Payment through CASE-UNC plan. This acronym stands for "Credit Available for Student Employees at UNC." It allows students employed by the University to make arrangements through the Office of Student Employment, a unit of the Department of Student Financial Resources in Carter Hall, to apply income from student employment, other than federal work-study, as it is earned to tuition, fees, and other charges (Carter Hall, University Center).
- Payment through VISA or MasterCard (Carter Hall, University Center, and various drop boxes).

In addition to the bill for tuition, fees, and other charges developed through the semester registration process, two additional statements of account will be mailed to the student's local address if any additional charges are incurred or if payment has been deferred. Note that these bills are not mailed to the parent or guardian. Each student is required to notify the Registrar's Office promptly of any change in his or her local address or in her or his permanent mailing address.

For further information on the payment process, contact the Accounts Receivable Office in Carter Hall, phone 970-351-2201.

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, YOUR ACCOUNT MAY BE CHARGED LEGAL ALLOWABLE COLLECTION CHARGES AND ATTORNEY FEES TO HELP SECURE REPAYMENT OF THE DEBT OWED THE UNIVERSITY.

Fee for Late Payment

In each of the three academic terms in a calendar year, a date is established after which payment of outstanding tuition, fees, and other charges is considered late. This date is stated in the official University calendar that is included in the Schedule of Classes and on the student's individual bill.

A student who has not paid his or her tuition, fees, and other charges within the allotted time is assessed a late fee in accordance with the following schedule. This fee is added to the outstanding balance.

Late Payment Fee Based on Past Due Balance

Amount Owed	Fee
\$25-\$199	\$ 6
\$200-\$399	\$12
\$400-\$599	\$18
\$600-\$799	\$24
\$800-\$999	\$30
\$1,100-\$1,199	\$36
\$1,200-\$1,399	\$42
\$1,400-\$1,599	\$48
\$1,600-\$1,799	\$54
\$1,800-\$1,999	\$60
\$2,000 and over	\$66

Fee for Deferral of Payment

A student may use the University's deferral plan by paying 1/3 of the total current term expenses (tuition, fees, and other charges) by the tenth day of classes each semester. A deferral fee on the amount deferred will be assessed based on the table below. A second 1/3 payment plus appropriate deferral fee is due the seventh week of the semester. The final 1/3 payment is due the 14th week of the semester. If any amounts remain unpaid after this deadline, a late fee will be assessed and registration for the subsequent term will be canceled.

Deferral Fee Based on Amount Deferred

Amount Deferred	Fee
\$25-\$199	\$ 2.50
\$200-\$399	\$ 5.00
\$400-\$599	\$ 7.50
\$600-\$799	\$10.00
\$800-\$999	\$12.50
\$1,000-\$1,199	\$15.00
\$1,200-\$1,399	\$17.50
\$1,400-\$1,599	\$20.00
\$1,600-\$1,799	\$22.50
\$1,800-\$1,999	\$25.00
\$2,000 and over	\$27.50

**Fee for Re-Registration of
Classes**

Students who have not paid tuition, fees, and other charges or made deferral plan arrangements for these charges before the published cancellation date will have their current semester classes cancelled. Students may be re-registered, but only into the exact schedule that they were enrolled at the time of cancellation, upon full payment or appropriate payment under the deferral plan, plus payment of an additional re-registration charge. For students enrolled in nine or more credit hours, the fee is one hundred dollars (\$100); those students enrolled in zero to less than nine credit hours are assessed a fifty dollar (\$50) fee. Payment or arrangements must be made in the Accounts Receivable Office. Re-registration may be made until the 24th class day of the semester. No re-registration requests will be considered after the deadline.

Withdrawing from a Class. Withdrawals from a class are permitted until the midpoint of the course. Withdrawals are processed at the Registration Center. Faculty signatures are required for every withdrawal section.

Withdrawal from ALL Classes. Initiate this process in the Dean of Students Office in Carter Hall, Room 3005 at 970-351-2796.

Fees for Withdrawals, Drops, or Cancellation from Classes. A withdrawal will appear on the student's record as a "W." This will not affect the grade point average, but tuition will be charged for these courses. Changes in tuition, fees, and other charges can occur during the add/drop period if the individual credit hours change from part-time to full-time or vice versa. After the add/drop deadline, no changes in tuition and fees will occur unless the student totally withdraws from all classes or is canceled from all classes due to nonpayment. In these instances, the student is assessed a percentage of the tuition and fee costs based on the number of credits registered for at the time of withdrawal, drop, or cancellation for nonpayment as follows:

Time Period (two weeks before term begins)	Percentage of the tuition and fees assessed
1-15 class days	15%
16-20 class days	40%
21-25 class days	50%
26+ class days	100%

Note that 100% of nonrefundable 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.

All amounts owed to the University are due and payable as of the date of the withdrawal or cancellation. Only charges for tuition, general student service fees, room and board may be prorated based on the date of withdrawal or cancellation. All other charges are not prorated or refunded.

Note that some federally funded aid programs mandate a different withdrawal/cancellation computation.

Individual classes may be dropped or added during the add/drop period at no charge. If full or deferred payment is not completed by the tenth day of classes each semester, the student will be dropped for nonpayment and assessed 15 percent of tuition and fees.

Students with room and board are assessed amounts based upon rates, policies, and procedures explained in the Residence Life contractual materials. The Residence Life, Carter Hall, phone 970-351-2721, will provide assistance and information upon request.

The following fees/charges are not refunded for any cause at any time: Arnie's charges, Bookstore charges, deferral, graduation, health insurance, housing damages, ID card replacement, instructional fees, lab equipment not returned, late payment, library fines, lost athletic equipment, lost library books, matriculation, parking fines, phone features, short check service charges, unpaid short term loan, University Technology Fee.

If a more complete explanation of the above policies is required or if individual circumstances warrant review, contact the University Controller, Carter Hall 1002, phone 970-351-2237.

Student Financial Resources

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 Veteran's benefits. The following represents the types of assistance available as of this printing.

Educational Loans. Loan funds plus interest must be repaid to the lending institutions, usually after graduation. Some loans have cancellation and deferment provisions. UNC participates in the following loan programs: Federal Perkins/Direct Loan (formerly National Direct Student Loan), the Federal Subsidized and Unsubsidized Stafford Loan and Parent Loans for Undergraduate Students (PLUS). Eligibility for Perkins/Direct Loans and Subsidized Stafford Loans is based upon need, as determined by the Free Application for Federal Student Aid (FAFSA).

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, the Federal Supplemental Educational Opportunity Grants, Colorado Student Incentive Grants, Colorado Diversity Grants, and undergraduate and graduate Colorado Student Grants.

Student Employment. UNC offers a number of employment opportunities. Federal and State Work Study programs provide on- 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. To 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 are not repaid and are usually awarded on the basis of academic performance, talent, athletic ability, or other criteria determined by the donor. A separate application is required and is available in November. The scholarship deadline date is March 1 annually.

Veteran's Benefits. Eligibility for Veteran's benefits is certified by this office.

How to Apply

To qualify for "need-based" programs, the student must demonstrate "financial need." Need is defined as the difference between the cost of education and what the family (both student and parents) can reasonably afford to pay toward the cost of education. The family's income and assets are reviewed to calculate a family contribution in a process called "Need Analysis." UNC will accept the Free Application for Federal Student Aid (FAFSA).

The FAFSA form can be obtained from most college and high school guidance counselor's offices. The student must carefully complete the form and mail it in the self-addressed envelope provided. 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 may receive limited or no funding.

To apply for scholarships offered at UNC, complete the University of Northern Colorado Scholarship Application form. The scholarship deadline date is March 1 each year. A listing of scholarships offered through private sources is available for use in the office. Many local libraries offer a comprehensive list as well.

To apply for Stafford or Parent (PLUS), contact your lending institution (bank or credit union) for an application. UNC has a list of participating institutions. After submission of the FAFSA application, students are urged to submit the completed loan application to the office no later than May 15 preceding the award year to assure timely receipt of funds.

The Award

Financial aid is awarded on the basis of "need" and may include a package of grants, loans and employment. Funds are available normally at the beginning of each semester as a credit to charges on the student's bill. A "net" check would be made to students if the aid exceeds all educational charges.

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 remains at about the same level. Consequently, families must increasingly rely upon their own

funds to pay for school. Students and their families need to be aware of this so that they can plan ahead. Students are expected to arrive on campus with funds they can utilize for books, tuition, housing and utilities deposits, and other expenses associated with the beginning of the year.

Financial aid awards are offered for an academic year. A separate application is required for funding during the summer session. Contact the office for dates and further details.

Renewal for financial aid is not automatic. A new application must be completed and mailed by February 15 preceding each award year that aid is requested. The student's academic progress as well as financial need determines the continuance of funding.

Additional questions can be answered by contacting the Office of Student Financial Resources at 970-351-2502.

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 towards a degree program, regardless of whether she or he has previously received financial assistance. For a more detailed explanation of these policies, refer to the Standards of Satisfactory Academic Progress mailed with the award letter or copies of the UNC Satisfactory Academic Policy statement can be obtained in our office.

Refund Policy

Tuition adjustments resulting from a complete withdrawal from the University may affect the financial aid received. The UNC refund distribution policy (repayment) has been designed to repay financial aid funds when a tuition/housing/food service adjustment creates a credit balance on your statement of account. No refund will be returned to a student unless all aid received has been fully repaid.

Refund calculations are prorated by Accounting Services, on the basis of educational costs and total financial aid received that semester. Refer to Accounting Services' explanation of refund policy in this University Bulletin.

Repayment Policy

Any student withdrawing totally from the University, who has received his or her financial aid for that semester, may be required to repay the financial aid received. For more detailed explanation of these policies, refer to the Refund/Repayment policies available in the Office of Student Financial Resources.

Voice Response

Information about your financial aid application may be accessed 24 hours a day by using the Voice Response System at 970-351-2825. Enter Service Code 3 for the financial aid main menu. You may then choose from a variety of options on the menu.

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Location: Michener L54; Telephone: 970-351-2707
 Roger A. Kovar, Dean; John K. Gapter, Associate Dean; Maria E. Lopez,
 Associate Dean

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, computer facilities in Ross and Candelaria Halls, a computerized news-writing lab, the math lab and the psychology lab.

English Essay Exam

Every student must pass the English Essay Examination at the University of Northern Colorado to graduate. The requirement may not be challenged or waived. This examination must be passed at least one semester before the semester the student graduates. The scheduled examination may be taken at any point, but students are expected to take it before the end of the first semester of their junior year. The examination is evaluated on a satisfactory/unsatisfactory basis and may be retaken any number of times. There is a fee to retake the examination. Additional information can be obtained from the Writing Center, Michener L173, phone 970-351-2056.

Department of Anthropology

Location: Candelaria Hall 24; Telephone: 970-351-2021
James Wanner, Chair

Professors — Michael J. Higgins, PhD, James Wanner, PhD

Associate professor — Sally McBeth, PhD

Instructor — Robert H. Brunswig, Jr., MA

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.

Department of Biological Sciences

Location: Ross Hall 2280; Telephone: 970-351-2921
Margaret E. Heimbrook, Chair

Professors — Warren R. Buss, PhD; James P. Fitzgerald, PhD; John K. Gapter, PhD; William E. Harmon, PhD; Margaret E. Heimbrook, PhD; Ivo E. Lindauer, PhD; Charles Olmsted III, PhD

Associate professors — Jennifer Clarke, PhD; April Gardner, PhD; John Moore, PhD

Assistant professors — D. Edward Bebout, PhD; Carolyn A. Dennehy, PhD; Stephen P. Mackesy, PhD; Sheryl McClamery, PhD; Robert J. Reinsvold, PhD

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 in development, structure and function, heredity and diversity among organisms. These emphases provide students opportunity for preparation in field biology, human biology, cell biology, secondary teaching in biology and liberal arts. 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 in independent research projects or internships with agencies outside the University to gain experience not available in the classroom.

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

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

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

Department of Black Studies

Location: Michener L128; Telephone: 970-351-2685
Anthonia C. Kalu, Chair

Professor — Hermon George, Jr., PhD

Associate professor — Anthonia C. Kalu, PhD

Assistant professors — Osita G. Afoaku, PhD; George H. Junne, Jr., PhD

The Black Studies Department 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 and looks beyond a deficient past into a critical evaluation of a history of pre-slavery freedom and a future of unlimited possibilities.

As an academic discipline, the Black 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 Descent people, nationalism, cultural heritage, the effects of racism and the social scientific study of black communities. The cultural studies focus emphasizes literature by authors of African descent, music, religion, identity and the family.

Department of Chemistry/Biochemistry

Location: Ross Hall 1380; Telephone: 970-351-2559
David Pringle, Chair

Professors — Clark L. Fields, PhD; Henry W. Heikinen, PhD; Richard M. Hyslop, PhD; M. Lynn James, PhD; Roger A. Kovar, PhD; Marcus K. Meilahn, PhD; David L. Pringle, PhD; James O. Schreck, PhD; Richard W. Schwenz, PhD; Gordon E. Tomasi, PhD

Associate professor — Loretta L. Jones, PhD

The goal of the Chemistry Department 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.

Department of Earth Sciences

Location: Ross Hall 3320; Telephone: 970-351-2647
William D. Nesse, Chair

Professors — L. Glen Cobb, PhD; Richard D. Dietz, PhD; Jay K. Hackett, EdD; William H. Hoyt, PhD; William D. Nesse, PhD; K. Lee Shropshire, PhD

Associate professors — D. Andre Erasmus, PhD; Kenneth D. Hopkins, PhD

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 and secondary level earth science teaching and also 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.

Department of Economics

Location: Michener L130; Telephone: 970-351-2739
Marie L. Livingston, Chair

Professor — Marie L. Livingston, PhD

Associate professors — Ann J. Garrison, MA; John W. Green, PhD; Kelfala Kallon, PhD

Assistant professors — David R. Aske, PhD; Patricia E. Graham, PhD; Bruce McDaniel, PhD

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 very close ties with the College of Business Administration.

Economics major and minor students usually take not only other social science courses such as political science and sociology, but also supporting and elective courses in business, mathematics and computer science.

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

Department of English

Location: Michener L50; Telephone: 970-351-2971
John Loftis, Chair

Professors — John Brand, PhD; James Doyle, MFA; Edward A. Kearns, MA; Rita Kiefer, MA; Joyce Lackie, PhD; John Loftis, PhD; Kathleen Manley, PhD; Norman Peercy, PhD; Tomas Santos, PhD; Sharon Wilson, PhD; Lloyd D. Worley, PhD

Associate professors — Barbara A. D. Dickinson, PhD; Elizabeth Jane Wall Hinds, PhD; Joonok Huh, PhD; Charles Meyer, MA; Ben Varner, PhD

Assistant professors — Thomas A. Bredehoff, PhD; Emily Golson, PhD; Dan Miller, PhD

Instructors — Diane Albertini, MA; Becky Edgerton, EdD; Mark Lechlitter, MA

The discipline of English treats literature and language and several 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.

Department of Foreign Languages

Location: Candelaria 32; Telephone: 970-351-2040
David Caldwell, Chair

Professors — Glenda Brown, PhD; Kathleen Ens, PhD

Associate professors — David Caldwell, PhD; Peter Kastner-Wells, PhD

Instructor — H. Kathleen Ulrich, MA

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 skill 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 an up-to-date language laboratory for individual work.

We also offer study-abroad programs for those students who desire or require additional experience abroad. 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.

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.

On the graduate level occasional workshops, institutes or single courses are offered during the summer to provide students who have a BA in French or German with the opportunity for professional development in the area of foreign language teaching in the secondary school and a chance to renew language skills by engaging in an intensive immersion experience. During these workshops, materials suitable for use in the classroom may be developed by the student, often in conjunction with a guest lecturer from off-campus. Students are also encouraged to speak their language at all times during these weeks on campus.

Department of Geography

Location: Candelaria 214; Telephone: 970-351-2715
David B. Cole, Chair

Professors — David B. Cole, PhD; Charles O. Collins, PhD; John L. Dietz, PhD; Kevin C. Kearns, PhD; Richard K. Ormrod, PhD; Charles G. Schmidt, PhD; Steven L. Scott, DA

Assistant professors — James P. Doerner, PhD; Kay E. Weller, PhD

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.

The Department of Geography is housed in a modern, air-conditioned building located next to the University library. The department possesses its own cartography laboratory and a small computer laboratory. A large, well-organized map collection is available in the University library. The University also has modern computer facilities that are readily accessible to all students.

Department of Hispanic Studies

Location: Candelaria 33; Telephone: 970-351-2811
Alfonso Rodriguez, Chair

Professors — Roberto H. Cordova, PhD; Ester Gimbernat de Gonzalez, PhD; Maria E. Lopez, PhD; Alfonso Rodriguez, PhD; Teresa B. Rodriguez, PhD

Associate professors — Terry Lynn Ballman, PhD; Carlos Leal, EdS

Assistant professors — Lilliana Castro, MA; Andres Guerrero, Jr., PhD

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 facilities include a fully-equipped language laboratory, student resource library and student conversation and study lounges. Faculty are readily available for advising and consultation. A study-abroad program has been established and majors and minors are encouraged to participate in this spring semester intensive program in which they may earn 12 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 theater, Colorado Chicano history, Southwest linguistics, bilingual educational materials and contemporary women Hispanic authors.

Department of History

Location: Michener L95; Telephone: 970-351-2905
Barry Rothaus, Chair

Professors — Marshall Clough, PhD; Ronald Edgerton, PhD; Stephen Powers, PhD; Barry Rothaus, PhD; Gail Rowe, PhD; Janet Worrall, PhD

Associate professors — Alexander Knott, PhD; Michael Welsh, PhD

Assistant professors — Joan A. Pratt, PhD; Nancy Spatz, PhD

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.

Department of Journalism and Mass Communications

Location: Candelaria Hall 123; Telephone: 970-351-2726
Charles H. Ingold, Chair

Associate professors — David L. Anderson, MA; John C. Bromley, MA; Charles H. Ingold, PhD

Assistant professors — Robert A. Hess, MA; Anita Fleming-Rife, MA

Instructors — Michael D. Applegate, MA; William W. Woodward, MA

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 closed-circuit radio station, a color TV studio and a computerized newswriting lab.

Department of Mathematical Sciences

Location: Ross Hall 3220; Telephone: 970-351-2820
Richard M. Grassl, Chair

Professors — William W. Bosch, PhD; Donald D. Elliott, PhD; Richard M. Grassl, PhD; Robert L. Heiny, PhD; Charles R. McMerney, PhD; Donald T. Searls, PhD; Igor Szczyrba, PhD

Associate professors — William L. Blubaugh, PhD; J. Wey Chen, PhD; Ricardo Diaz, PhD; Peter Isaacson, PhD; Steven C. Leth, PhD; Robert Mayes, PhD; Magdy Metry, PhD; Ann Thomas, PhD

Assistant professors — Dean Allison, PhD; Jeff D. Farmer, PhD; Lawrence Mark Lesser, PhD; Sinal Robins, PhD; Terry A. Scott, PhD

Affiliate professors — Mark A. Constat, PhD; John B. Cooney, PhD; Teresa M. McDevitt, PhD; Dale Shaw, PhD

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.

The mathematics, statistics and computer science programs in our department reflect the dual nature of these areas. Undergraduate courses, minors and majors can be used as an important component of a variety of programs.

Department of Philosophy

Location: Weber House; Telephone: 970-351-2572
Thomas K. Trelogan, Chair

Professor — Paul Hodapp, JD, PhD

Associate professors — Richard A. Blanke, PhD; Jack Temkin, PhD

Assistant professor — Thomas K. Trelogan, BA

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.

Department of Physics

Location: Ross Hall 430; Telephone: 970-351-2961
Willard L. Fadner, Chair

Professor — Willard L. Fadner, PhD

Associate professors — Cynthia Galovich, PhD; Kendall Mallory, PhD; Robert A. Walch, PhD; Courtney Willis, PhD

Assistant professor — Ruwang Sung, PhD

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 and access to a machine shop. An electronic technician and an instrument fabricator are available to help with classroom needs, as well as in special projects and research. A laboratory with high-speed personal computers is adjacent to the Physics office. Computer use is thoroughly integrated into physics classes and curricula.

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 varied 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.

Department of Political Science

Location: Weber House; Telephone: 970-351-2058
John T. Bookman, Chair

Professors — John T. Bookman, PhD; Steve Mazurana, MA

Associate professors — Mustafah Dhada, PhD; Stan Luger, PhD

Assistant professors — Kelechi Kalu, MA; Susan Kirkpatrick, EdM

Political Science is the study of that activity whereby public policy is made and implemented. Political scientists are, therefore, concerned with all those ideas, institutions, processes and policies that constitute that activity such as equality, legislatures, political socialization and welfare. The department emphasizes the development of undergraduate writing skills; it also offers qualified students the 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.

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.

Department of Psychology

Location: Candelaria Hall 30; Telephone: 970-351-2957
Eugene P. Sheehan, Chair

Professors — William A. Barnard, PhD; Theodore Bashore, PhD; Grant L. Morris, PhD; Charles S. L. Poston, PhD

Associate professors — Mark B. Alcorn, PhD; Mahlon Dalley, PhD; Paul D. Retzlaff, PhD; Eugene P. Sheehan, PhD; Marilyn Welsh, PhD

Assistant professors — Susan Plock Bromley, PsyD; Genevieve Canales, PhD; David Gilliam, PhD; Carl Granrud, PhD; Nancy J. Karlin, PhD

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 potentials or to help those experiencing problems in living.

Department of Sociology

Location: Candelaria Hall 228; Telephone: 970-351-2315;
Jacqueline Stanfield, Chair

Criminal Justice Office

Location: Candelaria Hall 228; Telephone: 970-351-2315;
Colleen Fitzpatrick, Director

Family Studies Office

Location: Candelaria Hall 233; Telephone: 970-351-2421;
Pamela G. Hewitt, Director

Sociology of Education Office

Location: Candelaria Hall 245; Telephone: 970-351-2592;
James Marshall, Director

Social Issues Office

Location: Candelaria Hall 243; Telephone: 970-351-2100;
Daniel O'Connor, Director

Professors — John Fox, PhD; Pamela G. Hewitt, PhD; David Musick, PhD; Philip Reichel, PhD; Richard G. Trahan, PhD; John A. Vonk, PhD

Associate professors — Karen Jennison, PhD; James Marshall, PhD;
Jacqueline Stanfield, PhD

Assistant professors — Hedy Red Dexter, PhD; Colleen Fitzpatrick, PhD; Gilbert Guitierrez, JD; Melanie Moore, PhD; Daniel O'Connor, PhD

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—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.

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."

Department of Speech Communication

Location: Candelaria Hall 121; Telephone: 970-351-2045
Dennis Warnemunde, Chair

Professor — Idahlynn Karre, PhD

Associate professors — Patricia Arneson, PhD; Dennis Warnemunde, PhD

Assistant professors — Linda Allen, PhD; Mary B. Bort, MA; James Keaten, Ph

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

Women's Studies Program

Location: Michener L181-L182; Telephone: 970-351-2607
Rita Kiefer, Coordinator

Professor — Rita Kiefer, MA

Assistant Professor — Hedy Red Dexter, PhD

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.

Minor in Archaeological Anthropology

Required Anthropology credits	15
Required elective credits	9
Total credits required for this minor.....	24

Students will learn concepts, field methods and laboratory techniques used by archaeologists to interpret and understand past cultural adaptations and how they relate to present-day cultural diversity. Archaeological Anthropology provides future historians and archaeologists a prehistoric and historic perspective on humanity and trains them in cultural analysis of prehistoric materials for greater appreciation of the content and evolution of human cultural diversity.

Archaeological Anthropology minors will be prepared to use the theories and methods of their minor option in their majors. Wherever possible, this minor program encourages field and laboratory experiences by students as a means of "bringing to life" the discipline's fundamental concepts, theories and goals. This is accomplished through methods classes with integrated field and laboratory experiences, professional internships and the annual Archaeology Field School. Lab fee required for field maintenance.

In addition to the Archaeological Anthropology minor, students may elect to choose an Interdisciplinary Major with an anthropology emphasis by combining that minor with 36 or more semester hours of courses selected in accordance with the regulations of the Interdisciplinary Program.

Minor in Cultural Anthropology

Required Anthropology credits	15
Required elective credits	9
Total credits required for this minor.....	24

Students will learn both advanced concepts of cultural behavior and techniques of analysis, e.g. participant observation, interviewing and critical interpretation of cultural data. The use of cultural analysis clarifies problems in human relations and encourages healthy social environments.

Cultural Anthropology minors will be prepared to use the theories and methods of their minor concentration in their majors. Wherever possible, this minor program encourages field and laboratory experiences by students as a means of "bringing to life" the discipline's fundamental concepts, theories and goals. This is accomplished through methods classes with integrated field and laboratory experiences and professional internships.

In addition to the Cultural Anthropology minor, students may elect to choose an Interdisciplinary Major with an anthropology emphasis by combining that minor with 36 or more semester hours of courses selected in accordance with the regulations of the Interdisciplinary Program.

Required Anthropology Credits — 15 semester hours

ANT 100 Introduction to Anthropology	3
ANT 110 World Cultures	3
ANT 120 World Archaeology	3
ANT 220 Archaeological Research Methods.....	3
<i>Select one of the following:</i>	
ANT 408 Workshop in Anthropology	3
ANT 420 Scientific Research in Archaeology	3
ANT 470 Seminar in Anthropology.....	3
ANT 480 Theory and Practice in Anthropology	3
ANT 492 Internship	3

Required Elective Credits — 9 semester hours

<i>Select two of the following:</i>	
ANT 121 Archaeology of Colorado	3
ANT 321 New World Archaeology	3
ANT 323 The Origins of State Societies	3
ANT 324 Southwest United States Archaeology.....	3
ANT 325 Fieldwork in Archaeology	4
<i>Select one 300 or higher numbered course from either the Cultural or Physical Anthropology minor</i>	
	3

Required Anthropology Credits — 15 semester hours

ANT 100 Introduction to Anthropology	3
ANT 110 World Cultures	3
ANT 210 Field Methods in Cultural Anthropology	3
ANT 470 Seminar in Anthropology	3
<i>Select one of the following:</i>	
ANT 408 Workshop in Anthropology	3
ANT 480 Theory and Practice in Anthropology	3
ANT 492 Internship	3

Required Elective Credits — 9 semester hours

<i>Select two of the following:</i>	
ANT 310 World Area Studies	3
ANT 311 Latin American Cultures	3
ANT 312 North American Indians.....	3
ANT 313 Modernization and Development.....	3
ANT 314 Sex Roles in Cross-Cultural Perspective.....	3
ANT 315 Life History and Culture.....	3
ANT 317 Contemporary Native American Issues	3
<i>Select one 300 or higher numbered course from either the Archaeological or Physical Anthropology minor.....</i>	
	3

Minor in Multicultural Anthropology

Required Anthropology credits	9
Required elective credits	15
Total credits required for this minor	24

This minor focuses on comparative concepts and issues related to multicultural behavior and group dynamics in contemporary US society. The experiences of ethnic groups, social classes and the cultural context of gender and sexuality provide the base of this minor. Multicultural Anthropology explores the basis of pluralism and cultural diversity in the US.

Multicultural Anthropology minors will be prepared to use the theories and methods of their minor concentration in their majors. Wherever possible, this minor program encourages field and laboratory experiences by students as a means of "bringing to life" the discipline's fundamental concepts, theories and goals.

In addition to the Multicultural Anthropology minor, students may elect to choose an Interdisciplinary Major with an anthropology emphasis by combining that minor with 36 or more semester hours of courses selected in accordance with the regulations of the Interdisciplinary program.

Required Anthropology Credits — 9 semester hours	
ANT 100 Introduction to Anthropology	3
MCS 101 Multiculturalism in the US: Concepts and Issues	3
ANT 210 Field Methods in Cultural Anthropology	3

Minor in Physical Anthropology

Required Anthropology credits	15
Required elective credits	9
Total credits required for this minor	24

Students will come to understand the process and knowledge base of human biological evolution. They will learn to apply statistical techniques to solving problems in human variability and environmental adaptations. The bio-cultural focus of Physical Anthropology is relevant to professional training in health and human services, environmental studies and physical education.

Physical Anthropology minors will be prepared to use the theories and methods of their minor concentration in their majors. Wherever possible, this minor program encourages field and laboratory experiences by students as a means of "bringing to life" the discipline's fundamental concepts, theories and goals. This is accomplished through methods classes with integrated field and laboratory experiences and professional internships.

In addition to the anthropology minor, students may elect to choose an Interdisciplinary Major with an anthropology emphasis by combining that minor with 36 or more semester hours of courses selected in accordance with the regulations of the Interdisciplinary Program.

Required Elective Credits — 15 semester hours

Select one of the following:

BLS 102 The Black Woman in America	3
BLS 240 Dynamics of Racism	3
EDF 201 Introduction to Multiculturalism	3
HISP 220 Women in Hispanic Society	3
HISP 225 History of the Chicano in the Southwest	3
SOC 237 Sociology of Minorities	3

Select two of the following:

ANT 311 Latin American Cultures	3
ANT 314 Sex Roles in Cross-Cultural Perspective	3
ANT 317 Contemporary Native American Issues	3
ANT 318 Native American Women	3

Select two of the following:

BLS 305 Survey of African-American Literature	3
BLS 340 The Black Family	3
BLS 360 Music and the Black Experience	3
BLS 396 African and Afro-American World Views	3
HISP 300 Social Stratification in the Mexican American Community	3
HISP 370 Chicano Psychology	3
PSY 467 Psychology of Prejudice	3
WS 320 Women in United States History	3
WS 373 Women-Identified Theory	3

(Different courses may be chosen with the consent of the minor advisor)

Required Anthropology Credits — 15 semester hours

ANT 100 Introduction to Anthropology	3
ANT 130 Introduction to Physical Anthropology	3
ANT 230 Anthropometrics	3
ANT 470 Seminar in Anthropology	3

Select one of the following:

ANT 408 Workshop in Anthropology	3
ANT 480 Theory and Practice in Anthropology	3
ANT 492 Internship	3

Required Elective Credits — 9 semester hours

Select two of the following:

ANT 330 Forensic Anthropology	3
ANT 331 Human Population Biology	3
ANT 430 Human Musculoskeletal Systems	3

Select one elective from either the Cultural or Archaeological Anthropology minors

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Bachelor of Arts in Biological Sciences

Emphasis in Cell Biology

Program Requirements

Required Biological Science credits.....	27
Required supporting credits.....	41-42
Required elective credits (minimum).....	10
General Education credits:	
13-14 credits already included in requirements above	
Remaining.....	26-27
Elective credits.....	14-16
Total credits required for this degree.....	120

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 such as microbiology, genetics and molecular biology, as well as in most professional medical schools. Students will also be qualified to work in industrial and various research laboratories in medicine, microbiology and biotechnology. This program encompasses a minor in chemistry.

Required Biological Sciences Credits — 27 semester hours

BIO 110 Principles of Biology.....	4
BIO 111 Survey of Organismal Biology.....	5
BIO 191 Biology as a Profession Seminar.....	0.5
BIO 220 Genetics.....	3
BIO 351 Microbiology.....	4
BIO 425 Molecular Genetics.....	3
BIO 450 Cell Physiology.....	4
BIO 465 Evolution.....	3
BIO 491 Senior Seminar.....	0.5

Bachelor of Arts in Biological Sciences

Emphasis in Field Biology

Program Requirements

Required Biological Sciences credits.....	26
Required supporting credits.....	9
Required elective credits (minimum).....	31
General Education credits:	
10 credits already included in requirements above	
Remaining.....	30
Elective credits.....	24
Total credits required for this degree.....	120

This program places heavy 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 sciences 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 Biological Sciences Credits — 26 semester hours

BIO 110 Principles of Biology.....	4
BIO 111 Survey of Organismal Biology.....	5
BIO 191 Biology as a Profession Seminar.....	0.5
BIO 220 Genetics.....	3
BIO 460 Ecology.....	4
BIO 465 Evolution.....	3
BIO 491 Senior Seminar.....	0.5
BOT 330 Plant Taxonomy.....	4
ENST 265 Conservation of Natural Resources.....	2

Required Supporting Credits — 41-42 semester hours

Chemistry Credits — 24 semester hours

CHEM 111 Principles of Chemistry I.....	5
CHEM 112 Principles of Chemistry II.....	5
CHEM 320 Theory and Use of Analytical Instruments.....	1
CHEM 321 Chemical Analysis.....	4
CHEM 331 Organic Chemistry I.....	5
CHEM 481 General Biochemistry I.....	3
CHEM 483 Experimental Biochemistry I.....	1

Physics Credits — 10 semester hours (select one group from the following):

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

Mathematics Credits (select two from the following):

MATH 124 College Algebra.....	4
MATH 125 Plane Trigonometry.....	3
or higher mathematics course.....	3-4

Note that some of the required courses in Chemistry, Physics and Mathematics will apply toward the General Education requirements.

Required Elective Credits — 10 semester hours (minimum)

BIO 458 Diagnostic Microbiology.....	4
BOT 270 Economic Botany.....	3
BOT 333 Morphogenesis of Algae and Fungi.....	4
BOT 350 General Plant Physiology.....	4
BOT 440 Anatomy and Morphogenesis of Plants.....	4
ZOO 333 General Parasitology.....	4
ZOO 345 Comparative Vertebrate Morphogenesis.....	4
ZOO 448 Histology/Microtechnique.....	3

Required Supporting Credits — 9 semester hours

CHEM 111 Principles of Chemistry I.....	5
CHEM 131 Introductory Organic Chemistry.....	4
Note that some of the required courses in Chemistry will apply toward the General Education requirement.	

Required Elective Credits — 31 semester hours

Biological Science-Organismal Credits — 10 semester hours (minimum)

BIO 351 Microbiology.....	4
BIO 380 Aquatic Biology.....	4
BOT 333 Morphogenesis of Algae and Fungi.....	4
ZOO 330 Ornithology.....	3
ZOO 331 General Entomology.....	4
ZOO 332 Invertebrate Zoology.....	3
ZOO 333 General Parasitology.....	4
ZOO 334 Mammalogy.....	4
ZOO 335 Survey of Fishes, Amphibians and Reptiles.....	4

Biological Science, Free Elective Credits — 4 semester hours

Physics or Mathematics Credits — 10 semester hours (minimum)

PHYS 220 Introductory Physics I.....	5
PHYS 221 Introductory Physics II.....	5
MATH 124 College Algebra.....	4
MATH 125 Plane Trigonometry.....	3
MATH 131 Calculus and Analytic Geometry I.....	4

Note that it is recommended that students complete either PHYS 220 and PHYS 221; or MATH 124, MATH 125 and MATH 131.

Statistics/Computer Science (select one from the following):

CG 105 Personal Computer Applications.....	3
STAT 150 Introduction to Statistical Analysis.....	3

Earth Science (select one from the following):

GEOL 100 General Geology.....	4
MET 205 General Meteorology.....	4

Bachelor of Arts in Biological Sciences

Emphasis in Human Biology

Program Requirements	
Required Biological Science credits	38
Required supporting credits	30
Required elective credits (minimum)	9
General Education credits:	
10 credits already included in requirements above	
Remaining	30
Elective credits	13
Total credits required for this degree	120

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 paramedical and medical, veterinary or dentistry 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 medical, scientific or pharmaceutical sales.

Required Biological Science Credits — 38 semester hours	
BIO 110 Principles of Biology.....	4
BIO 111 Survey of Organismal Biology.....	5
BIO 191 Biology as a Profession Seminar.....	0.5
BIO 220 Genetics.....	3
BIO 351 Microbiology.....	4

Bachelor of Arts in Biological Sciences

Emphasis in Liberal Arts

Program Requirements	
Required Biological Science credits	20
Required supporting credits (minimum)	23
Required elective credits (minimum)	21
General Education credits:	
10 credits already included in requirements above	
Remaining	30
Elective credits	26
Total credits required for this degree	120

This emphasis is the most broadly based biological sciences program at the University. It will meet the entrance requirements of most of the allied health professions such as physical therapy or chiropractic medicine. Students in elementary education licensure programs with an interest in the biological sciences should select this emphasis. It is critical that students meet with an advisor for specific requirements and direction.

Students will have a broad preparation in the biological sciences with skill needed to enter some professional programs, industry or other professions including agribusiness, food industries, cosmetics and sales. Additional courses may be needed for admission to graduate programs or some professional programs in the life sciences.

Required Biological Science Credits — 20 semester hours	
BIO 110 Principles of Biology.....	4
BIO 111 Survey of Organismal Biology.....	5
BIO 191 Biology as a Profession Seminar.....	0.5
BIO 220 Genetics.....	3
BIO 460 Ecology.....	4
BIO 465 Evolution.....	3
BIO 491 Senior Seminar.....	0.5

Required Supporting Credits — 23 semester hours	
Chemistry Credits — 9 semester hours	
CHEM 111 Principles of Chemistry I.....	5
CHEM 131 Introductory Organic Chemistry.....	4

BIO 450 Cell Physiology.....	4
BIO 460 Ecology.....	4
BIO 465 Evolution.....	3
BIO 491 Senior Seminar.....	0.5
BOT 270 Economic Botany.....	3
ZOO 341 Human Anatomy.....	3
ZOO 350 Human Physiology.....	4

Required Supporting Credits — 30 semester hours

Chemistry Credits — 20 semester hours	
CHEM 111 Principles of Chemistry I.....	5
CHEM 112 Principles of Chemistry II.....	5
CHEM 331 Organic Chemistry I.....	5
CHEM 332 Organic Chemistry II.....	5

Physics Credits — 10 semester hours	
PHYS 220 Introductory Physics I.....	5
PHYS 221 Introductory Physics II.....	5

Note that some of the required courses in Chemistry and Physics will apply toward the General Education requirement.

Required Elective Credits — 9 semester hours

Select from BIO, BOT or ZOO prefixes.....	6
Mathematics/Applied Statistics Credits — 3 semester hours (minimum)	
MATH 124 College Algebra.....	4
MATH 125 Plane Trigonometry.....	3
A higher level Mathematics course.....	3-4
STAT 250 Statistics for Health Sciences.....	3

Physics Credits — 5 semester hours	
PHYS 220 Introductory Physics I.....	5
Mathematics/Computer Science Credits — 5 semester hours (minimum)	
MATH 124 College Algebra.....	4
or a higher Mathematics course.....	3
SCI 391 Computer Applications in Science.....	2

Earth Sciences Credits — 4 semester hours	
GEOL 100 General Geology.....	4

Note that some of the required courses in Chemistry, Physics, Mathematics and Earth Sciences will apply toward the General Education requirement.

Required Elective Credits — 21 semester hours

Biological Science-Organismal — 10 semester hours (minimum)	
BIO 351 Microbiology.....	4
BOT 330 Plant Taxonomy.....	4
BOT 333 Morphogenesis of Algae and Fungi.....	4
ZOO 330 Ornithology.....	3
ZOO 331 General Entomology.....	4
ZOO 332 Invertebrate Zoology.....	3
ZOO 333 General Parasitology.....	4
ZOO 334 Mammalogy.....	4
ZOO 335 Survey of Fishes, Amphibians and Reptiles.....	4

Biological Science-Anatomy/Physiology — 7 semester hours (minimum)	
BIO 450 Cell Physiology.....	4
BOT 350 General Plant Physiology.....	4
BOT 440 Anatomy and Morphogenesis of Plants.....	4
Select one of the following:	
ZOO 245 Introduction to Human Anatomy and Physiology.....	4
ZOO 350 Human Physiology.....	4
ZOO 341 Human Anatomy.....	3

Note that credit not allowed for both ZOO 245 and ZOO 350. Biological Science (select from BIO, BOT, or ZOO prefixes)..... 4

Bachelor of Arts in Biological Sciences

Emphasis in Teaching-Secondary Biology

Program Requirements

Required credits	43
Required supporting credits(minimum)	26
Required elective credits(minimum)	9
General Education credits:	
10 credits already included in requirements above	
Remaining	30
PTE program	37-39
Total credits required for this degree	145-147

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 the completion of this program students will also be able to continue their education in graduate programs in the biological sciences.

Required Credits — 43 semester hours

BIO 110 Principles of Biology	4
BIO 111 Survey of Organismal Biology	5
BIO 191 Biology as a Profession Seminar	0.5
BIO 220 Genetics	3
BIO 270 Biology and Behavior of Human Sexuality	2
BIO 351 Microbiology	4
BIO 371 Teaching Strategies for Biology Teachers	1
BIO 460 Ecology	4
BIO 465 Evolution	3
BIO 491 Senior Seminar	0.5
BOT 270 Economic Botany	3
BOT 350 General Plant Physiology	4
SCED 441 Methods of Teaching Secondary School Science	3
SCI 391 Computer Applications in Science	2
ZOO 245 Introduction to Human Anatomy and Physiology	4

Required Supporting Credits — 26 semester hours

Chemistry Credits — 9 semester hours	
CHEM 111 Principles of Chemistry I	5
CHEM 131 Introductory Organic Chemistry	4
Physics Credits — 10 semester hours	
PHYS 220 Introductory Physics I	5
PHYS 221 Introductory Physics II	5
Mathematics/Applied Statistics/Computer Science Credits — 3 semester hours (minimum)	
MATH 124 College Algebra	4
or a higher level mathematics course	3-4
Earth Science Credits — 4 semester hours	
GEOL 100 General Geology	4
Note that some of the required courses in chemistry, physics, mathematics/statistics and earth sciences will apply toward the General Education requirement.	

Required Elective Credits — 9 semester hours (minimum)

Select from BIO, BOT or ZOO prefix	2
Earth Sciences (select one of the following):	
AST 100 General Astronomy	4
GEOL 201 Physical Geology	4
MET 205 General Meteorology	4
Mathematics/Statistics (select one of the following):	
MATH 125 Plane Trigonometry	3
STAT 150 Introduction to Statistical Analysis	3

Note

Completion of PTE is necessary for this program.

Master of Arts in Biological Sciences

Emphasis: Non-Thesis

Program Requirements

Complete the required credits specified here.....6
 Complete program electives specified here.....24

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.

Admission 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 send the following (to the Graduate Coordinator of the Biological Sciences department):

- a letter of intent including research/teaching interests and goals
- three letters of recommendation
- GRE scores (strongly recommended, including Biology section scores).

Required Credits — 6 semester hours

BIO 690 Invited Topics in Biological Science.....0.5
 BIO 691 Seminar in Biological Science.....0.5
 BIO 694 Foundation of Biological Research.....2
 BIO 697 Graduate Research.....3

Note that results of the graduate research project must be presented orally to the biological sciences faculty.

Required Elective Credits — 24 semester hours

Basic Electives Credits — 10 semester hours (minimum)

BIO 525 Molecular Genetics.....3
 BIO 550 Cell Physiology.....4
 BOT 530 Plant Taxonomy.....4
 BOT 533 Morphogenesis of Algae and Fungi.....4
 BOT 540 Anatomy and Morphogenesis of Plants.....4
 BOT 550 General Plant Physiology.....4
 ZOO 533 General Parasitology.....4
 ZOO 534 Mammalogy.....4
 ZOO 535 Survey of Fishes, Amphibians and Reptiles.....4

Note that all of the above courses are double numbered.

Advanced Study Electives — 8 semester hours (minimum)

BIO 545 Cytology.....3
 BIO 569 Conceptual Issues in Evolution.....2
 BIO 621 Advanced Genetics.....3
 BIO 655 Advanced Microbiology.....4
 BIO 662 Human Ecology.....3
 BOT 560 Plant Ecology.....4
 BOT 575 Fungal Diseases of Plants.....4
 BOT 655 Advanced Plant Physiology.....3
 ZOO 542 Vertebrate Histology.....4
 ZOO 551 Mammalian Physiology I.....4
 ZOO 552 Mammalian Physiology II.....4
 ZOO 560 Animal Ecology.....4
 ZOO 636 Advanced Invertebrate Zoology.....4
 ZOO 645 Comparative Vertebrate Adaptations.....4

Enrichment and Non-Scheduled Electives — 3 semester hours minimum

BIO 501 Current Issues in Biology
 BIO 508 Workshop.....0.5-6
 BIO 513 Professional Renewal.....1-10
 BIO 585 Topics in Field Biology.....1-10
 BIO 592 Internship in Biological Science.....1-3
 BIO 595 Special Topics in Biology.....3
 BIO 622 Directed Study (non-scheduled).....1-3
 BOT 595 Special Topics in Botany.....2
 BOT 622 Directed Study in Botany (non-scheduled).....1-3
 SCED 508 Workshop.....0.5-6
 SCED 513 Professional Renewal.....1-12
 ZOO 595 Special Topics in Zoology.....2
 ZOO 622 Directed Study in Zoology (non-scheduled).....1-3

Note that 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 math, supporting sciences or education, with approval of advisor.

Required Electives — 3 semester hours minimum

Select with approval of advisor.....3

Notes

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

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

Written comprehensive examinations are required.

Master of Arts in Biological Sciences

Emphasis: Thesis

Program Requirements

Complete the required credits specified here3
 Complete program electives specified here27

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.

Admissions 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 send the following (to the Graduate Coordinator of the Biological Sciences department):

- a letter of intent including research/teaching interests and goals
- three letters of recommendation
- GRE scores (Biology scores optional)

Required Credits — 3 semester hours

BIO 690 Invited Topics in Biological Science0.5
 BIO 691 Seminar in Biological Science0.5
 BIO 694 Foundations of Biological Research2

Required Elective Credits — 27 semester hours

Basic Electives — 7 semester hours minimum

BIO 525 Molecular Genetics3
 BIO 550 Cell Physiology4
 BOT 530 Plant Taxonomy4
 BOT 533 Morphogenesis of Algae and Fungi4
 BOT 540 Anatomy and Morphogenesis of Plants4
 BOT 550 General Plant Physiology4
 ZOO 533 General Parasitology4
 ZOO 534 Mammalogy4
 ZOO 535 Survey of Fishes, Amphibians and Reptiles4

Note that all of the above courses are double numbered.

Advanced Study Electives—8 semester hours minimum required.

BIO 545 Cytology3
 BIO 569 Conceptual Issues in Evolution2
 BIO 621 Advanced Genetics3
 BIO 655 Advanced Microbiology4
 BIO 662 Human Ecology3
 BOT 560 Plant Ecology4

BOT 575 Fungal Diseases of Plants4
 BOT 655 Advanced Plant Physiology3
 ZOO 542 Vertebrate Histology4
 ZOO 551 Mammalian Physiology I4
 ZOO 552 Mammalian Physiology II4
 ZOO 560 Animal Ecology4
 ZOO 636 Advanced Invertebrate Zoology4
 ZOO 645 Comparative Vertebrate Adaptations4

Enrichment and Non-Scheduled Electives — 3 semester hours minimum

BIO 501 Current Issues in Biology1
 BIO 508 Workshop0.5-6
 BIO 513 Professional Renewal1-10
 BIO 585 Topics in Field Biology1-10
 BIO 592 Internship in Biological Science1-3
 BIO 595 Special Topics in Biology3
 BIO 622 Directed Study (non-scheduled)1-3
 BOT 595 Special Topics in Botany2
 BOT 622 Directed Study in Botany (non-scheduled)1-3
 SCED 508 Workshop0.5-6
 SCED 513 Professional Renewal1-12
 ZOO 595 Special Topics in Zoology2
 ZOO 622 Directed Study in Zoology (non-scheduled)1-3

Note that hours can be selected with the approval of advisor from the above list of enrichment and non-scheduled classes or other appropriate classes in the sciences or College of Education.

Research Elective — 1-6 semester hours

BIO 699 Thesis1-6
 BOT 699 Thesis1-6
 ZOO 699 Thesis1-6

Notes

Results of the thesis problem must be presented to the biological sciences faculty.

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

Written comprehensive examinations are required.

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

Doctor of Philosophy in Biological Education

Program Requirements

Complete required research core specified here	23-33
Complete program pedagogical electives specified here	11-19
Complete program content electives specified here	20-21
Complete program minimum hours to total	64

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.

Admission Requirements

Students will be required to have completed 30 semester hours in the biological sciences, one year of chemistry and college algebra. A master's content thesis is 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 send the following (to the Graduate Coordinator of the Biological Sciences department):

- a letter of intent including research/teaching interest and goals
- three letters of recommendation
- GRE scores (Biology scores optional)

Required Research Core — 23-33 semester hours

BIO 690 Invited Topics in Biological Science	0.5
BIO 691 Seminar in Biological Sciences	0.5
BIO 694 Foundations in Biological Research	2
or	
SCED 694 Science Education Research	3
BIO 792 Doctoral Supervised Teaching	4
BIO 797 Doctoral Research Proposal	4
BIO 799 Doctoral Dissertation	12
*STAT 501 Statistics I	3
*STAT 502 Statistics II	3
*EPRE 700 Advanced Research Methods	3

**May be waived depending on course background of the student.*

Pedagogical Elective Credits — 11-13 semester hours

SCED 676 Evaluation Classroom Performance in Science	2
SCED 678 Science Education Seminar	1-2
SCED 680 Science Curriculum Secondary/College Settings	3
EPRE 540 Theories and Principles of Learning	2
SCI 591 Computer Applications in Science	2
BIED 682 Problems in Teaching College Biology	3

Content Elective Credits — 20-21 semester hours

Basic Electives — 8 semester hours maximum

BIO 525 Molecular Genetics	3
BIO 550 Cell Physiology	4
BOT 530 Plant Taxonomy	4
BOT 533 Morphogenesis of Algae and Fungi	4
BOT 540 Anatomy and Morphogenesis of Plants	4
BOT 550 General Plant Physiology	4
ZOO 533 General Parasitology	4
ZOO 534 Mammalogy	4
ZOO 535 Survey of Fishes, Amphibians and Reptiles	4

Note that all of the above courses are double-numbered. Courses in the support sciences may also be included with approval of the graduate advisor.

Advanced Electives — 13-14 semester hours minimum

BIO 545 Cytology	3
BIO 569 Conceptual Issues in Evolution	2
BIO 621 Advanced Genetics	3
BIO 655 Advanced Microbiology	4
BIO 662 Human Ecology	3
BOT 560 Plant Ecology	4
BOT 575 Fungal Diseases of Plants	4
BOT 655 Advanced Plant Physiology	3
ZOO 542 Vertebrate Histology	4
ZOO 551 Mammalian Physiology I	4
ZOO 552 Mammalian Physiology II	4
ZOO 560 Animal Ecology	4
ZOO 636 Advanced Invertebrate Zoology	4
ZOO 645 Comparative Vertebrate Adaptations	4

Notes

The student must meet with a graduate advisor and graduate committee early in the program to determine a course of study. Electives must be selected to assure background and experience in the fundamental areas of research, pedagogy and content biology.

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.

All Ph.D. students must demonstrate competency in two acceptable research tools. Acceptable tools include statistics, computer application, foreign languages or collateral fields of study. Collateral fields of study must be approved by the Department and the Dean of the Graduate School.

Bachelor of Arts in Black Studies

Program Requirements

Required Black Studies credits	25-28
Required elective credits	12
General Education credits	40
Elective credits	40-43
Total credits required for this degree	120

Black 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. The curriculum is based on the assumption that there exists a substantive, intrinsically valuable body of knowledge that expresses the black experience and looks beyond a deficient past into a critical evaluation of a history of pre-slavery freedom and a future of unlimited possibilities. The program's courses are organized into two foci: social and behavioral studies and cultural studies.

Graduates in Black Studies will be prepared to enter professional and academic careers in the humanities and social sciences. They will possess accurate information about the histories and identities of people of African descent. They will be exposed to and contribute to scholarship about people of African descent and will have a liberal arts education and those skills necessary for working in multicultural environments. They will understand the struggles of black people. As a job-related field, Black 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. Graduates also qualify for graduate work in Black Studies.

Required Black Studies Credits — 25-28 semester hours

BLS 100 Introduction to Black Studies	3
BLS 104 Survey of Africa	3
BLS 201 Afro-American History I	3
BLS 202 Afro-American History II	3
BLS 240 Dynamics of Racism	3

Bachelor of Arts in Black Studies

Emphasis in Multicultural Education

Program Requirements

Required Black Studies credits	18
Required supporting credits	3
Required elective credits	18
General Education credits	40
PTE program	37-39
Elective credits	2-4
Total credits required for this degree	120

Required Black Studies Credits — 18 semester hours

BLS 100 Introduction to Black Studies	3
BLS 102 The Black Woman in America	3
BLS 240 Dynamics of Racism	3
BLS 340 The Black Family	3
BLS 396 African and Afro-American World Views	3
BLS 486 Current Issues in Multicultural Education	3

Required Supporting Credits — 3 semester hours

EDF 201 Introduction to Multiculturalism	
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Required Elective Credits — 18 semester hours

Cultural Issues in American Society (select three of the following):

ENG 236 Ethnic American Literature	3
GEOQ 110 Geography of the United States and Canada	3
HIST 230 Class and Culture in America	3
MIND 182 Confluence of Cultures	3
PSY 367 Psychology of Prejudice	3
SOC 270 Sociology of Minorities	3
SOC 333 Social Class and Inequality	3

Note that at least one class from this category must be at or above the 300-level.

BLS 305 Survey of African-American Literature	3
BLS 386 Modern African World	3
BLS 399 Community Study Project	1-4
BLS 490 Seminar in Black Studies	3

Required Elective Credits — 12 semester hours

Social and Behavioral Studies (select two of the following):

BLS 102 The Black Woman in America	3
BLS 222 Black Nationalism in America	3
BLS 320 The Economic Experience of Black America	3
BLS 332 Pan-Africanism	3
BLS 395 Aspects of the African-American Experience	3
BLS 420 Black Urban Politics	3
BLS 456 Leadership and the Black Church	3

Cultural Studies (select two of the following):

BLS 101 Crisis of Identity	3
BLS 204 Introduction to African Literature	3
BLS 230 Black Women in Literature	3
BLS 340 The Black Family	3
BLS 360 Music and the Black Experience	3
BLS 395 Aspects of the African-American Experience	3
BLS 396 African and Afro-American Worldviews	3
BLS 486 Current Issues in Multicultural Education	3
ID 308 Interpersonal Growth Workshop	3

Notes

Electives are chosen with the approval of the chair.

BLS 395, Aspects of the African-American Experience, is a variable subtitle course. Students may elect this course more than once, each time with materials applicable to a different program focus, but may not repeat the same subtitle in a program focus where the student has already taken the course for credit.

Majors in Black Studies must choose at least one elective at the 300-level and one elective at the 400-level. Also, for majors, BLS 399 must always be taken at 3 semester hours.

Cultural Groups in American Society (select three of the following):

ANT 317 Contemporary Native American Issues	3
HISP 102 Hispanic Cultures in the United States	3
HIST 329 American Indian History	3
MCS 101 Multiculturalism in the United States	3
PSY 370 Chicano Psychology	3
WS 120 Women and Men in Perspective	3
WS 320 Women in United States History	3

Note that at least one class from this category must be at or above the 300-level.

Notes

This program is specifically designed for elementary or middle school teacher candidates. Students must take the PTE program specific to the level desired for licensure.

This program does not require a minor.

A grade point average of at least 2.75 and a minimum of 27 credit hours are required before a student can apply for student teaching.

A minimum of 18 semester hours in the major is required before a student can apply to the PTE program. At least 9 of these hours must be credits from the University of Northern Colorado.

Courses counted towards the requirements for this major will not be counted toward category 7 of the General Education requirements in the UNC catalog.

Bachelor of Arts in Chemistry

Emphasis in Chemistry (ACS Certified)

Program Requirements

Required Chemistry core credits.....	24-26
Required Chemistry credits.....	17
Required supporting credits.....	18
Required elective credits.....	4-5
General Education credits:	
9 credits already included in requirements above	
Specified.....	7
Remaining.....	24
Elective credits.....	23-26
Total credits required for this degree.....	120

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 degree 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.

Required Chemistry Core: 24-26 semester hours

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
CHEM 321 Chemical Analysis.....	4
CHEM 331 Organic Chemistry I.....	5
CHEM 332 Organic Chemistry II.....	5
CHEM 441 Inorganic Chemistry I.....	2

Required Chemistry Credits — 17 semester 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 453 Physical Chemistry I Laboratory.....	1
CHEM 452 Physical Chemistry II.....	4
CHEM 454 Physical Chemistry II Laboratory.....	1

Required Supporting Credits — 18 semester hours

Mathematics

MATH 132 Calculus and Analytic Geometry II.....	4
MATH 233 Calculus and Analytic Geometry III.....	4

Physics

PHYS 240 General Physics I.....	5
PHYS 241 General Physics II.....	5

Required Elective Credits — 4-5 semester hours

Select one Laboratory Course from the following:

CHEM 483 Experimental Biochemistry.....	1
CHEM 499 Seminar and Research in Chemistry.....	2

Select one Lecture Course from the following:

CHEM 481 General Biochemistry I.....	3
CHEM 500 Level Credits.....	3

General Education Credits, Specified — 7 semester hours

This program requires you to complete the following course(s) within the 40 hours of General Education.

Category 1 b — Intermediate Composition

SCI 291 Scientific Writing.....	3
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Category 2 — Mathematics

MATH 131 Calculus and Analytic Geometry I.....	4
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Category 6 — Sciences and Mathematics

MATH 132, PHYS 240 and CHEM 111 or CHEM 114 required in this program, will fulfill this requirement.	
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Notes

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

It is recommended that students consider electives in public speaking (SPCO 100/103) and for those students planning to go to graduate school, a foreign language (GER 100 or GER 101 and 102). Additional elective coursework in chemistry, mathematics, statistics and/or physics is desirable as time permits. Graduate level CHEM courses are recommended as well as MATH 221, MATH 335, STAT 150, PHYS 321 and PHYS 343.

Juniors and seniors are expected to participate in the Department's undergraduate research program. 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 general education selections and other requirements.

Bachelor of Arts in Chemistry

Emphasis in Biochemistry (ACS Certified)

Program Requirements

Required Chemistry core credits.....	24-26
Required Chemistry credits.....	25
Required supporting credits	22
General Education credits:	
9 credits already included in requirements above	
Specified	7
Remaining.....	24
Elective credits	16-18
Total credits required for this degree	120

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 degree 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.

Required Chemistry Core Credits — 24-26 semester hours

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
CHEM 321 Chemical Analysis.....	4
CHEM 331 Organic Chemistry I.....	5
CHEM 332 Organic Chemistry II.....	5
CHEM 441 Inorganic Chemistry I	2

Required Chemistry Credits — 25 semester 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 453 Physical Chemistry I Laboratory.....	1
CHEM 452 Physical Chemistry II.....	4
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 — 22 semester hours

Mathematics

MATH 132 Calculus and Analytic Geometry II.....	4
MATH 233 Calculus and Analytic Geometry III.....	4

Physics

PHYS 240 General Physics I.....	5
PHYS 241 General Physics II.....	5

Biology

BIO 110 Principles of Biology	4
BIO 450 Cell Physiology	4
BIO 220 Genetics	3

General Education Credits, Specified — 7 semester hours

This program requires you to complete the following course(s) within the 40 hours of General Education.

Category 1b — Intermediate Composition

SCI 291 Scientific Writing	3
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Category 2 — Mathematics

MATH 131 Calculus and Analytic Geometry I.....	4
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Category 6 — Sciences and Mathematics

MATH 132, PHYS 240 and CHEM 111 or CHEM 114 required in this program, will fulfill this requirement.

Notes

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

It is recommended that students consider electives in public speaking (SPCO 100/103) and for those students planning to go to graduate school, a foreign language (GER 100 or GER 101 and 102). Additional elective coursework in chemistry, mathematics, statistics and/or physics is desirable as time permits. Graduate level CHEM courses are recommended as well as MATH 221, MATH 335, STAT 150, PHYS 321 and PHYS 343.

Juniors and seniors are expected to participate in the Department's undergraduate research program. All students in the program must take an assessment examination before graduation. Students wishing to participate in the Honor's Program should consult their advisors about general education selections and other requirements.

Bachelor of Arts in Chemistry

Emphasis in Industrial Chemistry

Program Requirements

Required Chemistry core credits.....	24-26
Required Chemistry credits	11-13
Required supporting credits	10
General Education credits:	
9 credits already included in requirements above	
Specified	10
Remaining	21
Required minor with minimum credits.....	18
Elective credits	22-26
Total credits required for this degree	120

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 the degree 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 course work in physical chemistry and/or mathematics depending on the entrance requirements of specific graduate schools.

Required Chemistry Core Credits — 24-26 semester hours

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
CHEM 321 Chemical Analysis	4
CHEM 331 Organic Chemistry I.....	5
CHEM 332 Organic Chemistry II.....	5
CHEM 441 Inorganic Chemistry I	2

Required Chemistry Credits — 11-13 semester hours

CHEM 421 Instrumental Analysis.....	4
CHEM 443 Inorganic Chemistry Laboratory	1
CHEM 450 Survey of Physical Chemistry	4

Select one of the following:

CHEM 493 Special Topics in Chemistry (two courses)	4
CHEM 360 Environmental Chemistry.....	2

Required Supporting Credits — 10 semester hours

PHYS 220 Introductory Physics I.....	5
PHYS 221 Introductory Physics II.....	5

General Education, Specified — 10 semester hours

This program requires you to complete the following course(s) within the 40 hours of General Education.

Category 1 b — Intermediate Composition	
SCI 291 Scientific Writing	3
Category 2 — Mathematics	
MATH 131 Calculus and Analytic Geometry I.....	4
Category 5 — Social Science	
ECON 103 Introduction to Economics: Macroeconomics	3

Notes

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

A minor is required for this emphasis. Possible minors include business or economics for students interested in management, biology for students leaning toward biotechnology or English for students considering technical writing. Consult your advisor for additional coursework to complement this emphasis.

It is recommended that students consider electives in public speaking (SPCO 100/103) and for those students planning to go to graduate school, a foreign language (GER 100 or GER 101 and 102). Additional elective coursework in chemistry, mathematics, statistics and/or physics is desirable as time permits. Graduate level CHEM courses are recommended as well as MATH 132, MATH 221, STAT 150 and PHYS 321 .

Juniors and Seniors are expected to participate in the Department's undergraduate research program. 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 general education selections and other requirements.

Bachelor of Arts in Chemistry

Emphasis in Pre-Health

Program Requirements

Required Chemistry core credits.....	24-26
Required Chemistry credits.....	12
Required supporting credits	19
Required elective credits	10-11
General Education credits:	
9 credits already included in requirements above	
Specified	7
Remaining	24
Elective credits	21-24
Total credits required for this degree	120

This program offers training in chemistry, mathematics and physics with a broad base in biological sciences and biochemistry. It provides a 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.

Required Chemistry Core Credits — 24-26 semester hours

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
CHEM 321 Chemical Analysis	4
CHEM 331 Organic Chemistry I.....	5
CHEM 332 Organic Chemistry II.....	5
CHEM 441 Inorganic Chemistry I	2

Required Chemistry Credits — 12 semester 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 semester hours

Biology

BIO 110 Principles of Biology	4
BIO 111 Survey of Organismal Biology.....	5

Physics

PHYS 220 Introductory Physics I.....	5
PHYS 221 Introductory Physics II	5

Required Elective Credits — 10-11 semester hours

Biology credits (select one of the following):

ZOO 341 Human Anatomy	3
ZOO 350 Human Physiology.....	4
BIO 351 Microbiology.....	4

Select one course from the CS or STAT prefixes.....3

General Education, Specified — 7 semester hours

This program requires you to complete the following course(s) within the 40 hours of General Education.

Category 1b — Intermediate Composition

SCI 291 Scientific Writing	3
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Category 2 — Mathematics

MATH 131 Calculus and Analytic Geometry I.....	4
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Category 6 — Sciences and Mathematics

BIO 110, PHYS 220 and CHEM 111 or CHEM 114 required in this program, will fulfill this requirement.

Notes

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

It is recommended that students consider electives in public speaking (SPCO 100/103) and for those students planning to go to graduate school, a foreign language (GER 100 or GER 101 and 102). Additional elective coursework in chemistry, biology, mathematics, statistics and/or physics is desirable as time permits. Graduate level CHEM courses are recommended as well as MATH 221, MATH 335, STAT 150, PHYS 321 and PHYS 343.

Juniors and Seniors are expected to participate in the Department's undergraduate research program. 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 general education selections and other requirements.

Bachelor of Arts in Chemistry

Emphasis in Teaching (ACS Certified)

Program Requirements	
Required Chemistry core credits	24-26
Required Chemistry credits	8
Required credits for ACS certification	5
Required credits for science licensure	23
General Education credits:	
9 credits included in requirements above	
Specified	4
Remaining	27
PTE program	37-39
Total credits required for this degree	128-132

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 4-5 years to complete depending on high school background and the point in the educational career at which the program is entered.

Required Chemistry Core Credits — 24-26 semester hours

<i>Select one of the following groups:</i>	
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
CHEM 321 Chemical Analysis	4
CHEM 331 Organic Chemistry I	5
CHEM 332 Organic Chemistry II	5
CHEM 441 Inorganic Chemistry I	2

Required Chemistry Credits — 8 semester hours

CHED 495 Seminar in Teaching Chemistry	2
CHEM 360 Environmental Chemistry	2
CHEM 450 Survey of Physical Chemistry	4

Required Credits for ACS Certification — 5 semester hours

CHEM 421 Instrumental Analysis	4
CHEM 443 Inorganic Chemistry Laboratory	1

Required Credits for Science Licensure — 23 semester hours

<i>Biology</i>	
BIO 110 Principles of Biology	4
BIO 111 Survey of Organismal Biology	5
<i>Earth Sciences</i>	
GEOL 201 Physical Geology	4
<i>Physics</i>	
PHYS 220 Introductory Physics I	5
PHYS 221 Introductory Physics II	5
<i>Secondary Licensure</i>	
SCED 441 Methods of Teaching Secondary School Science	3

General Education, Specified — 4 semester hours

This program requires you to complete the following courses within the 40 hours of General Education.

<i>Category 2 — Mathematics</i>	
MATH 131 Calculus and Analytical Geometry I	4
<i>Category 6 — Sciences and Mathematics</i>	
BIO 110, PHYS 220 and CHEM 111 or CHEM 114 required in this program, will fulfill this requirement.	

Notes

It is recommended that students have a fundamental background in computers. SCI 393 is recommended.

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 general education selections and other requirements.

Pre-Professional Studies — Health Sciences

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. These students are encouraged to enroll in the seminar course, BIO 192, Careers in the Health Professions, to explore career options.

For information, contact the Advisory Committee for pre-professional studies in the health sciences, Department of Chemistry and Biochemistry, Ross Hall 1380, 970-351-2559.

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.

**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 Bulletin.*

Master of Arts in Chemistry

Emphasis in Education

Program Requirements

Complete the required credits specified here.....8-12
 Complete program electives specified here.....18-22

This degree 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.

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 BA degree in chemistry (teaching emphasis) 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 — Upon full admittance into the program, each student must pass qualifying examinations in four of six areas selected from chemistry content (analytical, biological, inorganic, organic or physical chemistry) or chemical education. 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".

Required Credits — 8-12 semester hours

CHEM 600 Seminar in Chemistry2
 CHED 682 Problems in Teaching Chemistry.....3

Select one of the following:

CHEM 622 Directed Studies.....3
 CHEM 695 Thesis Proposal.....1
 CHEM 699 Thesis6

Note that students must meet a physical chemistry requirement if not previously taken. CHEM 551, 552, 453 and 454 may be taken to meet this requirement.

Elective Credits — 14 semester hours

CHEM 522 Advanced Analytical Chemistry3
 CHEM 523 Chemical Spectroscopy.....3
 CHEM 533 Organic Synthesis and Stereochemistry.....3
 CHEM 534 Theory and Mechanisms of Organic Reactions.....3
 CHEM 543 Organometallic Chemistry3
 CHEM 555 Chemical Kinetics3
 CHEM 558 Chemical Thermodynamics3
 CHEM 559 Quantum Chemistry3
 CHEM 560 Environmental Chemistry2
 CHEM 581 General Biochemistry I4
 CHEM 582 General Biochemistry II4
 CHEM 590 Special Topics in Chemistry3

Electives — 4-8 semester hours

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.

Notes

Students completing a thesis must successfully defend the thesis.

All students must successfully complete comprehensive examinations in general chemistry and two other areas selected from chemical education and any subdiscipline of chemistry.

Master of Arts in Chemistry

Emphasis in Research

Program Requirements

Complete the required credits specified here.....12
 Complete program electives specified here18

The degree 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.

Admission

In addition to meeting the admission requirements of the Graduate School, the student should have completed a program equivalent to the Bachelor of Arts 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. If these prerequisites are not met, the candidate may be admitted to the program on a provisional basis.

Prerequisites

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

Qualifier Examinations — Upon full admittance into the program, each student must pass qualifying examinations in four of six areas selected from chemistry content (analytical, biological, inorganic, organic or physical chemistry) or chemical education. 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".

Required Credits — 12 semester hours

CHEM 600 Seminar in Chemistry2
 CHEM 695 Thesis Proposal1
 CHEM 699 Thesis.....9

Elective Credits — 12 semester hours

CHEM 520 Theory and Use of Analytical Instruments1
 CHEM 522 Advanced Analytical Chemistry3
 CHEM 523 Chemical Spectroscopy.....3
 CHEM 533 Organic Synthesis and Stereochemistry.....3
 CHEM 534 Theory and Mechanisms of Organic Reactions.....3
 CHEM 543 Organometallic Chemistry3
 CHEM 555 Chemical Kinetics3
 CHEM 558 Chemical Thermodynamics3
 CHEM 559 Quantum Chemistry3
 CHEM 560 Environmental Chemistry2
 CHEM 581 General Biochemistry I4
 CHEM 582 General Biochemistry II4
 CHEM 586 Biochemical Techniques3
 CHEM 587 Toxicology.....3
 CHEM 590 Special Topics in Chemistry3
 CHEM 622 Directed Studies1-3
 CHEM 654 Statistical Thermodynamics2

General Electives — 6 semester 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).

Doctor of Philosophy in Chemical Education

Program Requirements

Complete the research component specified here.....	28
Complete the pedagogy component specified here	12
Complete chemistry component specified here	20
Complete program electives to total.....	64

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.

Admission

In addition to meeting the admission requirements of the Graduate School, students should have completed courses comparable to those listed below. If these requirements are not met, students may be provisionally admitted to the program. Deficiencies are to be removed early in the program.

- Mathematics: through multi-variable calculus
- Physics: one year of college physics
- Chemistry: one year each of general chemistry, organic chemistry and physical chemistry, one semester each of quantitative analysis, instrumental analysis and inorganic chemistry and sufficient chemistry electives to qualify for a major in chemistry
- The general, organic, physical and analytical chemistry courses each require an associated laboratory experience

General Requirements

Qualifier Examinations — Upon full admittance into the program, each student must pass qualifying examinations in four of six areas selected from chemistry content (analytical, biological, inorganic, organic or physical chemistry) or chemical education. 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 course work in the appropriate subdiscipline with a minimum grade of "B".

Students entering the program with a master's degree are required to complete 64 credit hours. Students entering the program with a bachelor's degree are required to complete 94 credit hours.

Comprehensive Examinations — Students must pass written and oral comprehensive examinations in chemical education and in three of five chemistry content areas (analytical, biological, inorganic, organic or physical chemistry).

Research Component — minimum 28 hours

Required:

CHEM 600 Seminar	3
CHEM 793 Research Practicum.....	4
CHEM 797 Doctoral Proposal Research	4
CHEM 799 Doctoral Dissertation	12
SCED 694 Science Education Research	3

Select one of the following sequences:

STAT 501 Statistical Methods I.....	4
and STAT 502 Statistical Methods II	4
STAT 611 Mathematical Statistics with Applications I	4
and STAT 612 Mathematical Statistics with Applications II	4
EPRE 602 Elements of Statistics	3
and EPRE 603 Analysis of Variance	3

Note that completion of CHEM 600 (3 hrs) and one of the statistics sequences (STAT 501/502, STAT 611/612 or EPRE 602/603) fulfills the requirement for two research tools. SCED 694 fulfills the requirement for an advanced research course.

Chemistry Component — minimum 20 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 555 Chemical Kinetics	3
CHEM 558 Chemical Thermodynamics	3
CHEM 559 Quantum Chemistry	3
CHEM 560 Environmental Chemistry	2
CHEM 581 General Biochemistry I	4
CHEM 582 General Biochemistry II	4
CHEM 586 Biochemical Techniques	3
CHEM 587 Toxicology.....	3
CHEM 590 Advanced Topics in Chemistry	3
CHEM 622 Directed Studies	1-3
CHEM 654 Statistical Thermodynamics	2

Pedagogy Component — minimum 12 hours

Required — 6 semester hours

CHEM 755 Supervised Practicum in College Teaching	3
EPRE 682 Cognition and Instruction	3

Electives — 6 semester hours

CHED 682 Problems in Teaching Chemistry	3
SCED 680 Science Curricula in Secondary/College Settings	3
SCED 678 Science Education Seminar	2-3

Notes

One course in biochemistry is required if not previously taken.

Students must complete courses in a minimum of three areas of chemistry (analytical, biological, inorganic, organic or physical chemistry).

Students entering the program with a bachelor's degree must take a minimum of 32 hours in the Chemistry Component.

Candidates must select sufficient electives to complete their programs.

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 — Candidates must demonstrate competence in the research aspects of both basic chemistry and chemical education.

Students entering the program 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 have it accepted for publication in a refereed journal as a requirement for this degree.

Bachelor of Arts in Earth Sciences

Emphasis in General Earth Sciences

Program Requirements

Required Earth Sciences credits	30-40
Required supporting mathematics and science credits	20-30
General Education credits:	
7 credits already included in above requirements	
Remaining	33
Elective credits	34
Total credits required for this degree	120

Earth Sciences includes astronomy, geology, meteorology and oceanography.

The General Earth Sciences Program provides a multidisciplinary 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 plan to pursue careers in fields where a multidisciplinary background in the earth sciences is desirable. Such careers may include environmental or resource law, work with the environmental monitoring industry, pre-secondary teaching and regional planning. A departmental advisor will work closely with the student to ensure that the program meets individual needs.

Earth Science Credits — 30-40 semester 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).

Supporting Mathematics and Science Electives — 20-30 semester 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.

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.

The following program is recommended for students who wish to obtain a broad background in the earth sciences and the supporting sciences and mathematics.

Required Earth Science Credits — 30-40 semester hours

Core Credits — 29 semester hours

AST 301 Classical Astronomy	3
AST 302 Modern Astronomy	3
GEOL 201 Physical Geology	4
GEOL 202 Historical Geology	4
MET 205 General Meteorology	4
MET 421 Climatology	3
OCN 301 Physical and Chemical Oceanography	4
OCN 302 Geological and Biological Oceanography	4

Earth Science Elective Credits — 1-11 semester hours (in consultation with advisor)

ESCI 265 Earth Science Concepts for Elementary Teachers	3
ESCI 497 Undergraduate Research	1-6
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	3
MET 460 Mesometeorology	3

Supporting Mathematics and Science Credits — 20-30 semester hours

(in consultation with advisor)

BIO 110 Principles of Biology	4
BIO 111 Survey of Organismal Biology	5
BIO 265 Biological Concepts for Elementary Teachers	3
BIO 380 Aquatic Biology	4
BIO 460 Ecology	4
CQ 105 Personal Computer Applications	3
CHEM 103 Introductory Chemistry	3
CHEM 108 Fundamentals of General and Organic Chemistry	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 Trigonometry	3
MATH 131 Calculus and Analytic Geometry I	4
MATH 132 Calculus and Analytic Geometry II	4
MATH 181 Fundamentals of Mathematics I	3
MATH 182 Fundamentals of Mathematics II	3
PHYS 220 Introductory Physics I	5
PHYS 221 Introductory Physics II	5
PHYS 321 Elementary Modern Physics	3
SCI 265 Physical Science Concepts for Elementary Teachers	4
SCI 391 Computer Applications in Science	2

Bachelor of Arts in Earth Sciences

Emphasis in Geology

Program Requirements	
Required Geology credits	39
Required supporting credits	33
Required elective credits	3
General Education credits:	
7 credits already included in above requirements	
Specified	4
Remaining	29
Elective credits	12
Total credits required for this degree	120

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 and mining 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 Geology Credits — 39 semester 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
GEOL 482 Geology Field Camp	6

Bachelor of Arts in Earth Sciences

Emphasis in Meteorology

Program Requirements	
Required Meteorology credits	30
Required supporting credits	29
General Education credits:	
10 credits already included in above requirements	
Remaining	30
Elective credits	25
Total credits required for this degree	120

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 also provides the background necessary for admission to graduate programs in the atmospheric sciences.

Required Meteorology Credits — 30 semester hours	
MET 205 General Meteorology	4
MET 306 Dynamic Meteorology I.....	3
MET 315 Meteorological Instruments and Codes	2
MET 407 Dynamic Meteorology II.....	4

Required Supporting Credits — 33 semester hours

BIO 111 Survey of Organismal Biology	5
CHEM 111 Principles of Chemistry I	5
CHEM 112 Principles of Chemistry II	5
MATH 131 Calculus and Analytic Geometry I	4
MATH 132 Calculus and Analytic Geometry II	4
PHYS 220 Introduction to Physics I.....	5
PHYS 221 Introduction to Physics II.....	5
Notes: 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.	

Required Elective Credits — 3 semester hours

Electives must be selected from courses with a GEOL prefix that are open to majors.

General Education Credits, Specified — 4 semester hours

<i>Category 2 — Mathematics</i>	
MATH 124 College Algebra	4

Notes

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

A 2.0 grade point average in the major is required for graduation.

MET 421 Climatology	3
MET 441 Synoptic Meteorology	3
MET 442 Synoptic Meteorology Laboratory	2
MET 443 Synoptic Laboratory: Current Weather	2
MET 460 Mesometeorology	3
OCN 301 Physical and Chemical Oceanography	4

Required Supporting Credits — 29 semester hours

CQ 115 FORTRAN 77 Programming	3
CHEM 111 Principles of Chemistry I	5
MATH 131 Calculus and Analytic Geometry I	4
MATH 132 Calculus and Analytic Geometry II	4
PHYS 240 General Physics I.....	5
PHYS 241 General Physics II.....	5
STAT 150 Introduction to Statistical Analysis	3
Note that CHEM114 and 115 may be taken in lieu of CHEM 111 and CHEM 112.	

Required Elective Credits — 6 semester hours

Electives must be selected with the approval of the student's advisor.

Notes

A 2.0 grade point average in the major is required for graduation. Science and mathematics courses approved for General Education that are taken as part of the major may also be used to satisfy General Education requirements.

Bachelor of Arts in Earth Sciences

Emphasis in Secondary Teaching

Program Requirements

Required Earth Sciences credits	35
Required supporting credits	33
Required elective credits	5
General Education credits:	
7 credits already included in above requirements	
Remaining	33
PTE Program	37-39
Total credits required for this degree	143-145

The coursework and experiences in this major are designed to provide the student with a broad background of 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/Earth Science Licensure from the Colorado Department of Education.

Required Earth Sciences Credits — 35 semester 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 205 General Meteorology	4
MET 421 Climatology	3
OCN 301 Physical and Chemical Oceanography	4
OCN 302 Geological and Biological Oceanography	4
SCED 441 Methods of Teaching Secondary School Science.....	3

Required Supporting Credits — 33 semester hours

Math and science 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
BIO 111 Survey of Organismal Biology	5
CHEM 111 Principles of Chemistry I	5
CHEM 112 Principles of Chemistry II	5
MATH 131 Calculus and Analytic Geometry	4
PHYS 220 Introductory Physics I.....	5
PHYS 221 Introductory Physics II.....	5

Note that some of the required support courses in Biology, Chemistry and Physics will apply toward General Education Science requirement.

Required Elective Credits — 5 semester hours

One advisor-approved computer course (Such as SCI 391).....	2
One advisor-approved course with a prefix selected from AST, ESCI, GEOL, MET or OCN	3

Notes

PTE is required for this major.

The PTE requirement EDLS 363 should be taken concurrently with SCED 441.

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.

A science laboratory safety and management course may be required if available.

Master of Arts in Earth Sciences

Program Requirements

Complete the required credits specified here.....6
 Complete program electives specified here24

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 pre-secondary teachers, for students pursuing careers in allied fields, which 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.

Required Credits — 6 semester hours

ESCI 599 Seminar in Earth Sciences — minimum of.....2
 ESCI 600 Introduction to Earth Science Research2
 ESCI 695 Special Topics in Earth Science.....2

Elective Credits (Thesis Option) — 24 semester hours

ESCI 699 Thesis6-10
 Courses AST, ESCI, GEOL, MET, OCN and SCED prefixes
 from the list below14-18

Elective Credits (Non-Thesis Option) — 24 semester hours

ESCI 697 Graduate Research2-6

Courses with AST, ESCI, GEOL, MET, OCN and SCED prefixes

from the list below18-22
 AST 500 Survey of Astronomy3
 AST 595 Special Topics in Astronomy1-4
 AST 622 Directed Studies1-4
 ESCI 550 Strategies in Teaching Earth Science1
 ESCI 584 Earth Science Field Experience.....1-15
 GEOL 510 Groundwater Geology2

GEOL 521 Optical Mineralogy and Petrography4
 GEOL 525 Economic Geology3
 GEOL 532 Igneous and Metamorphic Petrology2
 GEOL 533 Sedimentary Petrology2
 GEOL 535 Tectonics2
 GEOL 540 Paleontology4
 GEOL 550 Sedimentology and Stratigraphy4
 GEOL 560 Geomorphology3
 GEOL 564 Glacial and Quaternary Geology.....3
 GEOL 567 Volcanic Geology.....3
 GEOL 570 Structural Geology4
 GEOL 581 Geologic Field Techniques.....2
 GEOL 582 Geology Field Camp.....6
 GEOL 590 Rocky Mountain Geology Seminar2
 GEOL 595 Special Topics in Geology1-4
 GEOL 622 Directed Studies1-4
 MET 500 Survey of Meteorology3
 MET 507 Dynamic Meteorology II4
 MET 521 Climatology3
 MET 536 Biometeorology3
 MET 541 Synoptic Meteorology3
 MET 542 Synoptic Meteorology Laboratory2
 MET 560 Mesometeorology3
 MET 570 Satellite Meteorology3
 MET 595 Special Topics in Meteorology1-4
 MET 622 Directed Studies1-4
 OCN 500 Survey of Oceanography3
 OCN 595 Special Topics in Oceanography1-4
 OCN 622 Directed Studies1-4
 SCED 671 Elementary and Middle School Science Curriculum.....2
 SCED 678 Science Education Seminar1-2
 SCED 680 Science Curricula in Secondary/College Settings3
 Note that other electives, including courses in supporting sciences, mathematics and science pedagogy, may be included with approval of the student's graduate studies committee.

Notes

Students must complete all Graduate School requirements as described elsewhere in this bulletin.

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.

Bachelor of Arts in Economics

Program Requirements

Required Economics credits	32
Required supporting credits	18-20
Required elective credits	12
General Education credits:	
3 credits already included in above requirements	
Remaining	37
Elective credits	19-21
Total credits required for this degree	120

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. 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.

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.

Required Economics Credits — 32 semester hours

ECON 103 Introduction to Economics: Macroeconomics	3
ECON 105 Introduction to Economics: Microeconomics	3
ECON 202 Money and Banking	3
ECON 300 Intermediate Microeconomics	3
ECON 345 International Trade	3
ECON 350 Intermediate Macroeconomics	3
ECON 400 Managerial Economics	3
ECON 402 Contemporary Economic Problems	3
ECON 452 Introduction to Econometrics	4
ECON 470 History of Economic Thought	3
ECON 499 Assessment Review	1

Required Supporting Credits — 18-20 semester hours

<i>Mathematics Credits — 6-8 semester hours (select one group, see notes)</i>	
MATH 124 College Algebra	4
MATH 131 Calculus and Analytic Geometry I	4
or	
MATH 175 Topics in Finite Mathematics	3
MATH 176 Topics in Calculus	3
<i>Statistics Credits — 6 semester hours</i>	
BACS 291 Business Statistics I	3
BACS 390 Business Statistics II	3
<i>Computer Proficiency Credits — 6 semester hours</i>	
BA 101 Business Computing	3
BACS 384 Business Computer Solutions	3

Required Elective Credits — 12 semester hours

Eligible electives include all ECON prefix courses, ENST 335 and MIND 286.

Recommended Electives — not required

BAAC 329 Introduction to Income Tax	3
BAFN 231 Legal Environment of Business	3
BAFN 340 Principles of Risk and Insurance	3
BAFN 370 Business Finance	3
BAFN 372 Introduction to Real Estate	3
BAMQ 354 Organizational Behavior	3
BAMK 360 Marketing	3
BAMK 361 Consumer Behavior	3
BAMK 368 Market Analysis and Research I	3

Notes

Students planning to attend Graduate School should take the MATH 124 - MATH 131 sequence.

To qualify for graduation, economics majors must achieve a minimum 2.50 GPA in all economics (ECON) courses taken at the University of Northern Colorado.

In addition, a minimum grade of "C" must be earned in all economics (ECON) courses.

For purposes of required electives, minimum grades and calculation of minimum GPA, MIND 286 and ENST 335 will be counted as ECON courses.

Bachelor of Arts in Economics

Emphasis in Business Economics

Program Requirements

Required Economics credits	25
Required supporting credits	18
Required elective credits	9
General Education credits:	
3 credits already included in above requirements	
Remaining	37
Required Business Administration Minor (33-46)	
9 credits already included in required supporting credits	
Remaining required credits	24-37
Total credits required for this degree	113-121

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 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 MBA or a graduate degree in Economics.

Required Economic Credits — 25 semester hours

ECON 103 Introduction to Economics: Macroeconomics	3
ECON 105 Introduction to Economics: Microeconomics	3
ECON 202 Money and Banking	3

ECON 300 Intermediate Microeconomics	3
ECON 345 International Trade	3
ECON 350 Intermediate Macroeconomics	3
ECON 400 Managerial Economics	3
ECON 453 Business and Economic Forecasting	3
ECON 499 Assessment Review	1

Required Supporting Credits — 18 semester hours

MATH 175 Topics in Finite Mathematics	3
MATH 176 Topics Calculus	3
BA 101 Business Computing	3
BACS 384 Business Computer Solutions	3
BACS 291 Business Statistics I	3
BACS 390 Business Statistics II	3

Required Elective Credits — 9 semester hours

ECON 250 Comparative Economic Systems	3
ECON 277 Industrial Organization	3
ECON 305 Labor/Management Economics	3
ECON 341 Public Finance	3
ECON 346 International Finance	3
ECON 360 Economics of Growth and Development	3
ECON 402 Contemporary Economic Problems	3
ECON 455 Regional Theory and Methods	3
ENST 335 Environmental and Resource Economics	3
MIND 286 Value Issues in Political Economy	3

Bachelor of Arts in English

Emphasis in Language Arts for Elementary and Middle School Teaching

Program Requirements

Required English credits	39
Required elective credits	3
General Education credits:	
Regular	40
Additional	7
PTE program	37-39
Required licensure credits	21
Total credits required for this degree	147-149

The language arts emphasis offers a balanced approach to literature, language, writing and oral communication. The program affords future teachers a broad approach to literature and its history, courses in writing and language that enable our graduates to "practice what they teach," and training in communication skills that are especially appropriate to the classroom.

Graduates of the program will be prepared to enter the teaching profession in grades 1-6 (with elementary licensure) and grades 5-9 (with middle school licensure) and to accept teaching assignments to a wide range of courses in language arts. In addition to preparing well-qualified teachers, the English major is excellent preparation for any profession or occupation that stresses language usage.

Required English Credits — 39 semester hours

EDRD 414 Literature for Children, Adolescents and Young Adults	3
ENG 131 Introduction to Literature	3
ENG 219 Traditional and Modern Grammars	3
ENG 238 Introduction to Folklore	3
ENG 240 Introduction to Creative Writing	3
ENG 260 Masterpieces of English Literature.....	3

Bachelor of Arts in English

Emphasis in Liberal Arts

Program Requirements

Required English credits	30
Required elective credits	9
General Education credits	40
Required minor with minimum credits	18
Elective credits	23
Total credits required for this degree	120

Ours is truly a language-dependent society. From corporate brochures to poetry, from television scripts to newspapers, we depend on our abilities to read and think critically, to communicate intelligently and effectively. The core requirements of the English major afford students a broad coverage of the field. Judicious planning with the student's advisor should provide additional program focus through course clusters in literature, writing and/or language study.

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. The English major is excellent preparation for any profession or occupation that stresses language usage, such as writing and teaching-related fields.

ENG 261 Masterpieces of American Literature.....	3
ENG 319 Advanced Expository Techniques.....	3
ENG 414 Greek and Comparative Mythology	3
ENG 419 Language and the History of English.....	3
SPCO 111 Oral Interpretation.....	3
SPCO 323 Intercultural Communication.....	3
SPCO 330 Small Group Communication	3
Note that ENG 430 with subtitle of "The Folktale" or "Native American Literature" may be taken in place of ENG 238.	

Required Elective Credits — 3 semester hours

THEA 281 Improvisation and Creative Dramatics	3
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Notes

English majors pursuing teacher licensure must complete Professional Teacher Education (PTE) requirements listed separately in this Bulletin.

No English major may be admitted to the PTE program until he or she has completed at least two courses in the major at the University of Northern Colorado and achieved a minimum grade point average of 2.50 in the major.

Before being permitted to apply for student teaching, an English major with a language arts emphasis must have successfully completed EDFE 270 or 370, must have completed at least 30 hours in the major with no D's and must have at least a 2.75 grade point average in those courses taken at UNC. Any course in the major for which a student received a D grade must have been repeated for a C or better before the student may apply for student teaching.

Qualified students may be exempted by examination from ENG 131.

Required English Credits — 30 semester hours

<i>Lower Division Core</i>	
ENG 131 Introduction to Literature.....	3
ENG 219 Traditional and Modern Grammars	3
ENG 260 Masterpieces of English Literature	3
ENG 261 Masterpieces of American Literature.....	3
ENG 262 Masterpieces of World Literature.....	3
<i>Upper Division Core</i>	
ENG 319 Advanced Expository Techniques	3
ENG 419 Language and the History of English	3
Period courses (ENG 351-372); two from English and one from American Literature	9

Required Elective Credits — 9 semester hours

ENG 122, 123, 223, 225 and 227 may NOT be counted toward the English major; all other courses with an ENG prefix may be counted for elective credit. At least one elective course MUST be taken at the 400-level.

Note

Qualified students may be exempted by examination from ENG 131.

Bachelor of Arts in English

Emphasis in Secondary Teaching

Program Requirements

Required English credits.....	33
Required elective credits.....	6
General Education credits.....	40
PTE program.....	37-39
Required credits for secondary licensure.....	9
Required minor with minimum credits.....	18
Total credits required for this degree.....	143-145

The English major with a secondary teaching emphasis at UNC is unique for its balanced approach to literature, language, writing and pedagogy. The program affords future teachers broad coverage of literary history, special topics in literature, genre studies and the like; courses in pedagogy, language and writing provide special training that enables our graduates to "practice what they teach."

Graduates of the program will be prepared to enter the teaching profession in grades 1-6 (with elementary licensure), grades 5-9 (with middle school licensure) and grades 7-12 (with secondary licensure) and to accept teaching assignments in a wide range of courses in writing and literature. Further, the bachelor's program will provide a solid background for future professional and graduate-level work in areas such as law, theology, medicine (with appropriate science and mathematics preparation), library science, communications, media and business. In addition to preparing well-qualified teachers, the English major is excellent preparation for any profession or occupation that stresses language usage, such as writing.

Required English Credits — 33 semester hours

Lower Division Courses

ENG 131 Introduction to Literature.....	3
ENG 219 Traditional and Modern Grammars.....	3
ENG 240 Introduction to Creative Writing.....	3
ENG 260 Masterpieces of English Literature.....	3
ENG 261 Masterpieces of American Literature.....	3
ENG 262 Masterpieces of World Literature.....	3

Upper Division Courses

ENG 319 Advanced Expository Techniques.....	3
ENG 419 Language and the History of English.....	3
Period courses (ENG 351-372); two from English and one from American Literature.....	9

Required Elective Credits — 6 semester hours

ENG 122, 123, 223, 225 and 227 may NOT be counted toward the English major. All other courses with an ENG prefix may be counted for elective credit. Majors preparing to teach may elect from either EED or ENG courses. At least one elective course must be taken at the 400-level.

Students may complete this major to be certified in elementary or middle school, as well as secondary teaching by completing the appropriate licensure program. Those wishing to be certified in secondary education must also complete a minor.

Required Credits for Secondary Licensure — 9 semester hours

Additionally, those students seeking secondary licensure must complete the following courses:

EED 341 Methods and Materials for Teaching Language and Composition in the Secondary Schools.....	3
(Take concurrently with EDLS 363 Clinical Experience)	
EED 402 Methods and Materials for Teaching Literature in the Secondary Schools.....	3
EED 406 Literature for Children and Adolescents.....	3

Notes

English majors pursuing teaching licensure must complete PTE requirements listed separately in this Bulletin.

Qualified students may be exempted by examination from ENG 131.

No English major may be admitted to the PTE program until he or she has completed at least two courses in the major at the University of Northern Colorado and achieved a minimum grade point average of 3.0 in the major.

Master of Arts in English

Program Requirements

Complete the required course specified here3
 Complete program electives specified here33

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 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 PhD 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 — 3 semester hours

ENG 600 Introduction to Graduate Study3

Required Elective Credits — 33 semester hours

A minimum of six courses must be selected from ENG 600-level offerings27
 Additionally, all students must choose one of the following options:

- a) a traditional thesis;
- b) a creative project, such as a novel or a collection of poetry;
- c) an additional six semester hours (two ENG 600-level seminars).

The thesis or creative projects may be written under ENG 699 for 6 semester hours credit6

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. 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 PTE requirements for licensure in English. Students must consult their departmental advisors and/or the College of Education PTE office if they are interested in elementary or secondary licensure.

Candidates must take a poetry explication examination during the first semester of enrollment; if necessary, this exam may be retaken until the student's performance is satisfactory.

All master's candidates must take a written, comprehensive examination.

Minor in Environmental Studies

Program Requirements

Required Environmental Studies credits.....	6
Required elective credits	16
Total credits required for this minor.....	22

The environmental studies minor enhances student 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 include 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 semester hours

ENST 100 Introduction to Environmental Studies.....	3
ENST 405 Senior Seminar.....	3

Required Elective Credits — 16 semester hours

Social Processes (select two of the following):

ENST 205 Environment, Politics and Law.....	2
ENST 215 Human Behavior and Environment	2
ENST 247 Politics of the Nuclear Age.....	2
ENST 335 Environmental and Resource Economics	3
GEOG 315 Resource Management	3

Physical Resource Science (select two of the following):

ENST 225 Energy and the Environment.....	3
ENST 235 Chemistry and the Environment.....	2
ENST 245 Nuclear, Solar and Alternative Power	3
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):

ENST 375 Literature and the Environment	3
ENST 385 Art and the Environment	2

Special Problems

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.

Bachelor of Arts in French

Emphasis in Liberal Arts

Program Requirements

Required French credits	31
Required elective credits	3
General Education credits	40
Required minor with minimum credits	18
Elective credits	28
Total credits required for this degree	120

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. Students develop skills in critical thinking as they acquire familiarity with francophone literature and civilization. The department's extracurricular activities encourage cultural awareness while developing leadership, organizational and promotional abilities and the French Study Abroad Program can further expand cultural knowledge and language proficiency.

French Liberal Arts majors may choose to pursue graduate study in French 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, world affairs, social work or the arts.

Required French Credits — 31 semester hours

FR 201 Intermediate French I	3
FR 202 Intermediate French II	3
FR 301 French Conversation and Composition I	3
FR 302 French Conversation and Composition II	3
FR 311 French Civilization & Literature Survey I	3
FR 312 French Civilization & Literature Survey II	3
FR 407 French for Oral Proficiency	3
FR 475 Seminar in French Literature	2
Advanced Literature Credits	8

Required Elective Credits — 3 semester hours (minimum)

FR 150 Practicum in Contemporary Culture	1
FR 300 Intermediate French Readings	1-3
FR 350 Practicum in Teaching French	2
FR 401 Intensive French	4
FR 402 Contemporary Life in France	3
FR 403 France of the Ancien Regime	4
FR 404 Modern France	4
FR 405 Business French	3
FR 450 Studies in French Literature	3

Notes

All work to be counted toward the BA in French, Liberal Arts emphasis, must be beyond the first year level.

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

Students must demonstrate competency in certain areas of language activity: Oral and written proficiency in French, ability to apply one's knowledge of the French language environment. Consult department advisor.

To graduate with French Liberal Arts major, the student must have a 2.5 grade point average in those courses that count toward the major and that were taken at UNC.

Students must complete a minor approved by the department.

Bachelor of Arts in French

Emphasis in Teaching

Program Requirements

Required French credits.....	34
Required elective credits (minimum)	3
General Education credits:	
3 credits already included in above requirements	
Remaining.....	37
PTE program	37-39
Required minor with minimum hours.....	18
Total credits required for this degree	129-131

In preparing majors for careers in secondary school teaching of French, this program stresses acquisition of the four language skills (listening, speaking, reading, writing) through performance-oriented classes at all levels, conducted in French. Students develop skills in critical thinking as they acquire familiarity with francophone literature and civilization. The department's extracurricular activities encourage cultural awareness while developing leadership and organizational and promotional abilities necessary to foreign language teaching and the French Study Abroad Program can further expand cultural knowledge and language proficiency. Pedagogical skills are developed through numerous clinical teaching experiences offered within the department as well as through Professional Teacher Education.

Completion of the French teaching major qualifies the student for State of Colorado Licensure to teach French in the secondary school and for graduate study in French. Training includes development of the four language skills in French, knowledge of francophone culture and literature and development of pedagogical and organizational skills expected in the French teaching profession. Also, students who combine their language study with other fields such as business, political science, international trade and relations, history or fine arts can pursue careers in international business, world affairs, social work or the arts.

Required French Credits — 34 semester hours

FR 201 Intermediate French I.....	3
FR 202 Intermediate French II.....	3
FR 301 French Conversation and Composition I.....	3
FR 302 French Conversation and Composition II.....	3
FR 311 French Civilization & Literature Survey I.....	3
FR 312 French Civilization & Literature Survey II.....	3
FR 350 Practicum in Teaching French.....	2
FR 407 French for Oral Proficiency	3
FL 341 Methods of Teaching in the Secondary School.....	3
Advanced Literature Credits	8

Required Elective Credits — 3 semester hours (minimum)

FR 150 Practicum in Contemporary Culture	1
FR 300 Intermediate French Readings	1-3
FR 350 Practicum in Teaching French.....	2
FR 401 Intensive French.....	4
FR 402 Contemporary Life in France.....	3
FR 403 France of the Ancien Regime.....	4
FR 404 Modern France	4
FR 405 Business French.....	3
FR 450 Studies in French Literature	3
FR 475 Seminar in French Literature.....	2

Notes

All work to be counted toward the BA in French, Teaching emphasis, must be beyond the first year level.

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

Students must demonstrate competency in certain areas of language activity: Oral and written proficiency in French, ability to apply one's knowledge of francophone culture to appropriate situations in a French language environment, leadership abilities important to secondary school language teaching. Consult department advisor.

To seek departmental approval for full admission to the Professional Teacher Education program, students must have at least a 2.5 grade point average in courses in French taken at UNC.

Students must complete a minor approved by the department.

Student must meet all requirements for the Professional Teaching Education program as described in this Bulletin, including EDLS 363, Clinical Experience (3 hrs.) to be taken along 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).

To be recommended for teacher licensure, the student must have a 2.5 grade point average at the completion of the program on those courses that count toward the major and were taken at UNC.

Master of Foreign Languages

Emphasis in French Teaching

Program Requirements

Complete the required credit specified here10
 Complete the program electives specified here20

The program is designed for secondary teachers of French who desire further preparation at the graduate level.

The program concentrates on the development of high-level functional proficiency in the four language skills and provides in-depth understanding of the cultural and literary achievements of French-speaking societies. The most recent developments in foreign language methodologies will be studied and researched.

Admission

Admission to this program has been suspended until further notice. Consult department chair.

In addition to meeting the standard Graduate School admissions requirements, applicants to the master's program in Foreign Language Teaching — French must possess a B.A. in French or the equivalent and must have completed one year of teaching experience.

Students may complete the M.A. degree in summers only or during the academic year only or by combining summer work with regular academic year program offerings.

Required Credits — 10 semester hours

FL 508 Workshop2
 FL 531 Teaching of Foreign Languages2
 FR 505 Topics in French Civilization3
 FR 506 Topics in French Literature2
 FR 521 Problems in Advanced Grammar1
 or
 FR 522 Problems in Advanced Composition1

Elective Credits — 20 semester hours

Courses in language, literature, and civilization from within the French offerings of the Department of Foreign Languages10
 Courses from outside of the department in the areas of pedagogy, civilization and culture10

Note that courses selected must relate logically to the teaching of French.

A minimum of two courses in each area will be chosen with the consent of the major advisor.

Notes

The department offers a spring semester Study Abroad Program in France.

Master's degree candidates are encouraged to participate and, when qualified, may obtain an assistantship.

Students must successfully complete comprehensive examinations in the areas of French language, literature, and civilizations and Foreign Language teaching methodology.

Bachelor of Arts in Geography Emphasis in Applied Geography

Required Geography credits	24
Required elective credits	15
General Education credits:	
Specified	3
Remaining	37
Required minor with minimum credits	18
Elective credits	23
Total credits required for this degree	120

The use of geographic concepts of location, distribution and diffusion for the analysis of patterns of economic, social, political and environmental behavior is at the core of applied geography. Beyond analysis, the dynamic application of these concepts makes possible the prediction and planning of significant human activities.

Those electing an applied major in geography are generally preparing for careers in cartography, location analysis, urban and regional planning, or geographic information systems. Examples of specific employment opportunities include computer map design and construction, market research, commercial site and industrial location analysis. Additional positions include transportation planning, land use and real estate analysis and planning, environmental management and community development. Students should select either the applied geography or the liberal arts emphasis in conjunction with their career goals.

Required Geography Credits — 24 semester hours	
GEOG 110 Geography of the United States and Canada.....	3
GEOG 200 Human Geography	3

Bachelor of Arts in Geography Emphasis in Liberal Arts

Program Requirements	
Required Geography credits	18
Required elective credits	21
General Education credits	40
Required minor with minimum credits	18
Elective credits	23
Total credits required for this degree	120

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 elementary or 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.

Required Geography Credits — 18 semester hours	
GEOG 110 Geography of the United States and Canada.....	3
GEOG 200 Human Geography	3
GEOG 225 Physical Geography	3
GEOG 264 Maps and Imagery	3
GEOG 302 Cartography	3
GEOG 495 Senior Seminar.....	3

Required Elective Credits — 21 semester hours	
Advanced Regional Credits — 9 semester hours (minimum)	
GEOG 318 Australia.....	2
GEOG 326 Africa	3

GEOG 225 Physical Geography	3
GEOG 264 Maps and Imagery	3
GEOG 302 Cartography	3
GEOG 312 Economic Geography	3
GEOG 475 Quantitative Techniques in Geography	3
GEOG 495 Senior Seminar.....	3

Required Elective Credits — 15 semester hours	
GEOG 300 Advanced Human Geography: Topics.....	3
GEOG 315 Resource Management	3
GEOG 325 Advanced Physical Geography: Topics.....	3
GEOG 360 Political Geography.....	3
GEOG 370 Urban Geography	3
GEOG 392 Field Course in Geography	1-3
GEOG 407 Theory and Use of Geographic Information Systems	3
GEOG 412 Advanced Cartography.....	3
GEOG 422 Directed Studies.....	1-3
GEOG 492 Internship	1-6

General Education, Specified — 3 semester hours	
Category 2 — Mathematics	
STAT 150 Introduction to Statistical Analysis	3
Note that students may take 3 of the above hours in related electives from outside the department with advisor approval. GEOG 300 and GEOG 325 may be taken for credit more than once. GEOG 492 may be taken for credit more than once, but only 3 hours will count toward the major.	

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 438 South America	3
GEOG 453 Geography of the Great Plains	3

Note that GEOG 438 and 453 are also offered for graduate credit under the numbers GEOG 538 and GEOG 553. Majors must take a minimum of 9 semester hours in Advanced Regional Geography. GEOG 344 may be taken for credit more than once.

Advanced Systematic Credits — 9 semester hours (minimum)	
GEOG 300 Advanced Human Geography: Topics	3
GEOG 312 Economic Geography.....	3
GEOG 315 Resource Management	3
GEOG 325 Advanced Physical Geography: Topics.....	3
GEOG 360 Political Geography	3
GEOG 370 Urban Geography.....	3
GEOG 392 Field Course in Geography	1-3
GEOG 407 Theory and Use of Geographic Information Systems.....	3
GEOG 412 Advanced Cartography.....	3
GEOG 422 Directed Studies	1-3
GEOG 475 Quantitative Techniques in Geography.....	3
GEOG 492 Internship.....	1-6

Note that majors must take a minimum of 9 semester hours in Advanced Systematic Geography. GEOG 300 and GEOG 325 may be taken for credit more than once. A maximum of 3 hours of GEOG 492 may be counted toward the major. Only one of the following courses may be counted toward the major: GEOG 392, GEOG 407, GEOG 412, GEOG 422, GEOG 475, GEOG 492.

Bachelor of Arts in Geography

Emphasis in Secondary Teaching

Program Requirements	
Required credits	22
Required supporting credits	18
Required elective credits	18
General Education credits:	
Specified	13
Remaining	27
PTE program	37-39
Total credits required for this degree	135-137

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 Credits — 22 semester hours

GEOG 100 World Geography	3
GEOG 200 Human Geography	3
GEOG 225 Physical Geography	3
GEOG 264 Maps and Imagery	3
GEOG 410 Teaching Geography in the Secondary Curriculum	1
GEOG 495 Senior Seminar	3
SOSC 341 Teaching Secondary Social Studies	3
SOSC 470 Theory and Research in Social Science	3

Required Elective Credits — 18 semester hours

Regional Credits — 9 semester 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 438 South America	3
GEOG 453 Geography of the Great Plains	3

Systematic Credits — 9 semester hours (minimum)

GEOG 300 Advanced Human Geography: Topics	3
GEOG 312 Economic Geography	3
GEOG 315 Resource Management	3
GEOG 325 Advanced Physical Geography: Topics	3
GEOG 360 Political Geography	3
GEOG 370 Urban Geography	3

Required Supporting Credits — 18 semester hours

ECON 103 Introduction to Economics: Macroeconomics	3
HIST 101 Survey of American History — 1877 to Present	3
HIST 110 African Civilization	3
or HIST 113 Asian Civilization II: the Modern Transformation	3
HIST 120 Western Civilization to 1689	3
or HIST 121 Western Civilization— 1689 to Present	3
PSCI 100 United States National Government	3
SOC 100 Principles of Sociology	3

General Education, Specified — 13 semester hours

Category 4 — Arts and Letters

HIST 100 Survey of American History to 1877	3
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Category 5 — Social Science

ANT 100 General Anthropology	3
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PSY 120 Principles of Psychology	4
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Category b — Multicultural - Select one of the following:

BLS 101 Crisis of Identity	3
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HISP 102 Hispanic Cultures in the United States	3
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WS 120 Women and Men in Perspective	3
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Notes

No minor is required for this major emphasis area.

All requirements for the Professional Teacher Education program, as described in the Bulletin, must be met.

No geography teaching major may apply for admission to the Professional Teacher Education (PTE) 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 PTE, 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.

Before taking EDLS 363 and SOSC 341, the student must have completed EPRE 345 and EDF 364.

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.

Bachelor of Arts in German

Emphasis in Liberal Arts

Program Requirements

Required credits	31
Required elective credits (minimum)	3
General Education credits.....	40
Required minor with minimum credits.....	18
Elective credits	28
Total credits required for this degree	120

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. Students develop skills in critical thinking as they acquire familiarity with German literature and civilization. The department's extracurricular activities encourage cultural awareness while developing leadership, organizational and promotion abilities, and the German Study Abroad Program can further expand cultural knowledge and language proficiency.

German Liberal Arts majors may choose to pursue graduate study in German or, having combined their language study with other fields such as business, political science, international trade and relations, history, fine arts and others, become involved in careers in international business, world affairs, social work or the arts.

Required Credits — 31 semester hours

GER 201 Intermediate German I.....	3
GER 202 Intermediate German II.....	3
GER 301 German Conversation and Composition I.....	3
GER 302 German Conversation and Composition II.....	3
GER 311 German Civilization & Literature Survey I.....	3
GER 312 German Civilization & Literature Survey II.....	3
GER 407 German for Oral Proficiency.....	3
GER 475 Seminar in German Literature.....	2
Advanced Literature Credits	8

Required Elective Credits — 3 semester hours (minimum)

GER 150 Practicum in Contemporary Culture.....	1
GER 300 Intermediate German Readings	1-3
GER 350 Practicum in Teaching German.....	2
GER 401 Intensive German	4
GER 402 Contemporary Life in Germany.....	3
GER 403 Practicum in Germany	4
GER 404 Modern Germany.....	4
GER 405 Business German	3
GER 450 Studies in German Literature.....	3

Notes

All work to be counted toward the BA in German, Liberal Arts emphasis, must be beyond the first year level.

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

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

Students must complete a minor approved by the department.

To graduate with a German Liberal Arts major, the student must have a 2.5 grade point average in those courses that count toward the major and that were taken at UNC.

Bachelor of Arts in German

Emphasis in Teaching

Program Requirements
Required credits34
Required elective credits (minimum)3
General Education credits:
 3 credits already included in requirements above
 Remaining37
FTE program37-39
Required minor with minimum credits.....18
Total credits required for this degree129-131

In preparing majors for careers in secondary school teaching of German, this program stresses acquisition of the four language skills (listening, speaking, reading, writing) through performance-oriented classes at all levels, conducted in German. Students develop skills in critical thinking as they acquire familiarity with German literature and civilization. The department's extracurricular activities encourage cultural awareness while developing leadership and organizational and promotional abilities necessary to foreign language teaching, and the German Study Abroad Program can further expand cultural knowledge and language proficiency. Pedagogical skills are developed through numerous clinical teaching experiences offered within the department as well as through Professional Teacher Education.

Completion of the German teaching major qualifies the student for State of Colorado Licensure to teach German in the secondary school and for graduate study in German. Training includes development of the four language skills in German, knowledge of Germanic culture and literature and development of pedagogical and organizational skills expected in the German teaching profession. Also, 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, world affairs, social work, or the arts.

Required Credits — 34 semester hours
 FL 341 Methods of Teaching in the Secondary School.....3
 GER 201 Intermediate German I.....3
 GER 202 Intermediate German II.....3
 GER 301 German Conversation and Composition I.....3
 GER 302 German Conversation and Composition II.....3
 GER 311 German Civilization & Literature Survey I.....3
 GER 312 German Civilization & Literature Survey II.....3
 GER 350 Practicum in Teaching German.....2
 GER 407 German for Oral Proficiency.....3
 Advanced Literature Credits8

Required Elective Credits — 3 semester hours (minimum)
 GER 150 Practicum in Contemporary Culture.....1
 GER 300 Intermediate German Readings1-3
 GER 401 Intensive German4
 GER 402 Contemporary Life in Germany.....3
 GER 403 Practicum in Germany4
 GER 404 Modern Germany.....4
 GER 405 Business German3
 GER 450 Studies in German Literature.....3
 GER 475 Seminar in German Literature2

Notes

All work to be counted toward the BA in German, teaching emphasis, must be beyond the first year level.

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

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

To seek department approval for full admission to PTE, students must have at least a 2.5 grade point average in courses in German taken at UNC.

Student must complete a minor approved by the department.

Students must meet all requirements for the Professional Teacher Education program as described in this Bulletin, including EDLS 363, Clinical Experience (3 credit hours) to be taken along with the Methods course, FL 341.

In order to obtain approval for student teaching assignment, a German teaching major must have obtained a grade of B or better in FL 341 and have successfully passed the department oral proficiency examination (consult advisor).

To be recommended for teacher licensure, the student must have at least a 2.5 grade point average at the completion of his or her program in those courses that count toward the major and were taken at UNC.

Master of Arts in Foreign Languages Emphasis in German Teaching

Program Requirements

Complete the required credits specified here.....10
Complete program electives specified here20

The program is designed for secondary teachers of German who desire further preparation at the graduate level.

The program concentrates on the development of high-level functional proficiency in the four language skills and provides in-depth understanding of the cultural and literary achievements of German-speaking societies. The most recent developments in foreign language methodologies will be studied and researched.

Admission

Admission to this program has been suspended until further notice. Consult department chair.

In addition to meeting standard Graduate School admissions requirements, applicants to the master's program in Foreign Language Teaching — German must possess a B.A. in German or the equivalent and must have completed one year of teaching experience.

Students may complete the M.A. degree: in summers only or during the academic year only or by combining summer work with regular academic year program offerings.

Required Credits — 10 semester hours

FL 508 Workshop2
FL 531 Teaching of Foreign Languages2
GER 505 Topics in German Civilization3
GER 506 Topics in German Literature2
GER 521 Problems in Advanced Grammar1
or GER 522 Problems in German Composition1

Elective Credits — 20 semester hours

Courses in language, literature and civilization from within the
German offerings of the Department of Foreign Languages10
Courses from outside of the department in the areas of pedagogy
and civilization and culture.....10

Note that courses selected must relate logically to the teaching of German.
A minimum of two courses in each area will be chosen with the consent of the major advisor.

Notes

The department offers a Study Abroad Program in Germany. Master's degree candidates are encouraged to participate and, when qualified, may obtain an assistantship.

Students must successfully complete comprehensive examinations in the areas of German language, literature and civilization and Foreign Language teaching methodology.

Bachelor of Arts in Hispanic Studies Emphasis in Latin American Studies

Program Requirements

Required credits	15
Required supporting credits	18
Required elective credits	3
General Education credits	40
Required minor with minimum credits	18
Elective credits	26
Total credits required for this degree	120

Students develop a functional proficiency in the Spanish language along with an understanding and appreciation of the literature, civilization and culture of the Hispanic world, the United States Southwest and Hispanics of the United States.

Students become linguistically and culturally proficient for work or travel in the Hispanic world.

Required Credits — 15 semester hours

HISP 102 Hispanic Cultures in the United States	3
SPAN 201 Intermediate Spanish I	3
SPAN 202 Intermediate Spanish II	3
SPAN 303 Spanish Conversation	3
SPAN 304 Introduction to Hispanic Literature	3

Required Supporting Credits — 18 semester hours

GEOG 335 Geography of Middle-America	3
GEOG 438 South America	3
HIST 118 History of Mexico	3

Bachelor of Arts in Hispanic Studies Emphasis in Mexican-American Studies

Program Requirements

Required credits	24
Required supporting credits	12
Required elective credits	3-4
General Education credits	40
Complete a minor with minimum hours	18
Elective credits	22-23
Total credits required for this degree	120

Students develop a functional proficiency in the Spanish language along with an understanding and appreciation of the literature, civilization and culture of the Hispanic world, the United States Southwest and Hispanics of the United States.

Students become linguistically and culturally proficient for work or travel in the Hispanic world.

Required Credits — 24 semester hours

HISP 101 Introduction to Mexican-American Studies	3
HISP 102 Hispanic Cultures in the United States	3
HISP 300 Social Stratification in the Mexican-American Community	3
SPAN 201 Intermediate Spanish I	3
SPAN 202 Intermediate Spanish II	3
SPAN 303 Spanish Conversation	3
SPAN 304 Introduction to Hispanic Literature	3
SPAN 457 Literature of the United States Hispanics	3

Required Supporting Credits — 12 semester hours

HIST 118 History of Mexico	3
HIST 216 History of Spain and Portugal	3
HIST 314 History of Latin America to 1855	3
HIST 315 History of Latin America: 1855 to the Present	3

HIST 216 History of Spain and Portugal	3
HIST 314 History of Latin America to 1855	3
HIST 315 History of Latin America: 1855 to the Present	3

Required Elective Credits — 3 semester hours

ANT 311 Ethnology of Hispanic Peoples	3
ECON 250 Comparative Economic Systems	3
ECON 345 International Trade	3
ECON 360 Economics of Growth and Development	3
SPAN 255 Music of the Hispanic World	3
SPAN 351 Latin American Civilization and Culture	3
SPAN 452 Mexican Literature	3
SPAN 454 Latin American Literature of the 20th Century	3
SPAN 456 Spanish and Latin American Short Story	3
SPAN 457 Literature of the United States Hispanics	3
SPAN 459 Hispanic Drama	3

Notes

A minor of at least 18 semester hours is required with prior approval from the department.

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.

Required Elective Credits — 3-4 semester hours

ART 383 Pre-Columbian Art	4
ENG 238 Introduction to Folklore: Hispanic	3
GEOG 335 Geography of Middle America	3
HISP 141 Mexican Civilization and Culture	3
HISP 220 Women in Hispanic Society	3
HISP 225 History of the Chicano in the Southwest	3
HISP 370 Chicano Psychology	3
SPAN 255 Music of the Hispanic World	3
SPAN 452 Mexican Literature	3
SPAN 459 Hispanic Drama	3

Notes

ENG 238, Introduction to Folklore, will fulfill the elective requirement only if taken when the Hispanic folklore is being taught in the series of Introduction to Folklore courses.

A minor of at least 18 semester hours is required with prior approval from the department.

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.

Bachelor of Arts in History

Emphasis in Liberal Arts

Program Requirements

Required History credits	18
Required elective credits	24
General Education credits.....	40
Required minor with minimum credits.....	18
Elective credits	20
Total credits required for this degree	120

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 will include 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 and are qualified to do graduate study in history. The University has designated the Department of History as a Center of Excellence.

Required History Credits — 18 semester hours

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
HIST 480 Senior Seminar.....	3
<i>Select one of the following:</i>	
HIST 110 African Civilization.....	3
HIST 112 Asian Civilization I.....	3
HIST 113 Asian Civilization II.....	3
HIST 118 History of Mexico	3

Note that in addition to meeting the above program requirements, all history majors in their senior year must, for state mandated assessment purposes, take the nationally standardized history examination — or a departmentally approved equivalent — administered by the Department of History.

Required Elective Credits — 24 semester 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 at the 300- or 400-level.

Notes

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.

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.)

All history courses numbered 300 or higher will include a research and writing component.

The study of a foreign language is recommended for those majors who plan to pursue graduate study in history.

Bachelor of Arts in History

Emphasis in Teaching

Program Requirements	
Required History credits	18
Required supporting credits	24
Required elective credits	18
General Education credits:	
6 credits already included in requirements above	
Remaining	34
PTE requirements	37-39
Total credits required for this degree	137-139

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 clinical and 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 elementary or middle school teaching. The University has designated the Department of History as a Center of Excellence.

Required History Credits — 18 semester hours

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
HIST 480 Senior Seminar	3
<i>Select one of the following:</i>	
HIST 110 African Civilization	3
HIST 112 Asian Civilization I	3
HIST 113 Asian Civilization II	3
HIST 118 History of Mexico	3

Required Supporting Credits — 24 semester hours

<i>Social Sciences</i>	
ANT 100 General Anthropology	3
ECON 103 Introduction to Economics: Macroeconomics	3
GEOG 100 World Geography	3
PSCI 100 United States National Government	3
SOC 100 Principles of Sociology	3
SOSC 341 Teaching Secondary Social Sciences	3

Social Science electives: a minimum of two courses, numbered 200 or higher must be taken.

Required Elective Credits — 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.

In addition to meeting the above program requirements, all history majors in their senior year must, for state mandated assessment purposes, take the nationally standardized history examination — or a departmentally approved equivalent — administered by the Department of History.

Notes

No minor is required in the History Education program for students seeking elementary, middle school, or secondary school licensure.

All history courses numbered 300 or higher will include a research and writing component.

Professional Teacher Education (PTE) is required of this program.

The History Secondary Education major must have completed EPRE 345 and EDF 364 before taking EDLS 363 and SOSC 341.

No history major may apply for admission to the PTE 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 2.80 grade point average in major courses taken at UNC.

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.

Master of Arts in History

Program Requirements

Complete the required courses specified here.....3
 Complete program electives specified here27

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. The University has designated the Department of History as a Center of Excellence.

Required Courses — 3 semester hours

HIST 600 Introduction to Graduate Historical Study3

Elective Courses — 27 semester hours

Elective courses may be taken from any of the 500 or 600 numbered courses carrying a HIST prefix, or those 300-level HIST prefix courses, which are double-numbered, i.e., carry both 300/500 numbers in the catalog. Students are restricted to a nine hour limit on double-numbered courses.

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 and submitted to the graduate school. 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.

Each candidate for the master's degree will receive in his or her first week on campus a departmental "packet," containing a description of the program, a reading list to be mastered before the taking of the comprehensive examination or the thesis oral and a bank of comprehensive examination questions.

Thesis Option

Up to six hours may be earned in HIST 699 by writing a thesis on a subject that falls within the student's concentration. At least fifteen 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.

Candidates have one opportunity to retake a failed oral examination. At least one full semester must elapse between the failure of the first examination and the reexamination. A failing grade on the second examination will eliminate the student from the master's degree program in history.

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 hours of additional history courses at the 500/600 or the 300/500 levels 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.

Candidates have one opportunity to retake a failed written or oral examination. At least one full semester must elapse between the failure of the first examination and the re-examination. A failing grade on the second examination will eliminate the student from the master's degree program in history.

COMPREHENSIVE AND THESIS FIELDS IN HISTORY

European	United States	Africa/Asia/Latin American
Ancient	Colonial Period to the Present	Comprehensive or thesis to be developed with candidate's graduate advisor and committee.
Medieval		
Early Modern		
Modern		

Notes

Candidates must obtain a permit from the Graduate School allowing them to take their comprehensive examination. With the advisor's signature on the permit, the student must return the permit to the Graduate Office by 4 pm on the second Friday of the semester in which the written and oral, or thesis oral, examinations will be taken. At this time specific dates 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 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.

Students who do not bring to the graduate program at least twelve semester hours in history, but who hold a sufficiently high grade point average to be admitted to graduate study, may be admitted provisionally to the history master's degree program. Students in this category will be examined orally by a department committee during the first semester in residence. A pass recommendation by this committee will enable the department chair to request the Graduate Office to remove the provisional status. 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, University of Northern Colorado, Greeley, CO 80639. Other graduate scholarships may be applied for by writing to the Office of Student Financial Resources, University of Northern Colorado, Greeley, CO 80639.

Bachelor of Arts in Interdisciplinary Studies

Administered by the College of Arts and Sciences

Program Requirements

Required credits	3
Required elective credits	57
General Education credits.....	40
Elective credits	20
Total credits required for this degree	120

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 Credits — 3 semester hours

XXXX 422 Directed Studies.....	3
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(Must have regular prefix of appropriate area of study — with the departmental prefix of the primary advisor as supervising faculty.)

Required Elective Credits — 57 semester hours

Complete an approved, coherent multi- or interdisciplinary program of electives.

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.

Bachelor of Arts in Interdisciplinary Studies

Emphasis in International Trade and Relations

Program Requirements

Required core credits.....	45
Required concentration area elective credits	18
General Education credits.....	40
Elective credits	17
Total credits required for this degree	120

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 Core Credits — 45 semester hours

Select one of the following groups:

ECON 300 Intermediate Microeconomics	3
ECON 345 International Trade.....	3
or	
ECON 346 International Finance.....	3
ECON 350 Macroeconomics	3
QEOG 200 Human Geography	3
HIST 240 Modern America, 1914 to Present.....	3
PSCI 220 Introduction to International Relations.....	3
PSCI 318 The Politics of Developing States	3
SPCO 323 Intercultural Communication.....	3
Select one of the following groups:	
MATH 175 Topics in Finite Mathematics	3
MATH 176 Topics in Calculus	3
ECON 452 Econometrics	3
or	
SOC 352 Contemporary Social Theory	3
SOC 360 Computer Applications in the Social Sciences	3
SOC 362 Social Statistics.....	3

Foreign Language credits at the intermediate level.....	12
Thesis	3

Required Concentration Area Credits — 18 semester hours

In addition to the core requirements, the student is to take 18 additional hours (at least 1 course each in anthropology, geography, history and political science) in one of the following concentration areas that complements the student's language training. 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 15 hour requirement.

Concentration Area: African and Middle Eastern

ANT 110 World Cultures.....	3
ANT 310 World Area Study (Africa).....	3
BLS 104 Survey of Africa	3
BLS 332 Pan-Africanism	3
BLS 396 African and Afro-American Worldviews	3
ECON 250 Comparative Economic Systems	3
ECON 360 Economics of Growth and Development.....	3
QEOG 326 Africa	3
QEOG 392 Field Course in Geography (Africa and/or Middle East)	3
HIST 110 African Civilization.....	3
HIST 130 Middle East History I	3
HIST 131 Middle East History II	3
HIST 317 Themes on Middle East History.....	3
HIST 318 Modern Africa.....	3
PSCI 325 Conflict in the Middle East.....	3
PSCI 328 International Law and Organization	3

Concentration Area: Asian

ANT 110 World Cultures.....	3
ANT 313 Modernization and Development.....	4
ECON 250 Comparative Economic Systems	3
ECON 360 Economics of Growth and Development.....	3
QEOG 344 Asia — Topics.....	3
HIST 112 Asian Civilization I.....	3
HIST 113 Asian Civilization II.....	3

HIST 309 Modern Southeast Asia	3
HIST 310 Modern China	3
HIST 311 Modern Japan.....	3
HIST 313 India	3
HUM 115 Literature and Arts of the Orient.....	3
HUM 225 Studies in Asian Humanities.....	3
MIND 181 Great Traditions of Asia	3
PSCI 328 International Law and Organizations.....	3
SOC 270 World Population Problems.....	3

Concentration Area: European

ANT 110 World Cultures.....	3
ECON 250 Comparative Economic Systems	3
ECON 360 Economics of Growth and Development.....	3
FR 116 Contemporary France.....	3
QEOG 340 Europe.....	3
QEOG 365 Russia and Eurasia.....	3
QEOG 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 216 History of Spain and Portugal.....	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 Soviet History: 1917 to the Present	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 World Cultures.....	3
ANT 311 Ethnology of Hispanic Peoples.....	3
ECON 250 Comparative Economic Systems	3
ECON 360 Economics of Growth and Development.....	3
QEOG 335 Geography of Middle America	3
QEOG 392 Field Course in Geography (Latin America)	3
QEOG 438 South America	3
HISP 131 Latin American Civilization and Culture.....	3
HISP 141 Mexican Civilization and Culture.....	3
HISP 220 Women in Hispanic Society	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

Notes

At least one half of all courses (including both core and elective courses) taken must be at the 300- and 400-level. ECON 103 and 105 are prerequisites for ECON 300 and 350 to be taken under general education. Students who plan to attend graduate school may substitute MATH 131 and prerequisites for MATH 175 and 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.

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 15 hour requirement.

Students must formally apply to the ITR Committee (970-351-2572) 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.

Master of Science in Interdisciplinary Studies: Secondary Science Teaching

Program Requirements

Complete required semester hours in first science discipline12

Complete required semester hours in second science discipline.....12

Complete program elective semester hours specified below9

The Interdisciplinary Master of Science in Secondary Science Teaching is a comprehensive degree program coordinated by the UNC Mathematics and Science Teaching (MAST) Center. It provides post-baccalaureate education primarily focused on science content appropriate for secondary school teachers. Students in this program have access to resources available in the University's science departments (Biological Sciences, Chemistry and Biochemistry, Earth Sciences and Physics), Mathematical Sciences Department and related departments/divisions within the College of Education. The program is specifically designed to strengthen science content areas in which teachers may need additional background to meet current or future teaching responsibilities.

Admission

Applicants must follow the admission procedures outlined under "Admission to a Graduate Interdisciplinary Program" (see "Special Admission: Procedures and Requirements" in this Bulletin) and must meet the minimum admission requirement for the master's degree. Applications meeting minimum Graduate School admission requirements will be forwarded to the MAST Center for review and a subsequent recommendation regarding admission by the Graduate School. An applicant should have completed the equivalent of a baccalaureate program (including a professional teacher education core) in biological sciences, chemistry, earth sciences, or physics. Persons with deficiencies (see "Prerequisites" below) may be admitted, but all deficiencies must be removed before completion of the program.

Prerequisites

In addition to the above baccalaureate degree, entering students should have completed a minimum of 8 semester hours of courses in each of three supporting science areas, 8 semester hours in approved courses in mathematics and a professional teacher education core. Prerequisite supporting science area courses include the following UNC courses or their equivalents:

- Biological Sciences: BIO 110, 111
- Chemistry and Biochemistry: CHEM 111, 112
- Earth Sciences: AST 100, 301, 302; GEOL 100, 201, 202; MET 205, 306; OCN 200, 301, 302
- Physics: PHYS 220, 221

Required Courses — 24 semester hours (minimum)

The Interdisciplinary Master of Science in Secondary Science Teaching is a 33 semester hour program. Subject to approval of the student's program advisors, students must select a minimum of 12 semester hours of courses in each of two science disciplines (see below).

The selected courses should build upon the student's background and contribute to professional growth in secondary school science teaching. Graduate courses selected to satisfy the science discipline requirements must bear appropriate course prefixes (biological sciences: BIO, BOT, ZOO; chemistry: CHEM, CHED; earth sciences: AST, ESCI, GEOL, MET, OCN; physics: PHYS, approved SCI). UNC graduate courses in these areas are listed in this Bulletin.

A two-course research core (4 semester hours minimum) is required of each student in the program. One course must be selected from BIO 694, CHEM 600 (at least two semester hours), ESCI 600, or PHYS 661. The second course should be one of the following: BIO 697, BIO 699, CHEM 622, CHEM 699, ESCI 697, ESCI 699, or PHYS 622.

Required Elective courses — to complete 33 semester hours

In addition to the 24 hours of required courses, students must complete elective courses to satisfy the 33 semester hour requirement. Subject to approval by the student's program advisors and based on individual needs, electives may be taken in either the science disciplines or in supporting areas.

Notes

All students are required to pass written and oral comprehensive examinations covering the completed coursework.

All graduate school requirements for the interdisciplinary master's degree must be met. The degree awarded will be an Interdisciplinary Master of Science degree.

Individuals seeking such licensure should consult their program advisors. This master of science degree does not lead to Colorado teacher licensure.

Journalism and Mass Communications Major

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 end of the sophomore year or the beginning of the junior 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. The application is a five-step process.

1. As a pre-major:
 - a. complete at least 40 credit hours of university-level coursework.
 - b. receive a grade of "C" or better in either GEOG 100 or GEOG 110.
 - c. receive a grade of "C" or better in PSCI 100, PSCI 203, or PSCI 220.
 - d. receive a grade of "C" or better in ENG 122, HIST 101, JMC 100 and JMC 210.
 - e. pass the English Essay Examination.
2. Fill out the following two forms:
 - a. an "Application for Admission to Journalism and Mass Communications Major."
 - b. a "General Education Checklist."
 Both forms are available from the department in Candelaria Hall 123.
3. Write a letter of application. The letter should address your reasons for wishing to major in JMC and should state what qualities you possess that will contribute to your success as a major. Letters must be typewritten and must not exceed one page, single-spaced.

4. Secure copies of transcripts from all colleges and universities attended, other than UNC.
5. Mail or deliver all of the material noted above to the Department of Journalism and Mass Communications, Candelaria, Room 123, University of Northern Colorado, Greeley, CO 80639.

All of your materials 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.

The JMC department is committed to liberal arts education. For this reason, students majoring in the department may apply no more than 30 hours with a JMC prefix toward meeting the required 120 semester hours for graduation.

A JMC committee admits new majors based on eligibility, completeness and quality of application materials and space available in required courses. Should the number of qualified applicants exceed available space, the department may accept only those students ranking highest in their eligibility and in the quality of their application materials. The applicant's cumulative grade point average may be considered.

JMC students are also expected to take 65 of the total 120 hours needed for graduation in liberal arts courses outside the JMC department.

Bachelor of Arts in Journalism

Emphasis in News-Editorial

Program Requirements

Required Journalism credits.....	24
Required elective credits	6
General Education credits:	
12 credits already included in the requirements above	
Remaining	28
Required minor with minimum credits.....	18
Elective credits	44
Total credits required for this degree	120

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.

Required Journalism Credits — 24 semester hours

JMC 100 Introduction to Journalism and Mass Communications	3
JMC 210 Newswriting	3
JMC 310 Feature Writing for News Media	3
JMC 350 News Editing and Layout	3
JMC 390 Impact of Mass Communications on Society.....	3
JMC 397 Journalism History	3
JMC 410 Advanced News.....	3
JMC 497 Mass Communications Law	3

Required Elective Credits — 6 semester hours

<i>Group A — News-Editorial Elective Credits (select one of the following):</i>	
JMC 340 Broadcast Newswriting	3
JMC 380 Public Relations	3
JMC 422 Journalism and Mass Communications Directed Study	3
JMC 460 Media Management.....	3
JMC 492 Journalism and Mass Communications Internship	3
(Internship strongly recommended)	
ART 271 Basic Photography.....	3
<i>Group B — Journalism and Mass Communications Elective Credits</i>	
Take one additional course with a JMC prefix	3

Bachelor of Arts in Journalism

Emphasis in Public Relations and Advertising Media

Program Requirements	
Required Journalism credits	24
Required elective credits	6
General Education credits:	
12 credits already included in requirements above	
Remaining	28
Required minor with minimum credits	18
Elective credits	44
Total credits required for this degree	120

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.

Required Journalism Credits — 24 semester hours	
JMC 100 Introduction to Journalism and Mass Communications	3
JMC 210 Newswriting	3
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
JMC 497 Mass Communications Law	3

Bachelor of Arts in Journalism

Emphasis in Telecommunications

Program Requirements	
Required Journalism credits	23
Elective credits	44-45
Required elective credits	6-7
General Education credits:	
12 credits already included in requirements above	
Remaining	28
Required minor with minimum credits	18
Total credits required for this degree	120

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.

Required Elective Credits — 6 semester hours

Group A — Select one of the following:	
JMC 390 Impact of Mass Communications on Society	3
JMC 391 Literary Journalism	3
JMC 397 Journalism History.....	3
Group B — Select one of the following:	
JMC 310 Feature Writing for News Media	3
JMC 387 Advertising Copywriting	3
JMC 484 Advertising and Society.....	3
JMC 492 Internship	3
<i>(Internship strongly recommended)</i>	

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
SPCO 444 Argumentation Theory	3

Required Journalism Credits — 23 semester hours

JMC 100 Introduction to Journalism and Mass Communications	3
JMC 210 Newswriting	3
Select one of the following:	
JMC 241 Radio Production and Broadcast Announcing	3
JMC 340 Broadcast Newswriting.....	3
JMC 342 Television Production.....	4
JMC 390 Impact of Mass Communications on Society.....	3
JMC 443 Electronic Field Production	4
JMC 497 Mass Communications Law	3

Required Elective Credits — 6-7 semester hours

Take additional hours in courses with JMC prefixes.
(JMC 492 Internship is strongly recommended)

Bachelor of Arts in Mathematics

Emphasis in Actuarial Science

Required Mathematics credits	30
Required supporting credits	26
General Education credits.....	40
Elective credits	24
Total credits required for this degree	120

This program is designed to give students a basic understanding of the mathematical, statistical and financial knowledge needed to enter the actuarial field. Coursework will cover the material of the first 110 credits of the Society of Actuaries exam sequence.

Students completing the degree will be prepared to enter the actuarial field where there are employment possibilities with insurance firms, the federal government, or local government.

Required Mathematics Credits — 30 semester hours

MATH 131 Calculus and Analytic Geometry I	4
MATH 132 Calculus and Analytic Geometry II	4
MATH 221 Elementary Linear Algebra	3
MATH 233 Calculus and Analytic Geometry III	4
MATH 305 Mathematics of Finance.....	3
MATH 350 Elementary Probability Theory.....	3
MATH 351 Elementary Statistics Theory.....	3
MATH 375 Elementary Numerical Analysis.....	3
MATH 437 Mathematical Modeling	3

Bachelor of Arts in Mathematics

Emphasis in Applied Statistics

Program Requirements

Required Mathematics credits	24
Statistics Core credits.....	10
Required elective credits (minimum)	5
General Education credits.....	40
Elective credits	41
Total credits required for this degree	120

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.

This 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.

Completion of this degree will prepare the student 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.

Required Supporting Credits — 26 semester hours

<i>Required Statistics Credits — 8 semester hours</i>	
STAT 311 Basic Statistical Methods.....	4
STAT 495 Topics in Applied Statistics: (e.g., Time Series, Operations Research)	4
<i>Required Finance Credits — 6 semester hours</i>	
BAFN 231 Legal Environment of Business.....	3
BAFN 340 Principals of Risk and Insurance.....	3
<i>Required Economics Credits — 6 semester hours</i>	
ECON 103 Introduction to Economics: Macroeconomics	3
ECON 105 Introduction to Economics: Microeconomics	3
<i>Required Computer Science Credits — 6 semester hours</i>	
CG 115 FORTRAN 77 Programming.....	3
CS 395 Special Topics in Computer Science: (APL).....	3

Required Mathematics Credits — 24 semester hours

MATH 131 Calculus and Analytic Geometry I	4
MATH 132 Calculus and Analytic Geometry II	4
MATH 221 Elementary Linear Algebra	3
MATH 228 Discrete Mathematics	3
MATH 233 Calculus and Analytic Geometry III	4
MATH 350 Elementary Probability Theory.....	3
MATH 351 Elementary Statistics Theory	3

Statistics Core Credits — 10 semester hours

STAT 311 Basic Statistical Methods	4
STAT 406 Multiple Linear Regression	3
STAT 409 Sampling Techniques	3

Required Elective Credits — 5 semester hours (minimum)

MATH 335 Differential Equations I.....	3
STAT 495 Topics in Applied Statistics	1-4
MATH 437 Mathematical Modeling	3

Note

Other elective courses may be taken with the approval of the advisor.

Bachelor of Arts in Mathematics

Emphasis in Computer Science

Program Requirements

Required Mathematics credits	27
Required Computer Science credits	30
General Education credits.....	40
Elective credits	23
Total credits required for this degree	120

This emphasis provides the student with an opportunity to obtain specialization within the mathematics major. It extends student knowledge of mathematical applications by focusing on computer sciences, including engineering software, methods of computer science, and elements of computer hardware.

Required Mathematics Credits — 27 semester hours

MATH 131 Calculus and Analytic Geometry I	4
MATH 132 Calculus and Analytic Geometry II	4
MATH 221 Elementary Linear Algebra	3
MATH 228 Discrete Mathematics	3
MATH 233 Calculus and Analytic Geometry III	4
MATH 350 Elementary Probability Theory.....	5
MATH 351 Elementary Statistics Theory	3
MATH 375 Elementary Numerical Analysis.....	3

Bachelor of Arts in Mathematics

Emphasis in Elementary/Middle School Teacher Education

Program Requirements

Required Mathematics credits	38
General Education credits:	
Regular	40
Additional	7
PTE Requirements	37-39
Other Licensure credits.....	21
Total credits required for this degree	143-145

This program is designed for prospective elementary/middle school 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 elementary/middle school level.

Required Mathematics Credits — 38 semester hours

<i>Select one of the following:</i>	
CG 110 BASIC Programming	3
CG 120 Pascal Programming	3
CG 125 LOGO Programming	3
MATH 131 Calculus and Analytic Geometry I	4
MATH 132 Calculus and Analytic Geometry II	4
MATH 181 Fundamentals of Mathematics I.....	3
MATH 182 Fundamentals of Mathematics II.....	3
MATH 221 Elementary Linear Algebra	3
MATH 228 Discrete Mathematics	3
MATH 283 Informal Geometry	3
MATH 341 Introduction to Modern Geometry	4
MATH 395 Topics in Mathematics for Teachers	3
MATH 464 Introduction to History of Mathematics.....	2
STAT 150 Introduction to Statistical Analysis	3

Required Computer Science Credits — 30 semester hours

CS 101 Introduction to Computer Science	3
CS 102 Structured Analysis, Design, and Programming	3
CS 200 Object-Oriented Analysis, Design, and Programming.....	3
CS 222 Computer Organization	3
CS301 Algorithms and Data Structures	3
CS 302 Programming Languages	3
CS 350 Software Engineering	3
CS 440 Operating Systems	3
CS 442 Networking	3
CS 497 Senior Project.....	1-8

Notes

Students majoring in mathematics who plan to teach in the elementary/middle school must complete the requirements as stated in this Bulletin for licensure as an elementary/middle school teacher.

For admission to PTE the student must:

- have completed at UNC at least two content courses that may count toward the MATH major;
- have a GPA of at least 2.50 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 2.50 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 PTE, 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 Bulletin as required courses for the major, or as program electives in the major.

Bachelor of Arts in Mathematics

Emphasis in Liberal Arts

Program Requirements

Required Mathematics credits	45
General Education credits.....	40
Elective credits	35
Total credits required for this degree	120

This program permits students to acquire the standard concepts of undergraduate mathematics including calculus, linear and abstract algebra, discrete mathematics, probability and statistics.

A graduate of this program is prepared to enter a graduate program in mathematics or some other disciplines such as statistics. A graduate 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.

Bachelor of Arts in Mathematics

Emphasis in Secondary Teacher Education

Program Requirements

Required credits	43
General Education credits.....	40
PTE Requirements	37-39
Total credits required for this degree	120-122

This program prepares students to teach mathematics, such as arithmetic, algebra, geometry, trigonometry and mathematical analysis 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 through trigonometry 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 certified to teach mathematics in grades 7-12 in the state of Colorado. The program also prepares students for graduate study in mathematics education.

Required Credits — 43 semester hours

CQ 120 Pascal Programming.....	3
MATH 131 Calculus and Analytic Geometry I	4
MATH 132 Calculus and Analytic Geometry II	4
MATH 221 Elementary Linear Algebra	3
MATH 228 Discrete Mathematics	3
MATH 233 Calculus and Analytic Geometry III	4
MATH 321 Introduction to Abstract Algebra	4
MATH 341 Introduction to Modern Geometry	4
MATH 350 Elementary Probability Theory.....	3
MATH 351 Elementary Statistics Theory.....	3
MATH 437 Mathematical Modelling	3
MATH 464 Introduction to History of Mathematics.....	2
MED 441 Methods of Teaching Mathematics	3

Required Mathematics Credits — 45 semester hours

MATH 131 Calculus and Analytic Geometry I	4
MATH 132 Calculus and Analytic Geometry II	4
MATH 221 Elementary Linear Algebra	3
MATH 228 Discrete Mathematics	3
MATH 233 Calculus and Analytic Geometry III	4
MATH 321 Introduction to Abstract Algebra.....	4
MATH 335 Differential Equations I.....	3
MATH 350 Elementary Probability Theory.....	3
MATH 351 Elementary Statistics Theory.....	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

Notes

Students must meet all requirements for Professional Teacher Education as specified in this Bulletin, including EDLS 363 Clinical Experience: Secondary, 2 hours.

For admission to PTE, the student must:

- have completed MATH 131 and 132 (with a grade of C or better);
- have completed at UNC at least two content courses that may count toward the Math major;
- have a GPA of at least 2.50 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, 321 and 341;
- satisfactorily completed MED 441 and EDLS 363;
- a GPA of at least 2.50 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 PTE, 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 Bulletin 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.

Master of Arts in Mathematics

Emphasis in Liberal Arts

Program Requirements

Complete the required credits specified here.....17
 Complete program electives specified here13

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.

Admission

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.

Master of Arts in Mathematics

Emphasis in Teaching

Program Requirements

Complete the required credits specified here.....15
 Complete program electives specified here15

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.

Admission

Generally a B.A. in mathematics or mathematics education with strong mathematics courses is required for admission to this program. Students without the B.A. 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.

Required Credits — 15 semester hours

MATH 528 Discrete Mathematics3
 MATH 534 Continuous Mathematics3
 MATH 543 Modern Geometry3
 MED 600 Research: Math Education.....3
 STAT 550 Applied Probability and Statistics.....3
 Note that Med 600 satisfies the Graduate School requirements, Introduction to Graduate Studies.

Elective Credits — 15 semester hours

At least five semester hours must be selected from group A and at least six semester hours must be selected from group B.

Required Credits — 17 semester hours

MATH 523 Modern Algebra I.....3
 MATH 525 Linear Algebra I.....3
 MATH 540 Introduction to Topology3
 MATH 545 Introductory Analysis.....3
 MATH 560 Introduction to Complex Variables.....3
 MATH 510 Seminar in Mathematics.....2

Required Elective Credits — 13 semester 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.

Group A

MATH 520 Functions and Equations2
 MATH 521 Vectors and Matrices2
 MATH 529 Mathematical Problem Solving.....2
 MATH 537 Mathematical Modeling.....3
 MATH 591 Abstract Algebra and Number Theory3

Group B

MED 528 Teaching Discrete Mathematics2
 MED 534 Teaching Algebra and Trigonometry2
 MED 543 Teaching Geometry2
 MED 550 Teaching Probability and Statistics.....2
 MED 595 Teaching Advanced Topics in Secondary Mathematics2
 MED 673 Preparation of Mathematics Specialists in Grades K-82

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.

Master of Science in Applied Statistics and Research Methods

Emphasis in Operations Research

Program Requirements

Complete the required credits specified here.....22
 Complete program electives specified here8

This program is designed to acquaint professional career personnel with concepts, skills and experiences essential to operations research and management science processes. This program concentrates on a mixture of theoretical foundations and applications of statistical techniques to fields such as education, physical sciences, social sciences and business. A particular emphasis in the area of operations research will be provided.

Completion of this degree will enable a student to seek employment in a career field requiring operations research and management science expertise, to teach in a community or junior college, or to enter a Ph.D. program in a related area.

Admission

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

- A working knowledge of a programming language or a course in statistical software.
- An essay of approximately 500 words addressing their interest in the master of Science in Applied Statistics and Research Methods degree program and their educational goals.
- A bachelor's degree in mathematics or its equivalent.

Required Credits — 22 semester hours

STAT 501 Statistical Methods I	4
STAT 502 Statistical Methods II	4
STAT 511 Mathematical Statistics with Applications I.....	4
STAT 512 Mathematical Statistics with Applications II.....	4
STAT 604 Advanced Experimental Design	3
STAT 606 Multiple Linear Regression Models	3

Note that students may substitute another approved course to fulfill the Graduate School requirement for introduction to graduate studies.

Required Elective Credits — 8 semester hours

STAT 605 Multivariate Analysis I	3
STAT 607 Nonparametric Statistics.....	3
STAT 609 Sampling Methods I.....	3
STAT 615 Multivariate Analysis II	3
STAT 641 Seminar in Operations Research	3
STAT 641 Seminar in Decision Theory	3
STAT 689 Internship in Applied Statistics	3

Notes

Other electives may be taken with approval of the advisor.

Three-hour written comprehensive examinations are required in each of the following areas:

- a. STAT 511, 512
- b. STAT 501, 502
- c. STAT 604, 606, electives

Note that STAT 604 is a more advanced version of EPRE 600 and will substitute for this graduate school requirement.

Doctor of Philosophy in Applied Statistics and Research Methods

Program Requirements

Complete the required credits specified here.....58
 Complete program electives specified here12

The Doctor of Philosophy degree program is designed to produce the critical thinker with expertise to do scholarly research and/or to teach in advanced academic programs. This degree will focus on measurement and research methods to solve problems in other fields with particular emphasis on educational research.

The graduate will be qualified to serve as a statistical analyst in fields of application depending on the student's background. The graduate will have expertise in the field of educational testing and measurements and will be able to seek employment as a professor in institutions of higher education in areas that require knowledge of research methods applied to other disciplines such as education.

Admission

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

- A working knowledge of a programming language or a course in statistical software.
- A master's degree in statistics or its equivalent.
- An essay of approximately 500 words addressing their interest in the Doctor of Philosophy in Applied Statistics and Research Methods degree program and their educational goals.

Required Credits — 58 semester hours

EPRE 610 Statistical Applications in Educational Research.....3
 EPRE 700 Advanced Research Methods.....3
 STAT 502 Statistical Methods II4
 STAT 611 Advanced Theory of Statistics I4
 STAT 612 Advanced Theory of Statistics II4

STAT 604 Advanced Experimental Design3
 STAT 605 Multivariate Analysis I3
 STAT 606 Multiple Linear Regression Models3
 STAT 607 Nonparametric Statistics.....3
 STAT 609 Sampling Methods I.....3
 STAT 615 Multivariate Analysis II3
 STAT 797 Doctoral Proposal Research.....4
 STAT 799 Doctoral Dissertation.....12

Required Elective Credits — 12 semester hours

To be taken with approval of advisor

Additional Requirements:

- Enrollment in a full load of courses for four semesters on campus at some time during the program.
- A declaration of emphasis on plan of study.
- A submission of doctoral research proposal (STAT 797) before completion of 50 semester hours.
- Four-hour written comprehensive examinations in each of four areas:
 - a. STAT 611, 612
 - b. EPRE 674, 675, 700
 - c. STAT 604, 605, 615
 - d. STAT 606, 607, 609 and electives.
- A two-hour oral comprehensive examination.
- A dissertation that demonstrates an original contribution to the field of applied statistics and research methods.
- A two-hour oral defense of the dissertation.

Note

Comprehensive written and/or oral examination and dissertation defenses are scheduled only during the academic year.

Doctor of Philosophy in Educational Mathematics

Program Requirements

Complete content courses and seminars in mathematics specified here	26
Complete courses and seminars in education specified here	19
Complete dissertation work	16
Additional electives.....	6
Complete research tool requirements to total.....	67

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.

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 course work 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.

Content Core — 26 hours

A. Minimum of 18 hours from the following — Students will select courses with these restrictions:	18
a) Four of the five initial courses of the sequences must be completed.	
b) At least one of the first three sequences must be completed.	
c) At least one of the last three sequences must be completed.	
d) A minimum of two sequences must be completed.	
MATH 635 Real Analysis.....	3
and	
MATH 736 Topics in Analysis.....	3
MATH 633 Geometric Analysis	3
and	
MATH 644 Differential Geometry.....	3
MATH 632 Complex Analysis.....	3
and	
MATH 691 Number Theory.....	3
MATH 623 Topics in Advanced Algebra	3
and	
MATH 727 Representation Theory.....	3
MATH 678 Mathematical Logic.....	3
and	
MATH 728 Topics in Discrete Mathematics	3
B. Math 700 Seminar2	
C. Additional 6 hours selected from the courses listed above; and from the following	
MATH 609 Symmetry in Mathematics.....	3
MATH 664 Difference Equations and Chaos	3
MATH 695 Special Topics	3
at most one of	
MATH 525 Linear Algebra	3
MATH 529 Mathematical Problem Solving.....	2
MATH 540 Introduction to Topology.....	3
MATH 564 Topics in History of Mathematics.....	3

Educational Core — minimum 19 semester hours

A. Required Courses — 9 hours	
MED 600 Survey of Research in Mathematics Education.....	3
MED 700 Advanced Seminar: Cognitive Processes.....	2
MED 701 Mathematical Research Design and Analysis.....	3
MED 710 Seminar in Post-Secondary Mathematics Teaching	1

B. Elective Courses — 10 hours

MED 622 Directed Studies.....	1-3
MED 630 Technology in Mathematics Education	3
MED 673 Preparation of Mathematics Education Specialists for Grades K-8	3
MED 674 Teaching and Learning Mathematics on the Secondary School Level	3
MED 675 Teaching and Learning Mathematics on the Post-Secondary School Level	3
MED 678 Special Topics in Mathematics Education	1-3
MED 750 Philosophy of Educational Mathematics	2
MED 765 Mathematical Structures	3

Dissertation — 16 semester 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 67 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	
STAT 502 Statistical Methods (or approved equivalent)	4
STAT 604 Advanced Experimental Design (or approved equivalent)	3
MED 701 Educational Mathematics Research.....	3

Select One Additional Tool

- B. *Computer Science* — Student's doctoral committee will approve combination of computer experience and/or course work to satisfy computer proficiency.
- C. *Foreign Language* — ETS exam result at or above 50th percentile in one of the following foreign languages: German, French, Russian. Other languages with the approval of the student's doctoral committee.
- D. *Collateral Fields* — Contact the departmental graduate coordinator for a detailed list of approved courses in cognition and instruction; measurement and evaluation; psychology and human development; and curricula. The list currently includes 14 EPRE courses and 3 MED courses.

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 EPRE 700 requirement.

MED 710 is normally taken the first semester of a student's program

The department written comprehensive examination will consist of two four-hour exams over two completed sequences (student's choice) from the mathematics content core; and a three-hour exam over the courses MED 600, MED 700, MED 701, and a list of required readings. The oral examination will be given upon successful completion of the written examination, will cover the entire program of the candidate, and may be up to two hours in length.

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.

Bachelor of Arts in Medical Technology

Program Requirements

Required Medical Technology credits.....	30
Required supporting credits.....	45-46
Required elective credits.....	5-7
General Education credits:	
Specified.....	12-13
Remaining.....	27-28
Total credits required for this degree.....	120-123

This program is administered by the Department of Chemistry and Biochemistry.

The program is designed to prepare students as practicing medical technologists 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 receive a Bachelor of Arts Degree in Medical Technology and be prepared to take the registry exam of the ASCP. After passing the ASCP registry exam, career opportunities will be found in hospitals, physicians' offices, private laboratories and research organizations; as technical representatives for laboratory supply companies; or as educators of future medical technologists.

Required Medical Technology Credits — 30 semester hours

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 Supporting Credits — 45-46 semester hours

<i>Biology Credits: 20 semester hours</i>	
BIO 111 Survey of Organismal Biology.....	5
BIO 351 Microbiology.....	4
BIO 458 Diagnostic Microbiology.....	4
ZOO 341 Human Anatomy.....	3
ZOO 350 Human Physiology.....	4

Chemistry Credits: 25-26 semester hours

CHEM 112 Principles of Chemistry II.....	5
or CHEM 115 General Chemistry II.....	4
CHEM 208 Fundamentals of Human Biochemistry.....	5
CHEM 321 Chemical Analysis.....	4
CHEM 331 Organic Chemistry I.....	5
CHEM 332 Organic Chemistry II.....	5
BCHM 381 Immunology.....	2

Required Elective Credits — 5-7 semester hours

Biology Credits: 3-4 semester hours

One elective course in biology is required and must come from this list.

BIO 220 Genetics.....	3
ZOO 333 General Parasitology.....	4
ZOO 355 Medical Pharmacology.....	3

Computer Science: 2-3 semester hours

A course in computer science must be selected with the consent of the advisor.

General Education, Specified — 12-13 semester hours

Category 2 — Mathematics

MATH 124 College Algebra.....	4
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Category 6 — Science and Mathematics

BIO 110 Principles of Biology.....	4
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Select one of the following:

CHEM 111 Principles of Chemistry I.....	5
CHEM 114 General Chemistry I.....	4

Note that MATH 124, BIO 110 and CHEM 111 or CHEM 114 will also be counted as part of the major requirements. A course in scientific/technical writing is recommended to complete the Category 1b — Intermediate Composition requirement.

Notes

Students completing the required biology courses including the biology elective above will be eligible for a minor in biology.

Students completing the required chemistry courses will be eligible for a minor in chemistry.

Before enrolling for the MTEC courses, a student must have completed all other required courses, maintained a minimum of a 2.7 GPA and be admitted to an ASCP accredited hospital program.

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

Bachelor of Arts in Philosophy

Program Requirements

Required Philosophy credits	24
Required elective credits	9
General Education credits.....	40
Required minor with minimum credits.....	18
Elective credits	29
Total credits required for this degree	120

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 become capable of such serious reflection.

The major is intended to prepare students who are interested in pursuing a study of philosophy at the graduate level. It is valuable both for students interested in philosophy in its own right and for pre-professional students — especially those who intend to study law. Many students who fit either of these categories find philosophy a particularly valuable second major because of the ways in which its study can increase one's ability to investigate fundamental issues in any specific area of study or non-academic endeavor.

Required Philosophy Credits — 24 semester hours

PHIL 240 Formal Logic I.....	3
PHIL 241 Formal Logic II	3
PHIL 260 History of Ancient Philosophy.....	3
PHIL 261 History of Modern Philosophy	3
PHIL 350 Ethics.....	3
PHIL 385 Epistemology.....	3
PHIL 390 Metaphysics	3
PHIL 495 Advanced Seminar.....	3

Required Elective Credits — 9 semester 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 115 Philosophy and Current Affairs	1-3
PHIL 220 Nature of Legal Reasoning.....	3
PHIL 300 Topics in Philosophy	3
PHIL 305 Ethics in Theory and Practice.....	3
PHIL 352 Business Ethics.....	3
PHIL 355 Social and Political Philosophy	3
PHIL 370 Philosophy of Religion	3
PHIL 422 Directed Studies	3
PHIL 497 Student Internship.....	1-3

Notes

A minor of at least 18 hours is required. The minor should be chosen in consultation with the major advisor. No minor is required if the philosophy major is part of a double major.

In addition, the Department of Philosophy recommends that philosophy majors take at least two years of a foreign language — preferably French or German.

Electives should be chosen in consultation with the major advisor. No more than 6 credit hours of PHIL 497 may be counted toward the major.

Bachelor of Arts in Physical Science Emphasis in Teaching

Program Requirements, Elementary Education

Required Physical Science credits.....	33
Required supporting credits.....	21-22
PTE program.....	37-39
Additional Licensure credits.....	21
General Education credits:	
Specified.....	3
Remaining.....	28-29
Total credits.....	143-148

Program Requirements, Middle School Education

Required Physical Science credits.....	33
Required supporting credits.....	21-22
PTE program.....	37-39
Additional Licensure credits.....	22
General Education credits:	
Specified.....	3
Remaining.....	22
Total credits.....	138-141

Program Requirements, Secondary Education

Required Physical Science credits.....	33
Required supporting credits.....	27
PTE program.....	37-39
General Education credits:	
Specified.....	3
Remaining.....	22
Total credits.....	124-126

A graduate with this degree and licensure at the elementary/middle school level could become a teacher or science coordinator at an elementary or middle school. 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. 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.

Required Credits — 33 semester hours

CHEM 111 Principles of Chemistry I.....	5
CHEM 112 Principles of Chemistry II.....	5
CHEM 331 Organic Chemistry I.....	5
CHED 495 Seminar in Teaching Chemistry.....	2
PHYS 220 Introductory Physics I.....	5
PHYS 221 Introductory Physics II.....	5
PHYS 301 Seminar in Physics.....	1
PHYS 321 Elementary Modern Physics.....	3
PHYS 475 Seminar in Teaching Physics.....	2

Required Supporting Credits — 19-20 semester hours

AST 301 Classical Astronomy.....	3
BIO 110 Principles of Biology.....	4

Required Supporting Credits for Elementary and Middle School

Licensure — 14 or 15 semester hours	
MATH 125 Plane Trigonometry.....	3
or	
MATH 131 Calculus and Analytic Geometry I.....	4
SCED 470 Teaching Science in the Elementary School.....	3
ESCI 265 Earth Science Concepts for Elementary Teachers.....	3
BIO 265 Biological Science Concepts for Elementary Teachers.....	3
PHYS 422 Directed Studies: Lab Assistantship.....	2

Required Supporting Credits for Secondary School

Licensure — 20 semester hours	
MATH 131 Calculus and Analytic Geometry I.....	4
SCED 441 Methods of Teaching Secondary School Science.....	3
<i>Elective in computer programming.....</i>	3
<i>Elective in Physics or Chemistry.....</i>	3
<i>Elective in Biology, selected from the following courses.....</i>	3
BIO 111 Survey of Organismal Biology	
BIO 220 Genetics	
BOT 270 Economic Botany	
ZOO 245 Introduction to Human Anatomy	
<i>Elective in Earth Science, selected from the following courses.....</i>	4
GEOL 201 Physical Geology	
MET 205 General Meteorology	
OCN 200 General Oceanography	
OCN 201 Physical and Chemical Oceanography	
OCN 302 Geological and Biological Oceanography	

General Education, Specified — 3 semester hours

<i>Category 7a — Interdisciplinary</i>	
ENST 225 Energy and the Environment.....	3

Recommended Courses

MATH 132 Calculus and Analytic Geometry II.....	4
or	
MATH 395 Topics in Mathematics for Teachers.....	3

Notes

PTE is required for this program. The student should take PTE program specific to the grade level desired for licensure. All Physical Science majors seeking elementary licensure are exempt from taking SCI 265 as a general education requirement. All electives require approval of the student's advisor.

PHYS 240 and PHYS 241 may be substituted for PHYS 220 and PHYS 221. PHYS 345 may be substituted for PHYS 321. These substitute courses require additional calculus.

To complete this major in four years would require careful planning of one's schedule.

Bachelor of Arts in Physics

Emphasis in Computer Science

Program Requirements	
Required Physics credits	51
Required supporting credits	35
Required elective credits	6
General Education credits:	
13 credits already included in requirements above	
Remaining	27
Elective credits	1
Total credits required for this degree	120

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.

A thesis, completed as part of PHYS 470, is required for this major.

Required Physics Credits — 51 semester hours	
PHYS 240 General Physics I	5
PHYS 241 General Physics II	5
PHYS 301 Seminar in Physics	1
PHYS 320 Mathematics Applications	3
PHYS 321 Elementary Modern Physics	3
PHYS 340 Mechanics I	3

Bachelor of Arts in Physics

Emphasis in Engineering Physics

Program Requirements	
Required Physics credits	62
Required supporting credits	28
Required elective credits	3
General Education credits:	
13 credits already included in requirements above	
Remaining	27
Total credits required for this degree	120

The Engineering emphasis of the BA 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. A thesis, completed as part of PHYS 470 is required for this major.

Required Physics Credits — 62 semester hours	
PHYS 240 General Physics I	5
PHYS 241 General Physics II	5
PHYS 301 Seminar in Physics	1
PHYS 310 Machining Skills	2
PHYS 320 Mathematical Applications	3
PHYS 321 Elementary Modern Physics	3
PHYS 340 Mechanics I	3
PHYS 341 Electricity and Magnetism I	3
PHYS 343 Alternating Current and Electronics	4
PHYS 345 Atomic and Quantum Physics	5
PHYS 347 Optics	4

PHYS 341 Electricity and Magnetism I	3
PHYS 343 Alternating Current and Electronics	4
PHYS 345 Atomic and Quantum Physics	5
PHYS 347 Optics	4
PHYS 440 Mechanics II	2
PHYS 420 Thermodynamics and Statistical Physics	3
PHYS 441 Electricity and Magnetism II	2
PHYS 443 Electronic Systems and Controls	4
PHYS 470 Senior Research	4

Required Supporting Credits — 35 semester hours

CG 115 FORTRAN 77 Programming	3
or CG 120 Pascal Programming	3
CHEM 111 Principles of Chemistry I	5
CS 102 Structured Programming	3
CS 200 Object-Oriented Analysis Design and Programming	3
CS 222 Computer Architecture/Organization	3
CS 480 Graphics	3
MATH 131 Calculus and Analytic Geometry I	4
MATH 132 Calculus and Analytic Geometry II	4
MATH 233 Calculus and Analytic Geometry III	4
MATH 375 Elementary Numerical Analysis	3

Required Elective Credits — 6 semester hours

Electives in Computer Science numbered above 300 (consent of advisor)	6
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Note

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 CG 115 or CG 120 before CS 102.

PHYS 420 Thermodynamics and Statistical Physics	3
PHYS 440 Mechanics II	2
PHYS 441 Electricity and Magnetism II	2
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 — 28 semester hours

Select one of the following:

CG 115 FORTRAN 77 Programming	3
CG 120 Pascal Programming	3
CHEM 111 Principles of Chemistry I	5
CHEM 112 Principles of Chemistry II	5
MATH 131 Calculus and Analytic Geometry I	4
MATH 132 Calculus and Analytic Geometry II	4
MATH 233 Calculus and Analytic Geometry III	4
MATH 335 Differential Equations I	3

Required Elective Credits — 3 semester hours

Elective Credits in Mathematics (consent of advisor)	3
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General Education, Specified (recommended)

Category 7a — Interdisciplinary

ENST 225 Energy and the Environment	3
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Notes

Students planning to enter graduate school in physics are strongly advised to take PHYS 449, Quantum Mechanics II.

HON 451 may be substituted for PHYS 470. A research advisor in the Physics department is required in either case

Bachelor of Arts in Physics

Emphasis in Liberal Arts

Required program/major credits	48
Required supporting credits	20
Required upper division elective credits	12
General Education credits:	
13 credits already included in requirements above	
Remaining	27
Elective credits	13
Total credits required for this degree	120

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.

A thesis, completed within PHYS 301, 422 or 470 or HON 451 is required for this major.

Required Physics Credits — 48 semester hours	
PHYS 240 General Physics I	5
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

Bachelor of Arts in Physics

Emphasis in Mathematical Physics

Program Requirements	
Required Physics credits	47
Required supporting credits	36
Required elective credits	10
General Education credits:	
10 credits already included in requirements above	
Remaining	30
Total credits required for this degree	123

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. A thesis, completed within PHYS 301, 422 or 470 or HON 451 is required for this major.

Required Credits — 47 semester hours	
PHYS 240 General Physics I	5
PHYS 241 General Physics II	5
PHYS 301 Seminar in Physics	1
PHYS 320 Mathematical Applications	3
PHYS 321 Elementary Modern Physics	3

PHYS 343 Alternating Current and Electronics	4
PHYS 345 Atomic and Quantum Physics	5
PHYS 347 Optics	4
PHYS 420 Thermodynamics and Statistical Physics	3
PHYS 440 Mechanics II	2
PHYS 441 Electricity and Magnetism II	2
PHYS 445 Nuclear and Condensed Matter Physics	5

Required Supporting Credits — 20 semester hours

CHEM 111 Principles of Chemistry I	5
CG 115 FORTRAN 77 Programming	3
or CG 120 Pascal Programming	3
MATH 131 Calculus and Analytic Geometry I	4
MATH 132 Calculus and Analytic Geometry II	4
MATH 233 Calculus and Analytic Geometry III	4

Upper Division Required Elective Credits — 12 semester hours

Elective Credits in Physics (consent of advisor)	6
Elective Credits in Mathematics (consent of advisor)	6

General Education, Specified (recommended)

<i>Category 7a — Interdisciplinary</i>	
ENST 225 Energy and the Environment	3

Notes

Students planning to enter graduate school in physics are strongly advised to take PHYS 449, Quantum Mechanics II.

PHYS 470 Senior Research (2-4 semester hours) is recommended.

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 440 Mechanics II	2
PHYS 441 Electricity and Magnetism II	2
PHYS 445 Nuclear and Condensed Matter Physics	5
PHYS 449 Advanced Quantum Mechanics	3

Required Supporting Credits — 36 semester hours

CHEM 111 Principles of Chemistry I	5
CG 115 FORTRAN 77 Programming	3
or CG 120 Pascal Programming	3
MATH 131 Calculus and Analytic Geometry I	4
MATH 132 Calculus and Analytic Geometry II	4
MATH 233 Calculus and Analytic Geometry III	4
MATH 335 Differential Equations I	3
MATH 221 Elementary Linear Algebra	3
MATH 321 Introduction to Abstract Algebra	4
MATH 460 Introduction to Complex Analysis	3
MATH 495 Topics in Mathematics (Math Meth Phys)	3

Upper Division Required Elective Credits — 10 semester hours

Elective Credits in Physics (consent of advisors)	4
Elective Credits in Mathematics (consent of advisors)	6

Bachelor of Arts in Physics

Emphasis in Teaching

Program Requirements	
Required Physics credits	38
Required supporting credits	28
Required elective credits	8
General Education credits:	
15 credits already included in requirements above	
Remaining	25
PTE program	37-39
Total credits required for this degree	136-138

The program emphasizes the laws and principles of physics and the communication of these to high school students. The degree also contains enough breadth to meet the qualifications to teach physics and other sciences at the junior and senior high school levels.

The B.A. in Physics-Teaching prepares the candidate to teach physics and other sciences at the secondary level (grades 7-12). With additional physics and mathematics courses, students could qualify for graduate study in physics and for employment in industry or governmental research laboratories. A thesis is required for this degree.

Required Credits — 38 semester hours

PHYS 240 General Physics I.....	5
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 343 Alternating Current and Electronics	4
PHYS 345 Atomic and Quantum Physics.....	5
PHYS 347 Optics	4
PHYS 475 Seminar in Teaching Physics.....	2

Required Supporting Credits — 28 semester hours

AST 301 Classical Astronomy	3
BIO 110 Principles of Biology.....	4
CHEM 111 Principles of Chemistry I	5
CHEM 112 Principles of Chemistry II	5
MATH 131 Calculus and Analytic Geometry I	4
MATH 132 Calculus and Analytic Geometry II	4
SCED 441 Methods of Teaching Secondary School Science.....	3
<i>(Taken concurrently with EDLS 363 Clinical Experience: Secondary)</i>	

Required Elective Credits — 8 semester hours

Elective Credits in Computer courses (consent of advisor)	3
Elective Credits in Biological Sciences (consent of advisor)	2
Elective Credits in Earth Sciences (consent of advisor)	3
<i>Recommended course</i>	
MATH 233 Calculus and Analytical Geometry III	4

General Education, Specified (recommended)

<i>Category 7a — Interdisciplinary</i>	
ENST 225 Energy and the Environment	3

Notes

PTE is required for this program.

The courses required above will satisfy general education requirements for skills 2 and for content category 6 as well as 5 hours of general education electives. Students will need to average about 16.5 hours per semester to complete this degree in four academic years. Careful planning of schedules with one's advisor is essential.

Pre-Engineering Program

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
CQ 115 FORTRAN 77 Programming	3
or CQ 120 Pascal Programming	3
ENG 122 College Composition.....	3
MATH 131 Calculus & Analytic Geometry I	4
MATH 132 Calculus & Analytic Geometry II	4
MATH 233 Calculus & Analytic Geometry III	4

PHYS 240 General Physics I.....	5
PHYS 241 General Physics II.....	5
PHYS 321 Elementary Modern Physics	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 a pre-engineering emphasis and must have an advisor in the physics department.

Bachelor of Arts in Political Science

Program Requirements

Required Political Science credits	11
Required supporting credits	18
Required elective credits	25
General Education credits:	
6 credits already included in requirements above	
Remaining.....	34
Elective credits	32
Total credits required for this degree	120

Political Science is the study of that activity whereby public policy is made and implemented. Political scientists are, therefore, concerned with all those ideas, institutions, processes and policies, which constitute that activity such as equality, legislatures, political socialization and welfare. 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.

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.

Required Political Science Credits — 11 semester hours

PSCI 100 United States National Government	3
PSCI 105 Introduction to Political Science	3
PSCI 150 Research in Political Science	2
<i>Select one of the following:</i>	
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

Required Supporting Credits — 18 semester hours

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
Note that any one of the four courses required above will satisfy the General Education requirement for a course in Category 4.	
ECON 103 Introduction to Economics: Macroeconomics.....	3
Note that this course will satisfy the General Education requirement for a course in Category 5.	
CG 105 Personal Computer Applications or a course on computer programming.....	3

Required Elective Credits — 25 semester 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.....	2
PSCI 207 Women and Politics	2

Pre-Law Program

Contact Steve Mazurana, Department of Political Science, Weber House, 970-351-1562, 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.

PSCI 208 Introduction to Public Administration	3
PSCI 301 Electoral Politics in the United States	3
PSCI 302 Law-Making Process in the United States.....	3
PSCI 306 Constitutional Law.....	3
PSCI 392 Internship	5-10
PSCI 401 Public Policy in the United States	3
PSCI 405 Problems in American Politics.....	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 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 435 Problems in Political Philosophy	3
Group D — Comparative Politics	
PSCI 210 Politics in the European Community.....	3
PSCI 310 Politics of Central and East European States.....	3
PSCI 315 Comparative Public Policy.....	3
PSCI 318 Politics of the Developing States.....	3
PSCI 415 Problems in Comparative Politics.....	3

Note that while PSCI 405, 415, 425 or 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 25 semester hour elective requirement. Should a student take a second course from among those identified above, the credit hours earned will count toward the 25 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.

Notes

Political Science majors must pass with a grade of "C" or better all courses taken in political science. Students receiving a grade of "D" or lower in a course must retake the course and receive a grade of "C" or better.

Political Science majors must earn a cumulative grade point average of 2.5 or better over all political science courses taken in order to graduate.

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.

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.

Bachelor of Arts in Psychology

Program Requirements

Required Psychology credits	23
Required supporting credits	3-4
Required elective credits	17-19
General Education credits:	
7 credits already included in requirements above	
Remaining	33
Elective credits	41-45
Total credits required for this degree	120

Psychology is the scientific study of behavior and mental processes. The BA program is designed to educate students in both the research and applied aspects of psychology through coursework and field experience. A broad foundation of knowledge in psychology is emphasized as preparation for specialized training at the graduate level and employment in various work settings.

Typical work settings include community mental health centers, vocational rehabilitation offices, correctional programs and residential treatment centers. Other options include careers in business in such areas as personnel, marketing and consumer behavior.

Required Psychology Credits — 23 semester hours

PSY 120 Principles of Psychology	4
PSY 200 Psychological Statistics and Design	3
PSY 341 Principles of Learning	3
PSY 400 Research Design and Analysis	5
PSY 480 Physiological Psychology	5
PSY 491 Psychology Field Experience	3

Required Supporting Credits — 3-4 semester hours

Select one of the following:

BIO 110 Principles of Biology	4
ZOO 115 Human Biology	3
ZOO 245 Introduction to Human Anatomy Physiology	4

Required Elective Credits — 17-19 semester hours

Select one course from each of the following groups:

Group I

PSY 250 Human Growth and Development	4
PSY 265 Social Psychology	3
PSY 455 Abnormal Psychology	3

Group II

PSY 342 Cognitive and Behavioral Change: Theory, Assessment and Application	3
PSY 344 Group Processes and Roles	3
PSY 407 Introduction to Counseling Theories	3

Group III

HISP 370 Chicano Psychology	3
PPSY 468 Psychology of Women	2
PSY 467 Psychology of Prejudice	3

Psychology electives

PSY elective denotes any psychology course with a PSY designation. All PSY courses are listed in the Bulletin. You may take more than one course from the designated psychology "groups" with the additional semester hours going toward psychology elective credits.

Notes

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 341, 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 psychology department 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.

No minor is required for the psychology major.

Master of Arts in Psychology Emphasis in General Psychology

Program Requirements

Complete the required courses specified here.....34
Complete program electives specified here3

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.

Admission

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.

Required Credits — 34 semester hours

EPRE 603 Analysis of Variance.....3
EPRE 610 Statistical Applications in Educational Research.....3
PSY 550 Cognitive Development3
PSY 590 Seminar in History and Systems.....3

PSY 601 Research Seminar2
PSY 620 Assessment and Interviewing2
PSY 625 Principles of Neuropsychology3
PSY 627 Psychometrics3
PSY 643 Theories of Motivation3
PSY 664 Advanced Social Psychology3
PSY 697 Master's Project in Psychology6
or PSY 699 Thesis6

Elective Credits — 3 semester hours (to complete a minimum of 37 semester hours in the program)

EPRE 530 Life Span Developmental Psychology3
EPRE 630 Child and Adolescent Psychology3
EPRE 631 Psychology of Youth, Adult and Aging.....3
EPRE 684 Advanced Seminar in Human Development3
EPRE 685 Advanced Seminar in Learning and Cognition3
PPSY 558 Abnormal Psychology3
PPSY 607 Theories of Counseling2
PPSY 657 Legal and Ethical Aspects of Counseling and Psychology3
PPSY 660 Psychological Consultation: Theory and Practice2
PSY 582 Behavioral Genetics.....2

Master of Arts in Psychology Emphasis in Human Neuropsychology

Program Requirements

Complete the required courses specified here.....37

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.

Admission

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.

Prerequisites

In addition to the admission requirements listed above, students will have completed the following courses (or their equivalent at another college or university) before beginning the human neuropsychology emphasis or may be taken concurrently with the program.

PSY 200 Psychological Statistics and Design
PSY 400 Research Design and Analysis
PSY 455 Abnormal Psychology
PSY 480 Physiological Psychology
ZOO 115 Human Biology
ZOO 341 Human Anatomy
ZOO 350 Human Physiology

Required Credits — 37 semester hours

EPRE 603 Analysis of Variance.....3
PSY 550 Cognitive Development3
PSY 601 Research Seminar2
PSY 620 Assessment and Interviewing2
PSY 625 Principles of Neuropsychology3
PSY 626 Introduction to Neuropsychological Assessment3
PSY 627 Psychometrics3
PSY 643 Theories of Motivation3
PSY 664 Advanced Social Psychology3
PSY 694 Practicum3
PSY 697 Master's Project in Psychology6
or PSY 699 Thesis6
PPSY 558 Abnormal Psychology3

Bachelor of Arts in Social Science

Emphasis in Liberal Arts, Elementary Education, and Middle School Education

Program Requirements

Required credits	16
Required elective credits	18
General Education credits:	
Specified	15
Remaining	25
Elective credits	9
Total credits required for this degree	120

A general, theoretical and applied background in the social sciences gives students a basis for thinking analytically about human behavior and the social environment. Individuals, groups and institutions in society are studied and analyzed through inference techniques to increase understanding of and to provide solutions to social problems.

The program prepares students for careers in teaching elementary and middle school, research, program planning, graduate school, and law school. Examples of specific careers include probation counseling, environmental and social impact analysis, city planning, and local, state and federal government positions.

Liberal Arts

It is recommended that liberal arts majors choose electives that prepare them for the computer and rich statistical data base environments of many social science positions.

Elementary Education

It is recommended that students wishing to teach at the primary level select a minor and electives in psychology or sociology that emphasize the psychological and sociological environment of the young child including but not limited to: learning and cognition, human development, the family, and societal issues and environments of the young child. It is recommended that students most interested in intermediate grades should select required and program electives that reflect a school environment where teaching state, local, and U.S. history, world area studies, and U.S. and world geography are most likely.

Middle School Education

The middle school environment is increasingly integrating instruction across disciplines. It is recommended that students most interested in these grades should select a minor and electives that encourage integration within all of the social sciences as well as integration between them and other disciplines. U.S. history and government and U.S. and world geography frequently provide the social science core of these interdisciplinary efforts with anthropology, economics, psychology, and sociology playing strong supporting roles.

Required Credits — 16 semester hours

ANT 100 Introduction to Anthropology	3
QEOQ 100 World Geography	3
or	
QEOQ 110 Geography of the United States and Canada	3
PSY 120 Principles of Psychology	4
SOC 100 Principles and Sociology	3
SOSC 470 Theory and Research in Social Science	3

Required Electives — 18 semester hours

Choose required electives to meet the requirements for a minor in one of the following discipline areas: anthropology, economics, geography, history, political science, psychology, or sociology. The minor chosen must include a research course. If a research course is not a departmental requirement for the minor, one must be taken from the offerings of that department. If a 100 level course required of the minor is taken to satisfy general education requirements an additional 300-400 level course must be chosen from the discipline of the minor.

Required Elective Credits — 9 semester hours

Choose from 300-400 level courses in anthropology, black studies, economics, environmental studies, geography, hispanic studies, history, political science, psychology, sociology, and women's studies. Students taking courses in black studies, environmental studies, hispanic studies, or women's studies should take 100 or 200 level prerequisites for the 300-400 level courses as part of their general education requirements. Elective courses may not be taken in the discipline selected for the required electives sequence.

General Education

Category 2 — Mathematics

STAT 150 Introduction to Statistical Analysis.....3

Category 4 — Arts and Letters

HIST 100 Survey of American History from its Beginning to 1877

or

HIST 101 Survey of American History from 1877 to the Present

Category 5 — Social Sciences

ECON 103 Introduction to Economics: Macroeconomics

PSCI 100 United States National Government

Category 7b — Multicultural

One of the following:

BLS 100 Introduction to Black Studies

BLS 101 Crisis of Identity

HISP 102 Hispanic Cultures in the United States

MCS 101 Multiculturalism in the United States: Concepts and Issues.....3

SOC 237 Sociology of Minorities.....3

WS 120 Women and Men in Perspective.....3

Notes

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

Students seeking licensure at the elementary level (grades K-6) or middle school level (grades 5-9) must meet all requirements as described in the Elementary Education Program and Middle School Certification Program sections of the Bulletin.

Bachelor of Arts in Social Science

Emphasis in Teaching — Secondary Licensure Program

Program Requirements

Required credits	27
Required elective credits	18
General Education credits:	
Specified	13
Remaining	27
PTE program	37-39
Total credits required for this degree	122-124

The study of the social sciences gives students a basis for thinking analytically about human behavior and the environment. Courses in the program provide students with the broad background necessary for teaching social studies at the secondary (grades 7-12) level.

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.

Required Credits — 27 semester hours

ECON 103 Introduction to Economics: Macroeconomics	3
GEOG 100 World Geography	3
HIST 101 Survey of American History from 1877 to the Present	3
<i>Select one of the following:</i>	
HIST 110 African Civilization	3
HIST 112 Asian Civilization I from Pre-History to the 1600s	3
HIST 113 Asian Civilization II: The Modern Transformation	3
<i>Select one of the following:</i>	
HIST 120 Western Civilization from Ancient Greece to 1689	3
HIST 121 Western Civilization from 1689 to the Present	3
PSCI 100 United States National Government	3
SOC 100 Principles of Sociology	3
SOSC 341 Teaching Secondary Social Studies	3
SOSC 470 Theory and Research in Social Science	3

Required Elective Credits — 18 semester hours

Elective hours will be distributed as follows:

- 9 hours from one of the following disciplines, 6 hours of which must be at the 300- 400 level: anthropology, economics, geography, history, political science, psychology, sociology.
- 9 hours distributed among the disciplines listed above, 6 hours of which must be at the 300-400 level.

General Education, Specified — 13 semester hours

<i>Category 4 — Arts and Letters</i>	
HIST 100 Survey of American History from Its Beginnings to 1877	3
<i>Category 5 — Social Sciences</i>	
ANT 100 General Anthropology	3
PSY 120 Principles of Psychology	4
<i>Category 7 — Interdisciplinary, Multicultural and International Studies</i>	
Select one of the following:	
HISP 102 Hispanic Cultures in the United States	3
WS 120 Women and Men in Perspective	3
BLS 101 Crises of Identity	3

Notes

All requirements for the Professional Teacher Education Program, as described in this Bulletin, must be met.

No social science major may apply for admission to the Professional Teacher Education (PTE) 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 PTE, a student must have a 2.50 grade point average in those courses counting toward his or her major that were taken at UNC and must have taken courses in at least four different major disciplines.

Before taking EDLS 363 and SOSC 341, the student must have completed EPRE 345 and EDF 364.

Before being permitted to apply for student teaching, a social science major must have successfully completed at least 27 hours in the major and have at least a 2.75 grade point average in those courses taken at UNC.

To be recommended for teacher licensure, the student must have at least a 2.75 grade point average at the completion of his or her program in those courses counting toward the major and that were taken at UNC.

Bachelor of Arts in Sociology

Emphasis in Criminal Justice

Program Requirements

Required Sociology credits	27
Required elective credits	12
General Education credits:	
Specified	6
Remaining	34
Required minor with minimum credits	18
Elective credits	23
Total credits required for this degree	120

The Bachelor of Arts degree in Sociology with an emphasis in Criminal Justice includes an examination of major criminal justice issues, juvenile delinquency, corrections and criminal law with the possibility for an internship experience with a social agency.

Graduates with this emphasis will be prepared for knowledgeable and productive citizenship roles, have an understanding of the criminal justice system and have knowledge and skills appropriate for careers in law enforcement, the court system or corrections. A foundation is provided for graduate work in Sociology.

Program Admission Requirements

Admission to the Sociology department as a major requires that the student complete a "Change of Major/Minor" form and a major application form (both available in the Sociology department office, Candelaria Hall 228).

Required Credits — 27 semester hours

SOC 141 Introduction to Criminal Justice	3
SOC 340 Juvenile Delinquency	3
SOC 346 Criminology	3
SOC 347 Sociology of Corrections	3
SOC 351 Classical Social Theory	3

Bachelor of Arts in Sociology

Emphasis in Family Studies

Program Requirements

Required Sociology credits	30
Required elective credits	9
General Education credits:	
Specified	6
Remaining	34
Required minor with minimum credits	18
Elective credits	23
Total credits required for this degree	120

The Bachelor of Arts in Sociology with an emphasis in Family Studies includes an examination of major contemporary family issues and social policy. The research internship experience with a social agency is the capstone course.

Graduates with this emphasis will be prepared for employment in a variety of state, local and private agencies involved in delivering family services. A foundation is provided for graduate work in Sociology.

Program Admission Requirements

Admission to the Sociology department as a major requires that the student complete a "Change of Major/Minor" form and a major application form (both available in the Sociology department office, Candelaria Hall 228).

Required Sociology Credits — 30 semester hours

SOC 120 Marriage and the Family	3
SOC 221 Sociology of Sex Roles	3
SOC 324 Issues in the Family	3
SOC 326 Sociology of Childhood and Adolescence	3
SOC 351 Classical Social Theory	3
SOC 352 Contemporary Social Theory	3
SOC 361 Social Research	3
SOC 362 Social Statistics	3
SOC 423 Violence and the Family	3
SOC 493 Practicum in Family Studies	3

SOC 352 Contemporary Social Theory	3
SOC 361 Social Research	3
SOC 362 Social Statistics	3
SOC 444 Sociology of Criminal Law	3

Required Elective Credits — 12 semester hours

Choose any four Sociology courses but include no more than two 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 the major.

General Education, Specified — 6 semester hours

<i>Category 2 — Mathematics</i>	
STAT 150 Introduction to Statistical Analysis	3
<i>Category 5f — Sociology</i>	
SOC 100 Principles of Sociology	3

Notes

The Sociology Department requires a grade of "C" or better for all Sociology classes that count toward the major.

Students may select only ONE emphasis area.

Students may elect to complete the PTE program in place of, or in addition to, the required minor.

Students wishing to be recommended for teacher licensure must also complete the approved Professional Teacher Education program in elementary, middle school or special education.

Required Elective Credits — 9 semester hours

Note that you may choose any three Sociology courses but include no more than two 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 the major.

General Education, Specified — 6 semester hours

<i>Category 2 — Mathematics</i>	
STAT 150 Introduction to Statistical Analysis	3
<i>Category 5f — Sociology</i>	
SOC 100 Principles of Sociology	3

Notes

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

Students need to attend a required practicum meeting during the fall before their practicum and subsequently need to set up their research projects with the agencies before the semester begins.

The Sociology Department requires a grade of "C" or better for all Sociology classes that count toward the major.

Students may select only ONE emphasis area.

Students may elect to complete the PTE program in place of, or in addition to, the required minor.

Students wishing to be recommended for teacher licensure must also complete the approved Professional Teacher Education program in elementary, middle school or special education.

Bachelor of Arts in Sociology Emphasis in Social Issues

Program Requirements
Required Sociology credits12
Required elective credits27
General Education credits:
 Specified6
 Remaining34
Required minor with minimum credits18
Elective credits23
Total credits required for this degree120

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 and institutional arrangements. The curriculum includes an examination of major issues in sociology, social change, social psychology and other elective areas.

Graduates with this emphasis will be prepared for employment in social agencies, social research and related areas. A foundation is provided for graduate work in sociology.

Program Admission Requirements

Admission to the Sociology department as a major requires that the student complete a "Change of Major/Minor" form and a major application form (both available in the Sociology department office, Candelaria Hall 228).

Required Sociology Credits — 12 semester hours

SOC 351 Classical Social Theory.....3
 SOC 352 Contemporary Social Theory.....3
 SOC 361 Social Research.....3
 SOC 362 Social Statistics3

Bachelor of Arts in Sociology Emphasis in Sociology of Education

Program Requirements
Required Sociology credits30
Required elective credits9
General Education credits:
 Specified6
 Remaining34
Required minor with minimum credits18
Elective credits23
Total credits required for this degree120

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. It is recommended that students who would like to receive licensure in elementary education with a major in sociology consider this emphasis area.

Graduates with this emphasis 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. A foundation is provided for graduate work in sociology.

Program Admission Requirements

Admission to the Sociology department as a major requires that the student complete a "Change of Major/Minor" form and a major application form (both available in the Sociology department office, Candelaria Hall 228).

Required Credits — 30 semester hours

SOC 237 Sociology of Minorities3
 SOC 272 Community3
 SOC 326 Sociology of Childhood and Adolescence3
 SOC 332 Social Psychology3
 SOC 333 Social Class and Inequality3
 SOC 351 Classical Social Theory.....3
 SOC 352 Contemporary Social Theory.....3
 SOC 361 Social Research.....3
 SOC 362 Social Statistics3
 SOC 378 Sociology of Education.....3

Required Elective Credits — 24 semester hours

Select two courses from the following:
 SOC 235 Social Change.....3
 SOC 237 Sociology of Minorities.....3
 SOC 330 Social Organizations.....3
 SOC 332 Social Psychology3
 SOC 333 Social Class and Inequality3
 Additional electives from sociology courses18

General Education, Specified — 6 semester hours

Category 2 — Mathematics
 STAT 150 Introduction to Statistical Analysis.....3
 Category 5f — Sociology
 SOC 100 Principles of Sociology3

Notes

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

The Sociology Department requires a grade of "C" or better for all Sociology classes that count toward the major.

Students may select only ONE emphasis area.

Students may elect to complete the PTE program in place of, or in addition to, the required minor.

Students wishing to be recommended for teacher licensure must also complete the approved Professional Teacher Education program in elementary, middle school or special education.

Required Elective Credits — 9 semester hours

Note that you may choose any three Sociology courses, but include no more than two 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 the major.

General Education, Specified — 6 semester hours

Category 2 — Mathematics
 STAT 150 Introduction to Statistical Analysis.....3
 Category 5f — Sociology
 SOC 100 Principles of Sociology3

Notes

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

The Sociology Department requires a grade of "C" or better for all Sociology classes that count toward the major.

Students may elect to complete the PTE Program in place of, or in addition to, the minor.

No sociology major may apply for admission to the Professional Teacher Education (PTE) 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.

Students wishing to be recommended for teacher licensure must also complete the approved Professional Teacher Education program in elementary, middle school or special education.

Master of Arts in Social Science

Emphasis in Clinical Sociology

Program Requirements

Required Sociology credits	27
Required elective credits	9

The Master of Arts in Social Science, with an emphasis in Clinical Sociology, is a program that provides students with a theoretical and research methodology repertoire designed to assist communities, agencies, legislative bodies, industries, and political jurisdictions in identifying and overcoming barriers to political jurisdictions in identifying and overcoming barriers to achieving their high priority social goals. Graduates of this program should also be able to assess and make reasonable projections concerning the social costs and benefits resulting from local, regional, and national policies aimed at meeting community needs. The major emphasis of the program is to provide graduates with social science knowledge and skills which are applicable to communities, organizations, and agencies in their efforts to cope with a variety of social concerns.

Program Admission Requirements

After acceptance by the UNC Graduate School, students must apply to, and be accepted by, the Department of Sociology Graduate Committee.

Students must have earned a B.A. or B.S. degree from an accredited college or university.

Students must submit a letter of application outlining their qualifications and academic and career goals, Graduate Record Examination scores, and two letters of recommendation to the Department of Sociology Graduate Committee.

Required Sociology Credits — 27 semester hours

SOC 530 Social Organization	3
SOC 632 Seminar in Social Psychology	3
SOC 639 Seminar in Clinical Sociology	3
SOC 650 Applied Social Theory	3
SOC 660 Applied Social Research	3
SOC 680 Social Policy Analysis	3
SOC 699 Thesis	6
GERO 665 Grant Development and Administration	3

Successful completion of a thesis is required. In accordance with regulations set forth in the UNC Thesis and Dissertation Manual, each student will develop and write a thesis which focuses on some important aspect of clinical sociology. For at least one semester, students will work as interns, either on a

volunteer or paid basis, for an organization or agency, collecting and analyzing data which sheds light on a problem or goal. For at least one additional semester, students will consult, either on a volunteer or paid basis, with agency or organization representatives, helping to implement a problem-solving or change-oriented program. It is expected that topic selection, data collection, analysis, and writing of the thesis will result from the internship experience. The Department of Sociology is not able to provide stipends, or any other form of monetary support, for students during their internship experience.

Required elective credits — 9 semester hours

At least two of the courses taken must be in disciplines other than Sociology.

PPSY 655 Community Psychology and Social Systems	3
WS 510 Philosophy of Feminism	3
WS 520 Women in History	3
SOC 508 Sociology of Occupations	3
SOC 523 Violence and the Family	3
SOC 571 Sociology of Aging	3
PPSY 565 Psychology of Prejudice	2
SPAN 561 Latin American Civilization and Cultures (taught in Spanish)	2
SPAN 562 Mexico and U.S. Hispanic Civilization and Culture (taught in Spanish)	2
GERO 655 Program Planning and Evaluation in Gerontology	3
EPRE 530 Lifespan Developmental Psychology	3
SOC 544 Sociology of Criminal Law	3
SOC 554 Criminological Theories	3
PPSY 624 Assessment and Treatment of Substance Abuse	3
PSY 620 Assessment and Interviewing	2
PSY 627 Psychometrics	3
SOC 602 Perspectives in Applied Sociology	3
GEOG 578 Seminar in Research Methodology	3
GEOG 590 Advanced Research Seminar	3
SOC 563 Qualitative Research	3
EPRE 670 Evaluation: Models and Designs	3
EPRE 671 Evaluations: Advanced Methods	3
MATH 535 Introductory Analysis I	3
STAT 512 Mathematical Statistics with Applications II	4
STAT 605 Multivariate Analysis I	3
STAT 609 Sampling Methods	4

Bachelor of Arts in Spanish Emphasis in Bilingual Bicultural Education

Program Requirements

Required credits	33
Required supporting credits	3
Required elective credits	3
General Education credits:	
Regular	40
Additional	7
PTE program	37-39
Required credits for licensure	21
Total credits required for this degree	144-146

Students develop a functional proficiency in the Spanish language and an understanding of the role of the bilingual teacher in the classroom at the elementary (k-6) level.

The program prepares competent bilingual/bicultural teachers.

Required Credits — 33 semester hours

HISP 101 Introduction to Mexican American Studies	3
HISP 395 Historical, Philosophical, Legal & Cultural Dimensions of Bilingual Education	3
HISP 400 Bilingual and English as a Second Language Methods	3
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 407 Spanish for Oral Proficiency	3
SPAN 411 Spanish for Bilingual Education I	3
SPAN 412 Spanish for Bilingual Education II	3

Note that competency in the Spanish language must be demonstrated after completion of SPAN 411 and SPAN 412 before licensure is granted.

Bachelor of Arts in Spanish Emphasis in Liberal Arts

Program Requirements

Required Spanish credits	36
Required elective credits	3
General Education credits	40
Required minor with minimum credits	18
Elective credits	23
Total credits required for this degree	120

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.

Required Credits — 36 semester 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
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

Required Supporting Credits — 3 semester hours

ANT 210 Studying Cultures	3
SPCO 323 Intercultural Communication	3

Required Elective Credits — 3 semester hours

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

Notes

Students must have at least a 2.50 GPA for admission to this major and emphasis.

Students must complete at least 10 credits in this major before applying to PTE.

PTE 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 exam.

All Spanish language courses to be counted for the major 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.

Required Elective Credits — 3 semester hours

SPAN 406 Introduction to Translation	3
SPAN 452 Mexican Literature	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 United States Hispanics	3
SPAN 458 Cervantes	3
SPAN 459 Hispanic Drama	3

Notes

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

A minor of at least 18 semester hours is required with prior approval from the department.

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 Exam.

Bachelor of Arts in Spanish

Emphasis in Teaching

Program Requirements

Required Spanish credits36
Required supporting credits3
General Education credits.....40
PTE program37-39
Required minor with minimum hours.....18
Total credits required for this degree134-136

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. This will be accompanied by training in the most recent methodologies that can be used in the effective teaching of Spanish.

Students become competent secondary teachers of Spanish.

Required Spanish Credits — 36 semester hours

SPAN 201 Intermediate Spanish I.....3
 SPAN 202 Intermediate Spanish II.....3
 SPAN 301 Spanish Grammar3
 SPAN 302 Spanish Composition3
 SPAN 303 Spanish Conversation3
 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 Proficiency3

Required Supporting Credits — 3 semester hours

FL 341 Methods of Teaching in the Secondary School.....3

Notes

PTE is required for this program.

Students wishing to be licensed must complete EDLS 363 and 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 exam.

A minor of at least 18 semester hours is required with prior approval from the department.

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.

Master of Arts in Foreign Languages Emphasis in Spanish Teaching

Program Requirements

Complete the required credits specified here.....10
Complete program electives specified here.....20

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.

Admission

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
- during the academic year only or
- by combining summer work with regular academic year program offerings.

Students are required to complete 20 semester hours of coursework within the Department of Hispanic Studies in Spanish and 10 semester hours of coursework outside of the department in areas of pedagogy and civilization and culture.

The 20 within the department consist of courses in the following categories:

- 16 hours in language, literature and civilization
- 4 hours in foreign language workshops and/or practica.

Required Credits — 10 semester hours

FL 508 Workshop2

FL 531 Teaching of Foreign Languages.....2

Civilization (select one of the following):

SPAN 521 Spanish Civilization and Culture3

SPAN 531 Latin American Civilization and Culture3

SPAN 560 Spanish Civilization and Culture2

SPAN 561 Latin American Civilization and Culture2

SPAN 562 Mexico and United States Hispanic Civilization and Culture.....2

Literature (select one of the following):

SPAN 550 Masterpieces of Spanish Literature3

SPAN 551 Masterpieces of Latin American Literature3

SPAN 570 Readings in United States Hispanic Literature1-3

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 Composition3

SPAN 505 Spanish Phonetics and Dialects3

SPAN 507 Spanish for Oral Proficiency3

SPAN 580 Grammar Topics.....1-3

SPAN 582 Spanish for Oral Proficiency2

SPAN 584 Spanish Pronunciation and Dialects.....2

Required Elective Credits within the Department — 10 semester hours

In addition to the required core of courses, the student is to select 10 additional hours from the 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 Culture2

SPAN 561 Latin American Civilization and Culture2

SPAN 562 Mexico and United States Hispanic Civilization and Culture.....2

SPAN 563 Hispanic Cultural Topics3

Literature

SPAN 570 Readings in United States Hispanic Literature.....3

SPAN 571 Readings in Spanish Literature3

SPAN 572 Readings in Latin American Literature3

SPAN 573 National Literatures2

SPAN 574 Masterpieces of 20th Century Spain.....2

SPAN 575 Masterpieces of 20th Century Latin America2

SPAN 576 Mexican Literature2

Skill Development

SPAN 580 Grammar Topics3

SPAN 581 Advanced Spanish Grammar.....2

SPAN 582 Spanish for Oral Proficiency2

SPAN 583 Oral and Written Discourse2

SPAN 584 Spanish Pronunciation and Dialects.....2

Workshops

HISP 508 Workshop6

HISP 513 Professional Renewal.....6

SPAN 508 Workshop6

SPAN 513 Professional Renewal6

Required Elective Credits outside the Department — 10 semester 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.

Elementary Education

Emphasis in Bilingual Bicultural Endorsement

Total credits required for this endorsement18

Courses for a Bilingual Bicultural Education Endorsement will be provided by the Department of Hispanic Studies to Elementary Education students who wish to be licensed to teach in 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. This program can be combined with a major in other Arts and Sciences subjects or realized within our Spanish major.

Requirements

Students must have completed the Intermediate Spanish courses or equivalent before enrolling in SPAN 411 and 412.

Competency in the Spanish language must be demonstrated after completion of SPAN 411, before licensure is granted.

Note that students must pass the Hispanic Studies Department's oral proficiency test in Spanish before being allowed to enter student teaching.

Required Credits — 18 semester hours

Select one of the following:

HISP 101 Introduction to Mexican American Studies.....	3
HISP 102 Hispanic Cultures in the United States.....	3
HISP 395 Historical, Philosophical, Legal and Cultural Dimensions of Bilingual Education.....	3
HISP 400 Bilingual and English as a Second Language Methods	3
SPAN 411 Spanish for Bilingual Education I	3
SPAN 412 Spanish for Bilingual Education II	3
<i>Select one of the following:</i>	
ANT 210 Studying Cultures.....	3
SPCO 323 Intercultural Communication	3

Note

Administered by the Department of Hispanic Studies.

Speech Communication Major Requirements

To become a major in the Department of Speech Communication, the student must complete a "Change of Major/Minor" form, available from the department in Candelaria Hall 123. Students may do this any time during the freshman, sophomore, or junior year.

General Education Requirements

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

Bachelor of Arts in Communication Emphasis in Elementary and Middle School Education

Program Requirements

Required Speech Communication credits	21
Required elective credits	12
Required credits in SPCO and related fields	6
General Education credits:	
Regular	40
Additional	7
PTE requirements	37-39
Required credits for licensure.....	21
Total credits required for this degree	144-146

A major in the discipline of speech communication with an emphasis in elementary education and middle school education allows the student to investigate 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 with this emphasis, required coursework includes the study of communication in interpersonal, small group, and classroom contexts. The student will have the opportunity to acquire practical skills in professional presentation, persuasion, leadership and argumentation.

The principal purpose of this major is to prepare persons as teachers of speech communication in elementary and middle schools. Students completing this program also may elect to apply for graduate study in the field of speech communication.

Required Speech Communication Credits — 21 semester hours

SPCO 102 Introduction to Speech Communication	3
SPCO 111 Oral Interpretation.....	3
SPCO 201 Inquiry in Speech Communication	3
SPCO 321 Interpersonal Theory.....	3
SPCO 330 Small Group Communication	3
SPCO 350 Communication in the Classroom	3
SPCO 491 Speech Communication Theory	3

Required Elective Credits — 12 semester hours

SPCO 211 Argumentation and Debate	3
SPCO 212 Professional Speaking	3
SPCO 221 Non-verbal Communication.....	3
SPCO 323 Intercultural Communication.....	3
SPCO 324 Family Communication.....	3
SPCO 343 Persuasion.....	3
SPCO 352 Methods of Teaching Secondary Communication	3
SPCO 354 Directing Speech Communication Activities	3
SPCO 431 Communication and Leadership	3

Note that elective credits should be selected only by SPCO advisor's consent.

Grade Point Average

Students must have a minimum of 2.5 GPA for all courses completed for graduation. Students wishing to be admitted to Professional Teacher Education (PTE) in Speech Communication must have a minimum of 3.0 GPA for all courses completed in Speech Communication.

Required Credits in SPCO or Related Fields — 6 semester hours

Elective Speech Communication courses and Required Supporting Credits from related fields must be chosen in consultation with your speech communication advisor.

Notes

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

All majors must complete a minimum of 18 semester hours in 300- and 400-level courses with a minimum of 6 semester hours of 400-level SPCO prefix courses.

All requirements for the Professional Teacher Education Program, as described in this Bulletin, must be met. Students seeking licensure at the elementary level (grades K-6) or middle school (grades 5-9) must also meet all requirements as described in the Elementary Education or Middle School Education section of this Bulletin.

A Speech Communication major may apply for admission to the Professional Teacher Education (PTE) program when he or she has obtained a B or better GPA in a minimum of six (6) semester hours of SPCO courses taken at the University of Northern Colorado. Majors must maintain a 3.00 GPA for department courses.

Before being permitted to apply for student teaching, a Speech Communication major must have successfully completed at least 24 hours in the major, be approved by the department faculty, and have at least a 3.00 grade point average in those courses taken at UNC.

To be recommended by the department for teacher licensure, the student must have at least 3.00 grade point average at the completion of his or her program in those courses counting toward the major and that were taken at UNC and be endorsed by the faculty of the Speech Communication department.

Bachelor of Arts in Communication

Emphasis in Human Communication

Program Requirements

Required Speech Communication credits	12
Required core credits	9
Required elective credits	18
General Education credits	40
Required minor with minimum credits	18
Elective credits	23
Total credits required for this degree	120

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.

Required Speech Communication Credits — 12 semester 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 491 Speech Communication Theory	3

Note that SPCO 212 may be substituted for SPCO 100/103 with permission of the Director of the Basic Course.

Required Core Credits — 9 semester hours (minimum)

Select a minimum of 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 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
SPCO 404 Rhetorical Theory	3
SPCO 444 Argumentation Theory	3

Required Elective Credits — 18 semester hours

Select additional electives from the core courses or from the courses listed below to total a minimum of 18 hours of program electives.

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 442 Directed Study	1-3
SPCO 461 Seminar in Speech Communication	3
SPCO 480 Research in Speech Communication	2-5
SPCO 492 Undergraduate Internship	1-3

Notes

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

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

All majors must 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 grade of "C" or better must be earned for required SPCO courses for that course to count toward graduation. A grade point average of 2.5 for SPCO courses is required for graduation. A maximum of 3 semester hours of credits from SPCO 422, 480, and/or 492 may count toward the 39 hour major.

Bachelor of Arts in Communication

Emphasis in Secondary Education

Program Requirements	
Required Core credits	24
Required supporting credits	3
Required elective credits	12
General Education credits	40
PTE requirements	37-39
Required minor with minimum credits	18
Total credits required for this degree	134-136

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.

Required Core Credits — 24 semester 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 352 Methods of Teaching Secondary Communication	3
SPCO 354 Directing Speech Communication Activities	3
SPCO 491 Speech Communication Theory	3

Required Supporting Credits — 3 semester hours

JMC 100 Introduction to Journalism and Mass Communications	3
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Required Elective Credits — 12 semester hours

Select at least one course from each category:

Interpersonal Communication

SPCO 221 Non-Verbal Communication	3
SPCO 321 Interpersonal Theory	3
SPCO 323 Intercultural Communication	3
SPCO 324 Family Communication	3

Small Group and Organizational Communication

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
SPCO 404 Rhetorical Theory.....	3
SPCO 444 Argumentation Theory.....	3

Notes

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

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

All majors must complete a minimum of 18 semester hours of 300- and 400-level SPCO courses with a minimum of 6 semester hours in 400-level courses.

All requirements for the Professional Teacher Education Program, as described in this Bulletin, must be met.

A Speech Communication major may apply for admission to the Professional Teacher Education (PTE) program 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 3.00 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 3.00 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 3.00 grade point average at the completion of his or her program in those courses counting toward the major and that were taken at UNC and be endorsed by the faculty of the Speech Communication department.

Master of Arts in Communication

Emphasis in Communication Education: Non-Thesis Option

Program Requirements

Complete the required credits here	18
Complete program electives specified here	15

This program focuses on the study of spoken symbolic interaction. Students will emphasize coursework relevant to post-secondary education.

Students completing this program will probably elect to apply for teaching positions in junior and community colleges. Others will apply for Ph.D. programs in the field of speech communication.

Required Credits — 18 semester hours

Communication Core

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
SPCO 504 Rhetorical Theory	3
or	
SPCO 603 Communication Theory	3
Communication Education Requirement	
SPCO 511 Instructional Communication	3

Required Elective Credits — 15 semester hours

500- and/or 600-level coursework

Notes

Select any electives with SPCO prefixes. One elective course may be from another 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 of 48 graduate and undergraduate credit hours in the discipline for graduation. 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.

Students selecting the non-thesis option should be aware that this requires three more hours than the thesis option.

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.

Master of Arts in Communication

Emphasis in Communication Education: Thesis Option

Program Requirements

Complete the required credits here	24
Complete program electives specified here	6

This program focuses on the study of spoken symbolic interaction. Students will emphasize coursework relevant to post-secondary education.

Students completing this program will probably elect to apply for teaching positions in junior and community colleges. Others will apply for Ph.D. programs in the field of speech communication. The thesis option is recommended for students considering additional graduate study.

Required Credits — 24 semester hours

Communication Core

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
SPCO 504 Rhetorical Theory	3
or	
SPCO 603 Communication Theory	3
Communication Education Requirement	
SPCO 511 Instructional Communication	3
Thesis	
SPCO 699 Thesis	6

Elective Credits — 6 semester hours

500- and/or 600-level coursework

A student in this program must pass an oral examination over his or her thesis.

Notes

Select any electives with SPCO prefixes. One elective course may be from another 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 of 45 graduate and undergraduate credit hours in the discipline for graduation. Possible deficiencies will be determined after review of the undergraduate transcript.

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.

Master of Arts in Communication

Emphasis in Human Communication: Non-Thesis Option

Program Requirements

Complete the required credits specified here.....18
 Complete program electives specified here15

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.

Successful completion of this program will help persons advance current professional careers, prepare themselves for careers in business and industry requiring expertise in human communication or prepare themselves for a Ph.D. program in speech communication.

Required Credits — 18 semester hours

Communication Core

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
SPCO 504 Rhetorical Theory.....	3
or	
SPCO 603 Communication Theory	3
SPCO514 Interpersonal Communication	3
or	
SPCO 515 Group Communication	3

Required Elective Credits — 15 semester hours

500- and/or 600-level coursework

Notes

Select any electives with SPCO prefixes. One elective course may be from another 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 of 48 graduate and undergraduate credit hours in the discipline for graduation. 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.

Students selecting the non-thesis option should be aware that this requires three more hours than the thesis option.

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.

Master of Arts in Communication

Emphasis in Human Communication: Thesis Option

Program Requirements

Complete the required credits specified here.....24
 Complete program electives specified here6

This program focuses on the study of spoken symbolic interaction. Students will emphasize coursework relevant to rhetorical and communication theory, to interpersonal and group communication, and communication research methods.

Successful completion of this program will help persons 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.

Required Credits — 24 semester hours

Communication Core

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
SPCO 504 Rhetorical Theory	3
or	
SPCO 603 Communication Theory	3
SPCO 514 Interpersonal Communication	3
or	
SPCO 515 Group Communication	3

Thesis

SPCO 699 Thesis.....	6
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Required Elective Credits — 6 semester hours

500- and/or 600-level coursework

A student in this program must pass an oral examination over his or her thesis.

Notes

Select any electives with SPCO prefixes. One elective course may be from another 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 of 45 graduate and undergraduate credit hours in the discipline for graduation. Possible deficiencies will be determined upon review of the undergraduate transcript.

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.

Minor in Teaching English as a Second Language (TESL)

Program Requirements

Required credits	10
Required supporting credits	12
Total credits required for this minor.....	22

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 semester hours

HISP 395 Historical, Philosophical, Legal and Cultural Aspects of Bilingual Education	3
HISP 400 Bilingual and English as a Second Language Methods	3
TESL 301 TESL Practicum I	2
TESL 302 TESL Practicum II	2

Required Supporting Credits — 12 semester hours

ANT 210 Studying Cultures	3
ENG 219 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 PTE program. This minor does not lead to teacher licensure.

Minor in Women's Studies

Required Women's Studies credits.....	9
Required elective credits	12
Total credits required for this minor.....	21

Major goals of the Women's Studies Program are to understand and overcome social myths and sex-role stereotypes that adversely affect the status, rights and aspirations of women and the individual abilities of women and men. The program utilizes a feminist perspective to challenge the prejudices of sexism, racism and classism. It also fosters appreciation of the contributions of women of all races, classes, ages, sexual orientations and physical abilities. The interdisciplinary program is administered by the faculty coordinator, the core faculty with joint appointments, and a committee of Women's Studies faculty teaching cross-listed courses and student representatives involved in the program.

Students learn concepts and techniques by which they can understand and enhance personal and professional goals and relationships. The minor also provides important preparation for students planning careers in social services, business, teaching, school administration, law, medicine and a wide variety of other professions.

Required Women's Studies Credits — 9 semester hours

WS 120 Women and Men in Perspective	3
WS 148 Introductory Seminar in Women's Studies: Women in Crisis	3
WS 448 Women's Studies Senior Seminar	3

Required Elective Credits — 12 semester 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 Cultural Perspective	3
ART 308 Workshop in Art: Artists of Color/Women Artists	3
ART 395 Special Topics in Art: Women in Art.....	3
BLS 102 The Black Woman in America	3

BLS 230 Black Women in Literature.....	3
ECON 304 Women and the Economy.....	3
ENG 239 Topics in Women's Literature	3
ENG 335 World Literature By and About Women.....	3
HISP 220 Women in Hispanic Society	3
HUM 331 Images of Women in Literature and the Arts.....	3
ID 208 Feminism: An Interdisciplinary Analysis.....	3
NURS 200 Women's Health Care	3
PE 231 Women in Sport.....	2
PSCI 207 Women and Politics	2
PPSY 468 Psychology of Women	2
SOC 221 Sociology of Sex Roles.....	3
SOC 322 Women and Aging	3
SOC 425 Violence in the Family.....	3
WS 308 Women's Studies Workshop	1-3
WS 310 Philosophy of Feminism	3
WS 320 Women in United States History	3
WS 373 Women-Identified Theory.....	3
WS 422 Directed Studies	1-3
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.

Additional College of Arts and Sciences minors may be found under the following headings: Anthropology, Environmental Studies, Teaching English as a Second Language and Women's Studies.

Minor in Applied Statistics

Required credits	13
Required elective credits	5-8
Total credits required for this minor.....	18-21

Required Credits — 13 semester hours

Select one of the following:

STAT 150 Introduction to Statistical Analysis.....	3
STAT 250 Statistics for Health Sciences	3
STAT 311 Basic Statistical Methods	4
STAT 406 Multiple Linear Regression	3
STAT 409 Sampling Techniques	3

Required Elective Credits — 5-8 semester hours

STAT courses numbered 300 or higher or MATH 350, MATH 351 with approval of advisor.

Minor in Biological Sciences/Liberal Arts

Required credits	9
Required elective credits	9
Total credits required for this minor.....	18

Required Credits — 9 semester hours

BIO 110 Principles of Biology.....	4
BIO 111 Survey of Organismal Biology	5

Required Elective Credits — 9 semester hours

Select from BIO, BOT or ZOO prefix.....9

Minor in Biological Sciences/ Teaching Secondary Biological Science

Required credits	20
General Education, Specified.....	5
Total credits required for this minor.....	25

Required Credits — 20 semester hours

BIO 110 Principles of Biology.....	4
BIO 111 Survey of Organismal Biology	5
BIO 220 Genetics.....	3
BOT 350 General Plant Physiology	4
ZOO 245 Introduction to Human Anatomy and Physiology.....	4

General Education, Specified — 5 semester hours

CHEM 111 Principles of Chemistry I	5
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Note

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 course to meet requirement. This minor does not lead to teacher licensure.

Minor in Black Studies

Required credits	9
Required elective credits	9
Total credits required for this minor.....	18

Required Credits — 9 semester hours

BLS 100 Introduction to Black Studies.....	3
BLS 104 Survey of Africa.....	3
BLS 240 Dynamics of Racism.....	3

Required Elective Credits — 9 semester hours

BLS 305 Survey of African-American Literature.....	3
BLS 320 Economic Experience of Black America	3
BLS 332 Pan-Africanism.....	3
BLS 340 The Black Family.....	3
BLS 360 Music and the Black Experience.....	3
BLS 386 Modern African World.....	3
BLS 395 Aspects of the African-American Experience	3
BLS 396 African and Afro-American Worldviews	3
BLS 399 Community Study Project	1-4
BLS 420 Black Urban Politics.....	3
BLS 422 Directed Studies	1-4
BLS 456 Leadership and the Black Church	3
BLS 490 Seminar in Black Studies	3
BLS 508 Workshop	1-3
BLS 515 Professional Renewal	1-4
ID 308 Interpersonal Growth Workshop	3

Notes

BLS 395, Aspects of the African-American Experience, is a variable subtitle course that students may take more than once under different subtitles.

BLS 399, 422, 508 or 515, when taken by minors, must always be taken for three semester hours.

Minor in Chemistry/Liberal Arts

Required credits	8-10
Required elective credits	11-13
Total credits required for this minor.....	21

Required Credits — 8-10 semester hours

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

Required Elective Credits — 11-13 semester hours (to total 21 credits in the minor)

CHEM 131 Introductory Organic Chemistry.....	4
CHEM 109 Fundamentals of Chemistry II	5
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 441 Inorganic Chemistry I	2
CHEM 442 Inorganic Chemistry II	2
CHEM 481 General Biochemistry I	3
CHEM 483 Experimental Biochemistry I.....	1

At least half the credit hours for the minor must be at the 300-level or above.

Minor in Chemistry/Teaching

Required credits	10-12
Required supporting credits	9-11
Total credits required for this minor.....	21

Required Credits — 10-12 semester hours

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

CHED 495 Seminar in Teaching Chemistry2
Note that 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.

Required Elective Credits — 9-11 semester hours (to total 21 credits in the minor)

CHEM 131 Introductory Organic Chemistry.....	4
CHEM 109 Fundamentals of Chemistry II	5
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 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.

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.

Minor in Computer Science

Required credits	15
Required elective credits	6
Total credits required for this minor.....	21

Required Credits — 15 semester hours

CS 101 Introduction to Computer Science	3
CS 102 Structured Analysis, Design and 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 semester hours

Two upper-division CS courses.....6

Minor in Earth Sciences

Required elective credits	20
Total credits required for this minor.....	20

Required Elective Credits — 20 semester hours

Courses with AST, ESCL, 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.

Minor in Economics

Required Economic credits	15
Required elective credits	9
Total credits required for this minor.....	24

Required Economic Credits — 15 semester hours

ECON 103 Introduction to Economics: Macroeconomics.....	3
ECON 105 Introduction to Economics: Microeconomics.....	3
ECON 202 Money and Banking	3
ECON 300 Intermediate Microeconomics.....	3
ECON 350 Intermediate Macroeconomics.....	3

Required Elective Credits — 9 semester hours

Eligible electives include all ECON prefix courses, ENST 335 and MIND 286.

Note

At least 12 credit hours must be taken at the 300- or 400-level.

Minor in English

Required credits	9
Required elective credits	9
Total credits required for this minor.....	18

Required Credits — 9 semester hours

ENG 131 Introduction to Literature	3
ENG 219 Traditional and Modern Grammars.....	3
ENG 419 Language and the History of English.....	3

Required Elective Credits — 9 semester hours

One course from the following:

ENG 260 Masterpieces of English Literature	3
ENG 261 Masterpieces of American Literature.....	3
ENG 262 Masterpieces of World Literature.....	3

One course from each of the following levels:

ENG 300-level.....	3
ENG 400-level.....	3

Note

Qualified students may be exempted by examination from ENG 131.

Minor in French/Liberal Arts

Required credits	21
Required elective credits (minimum)	2
Total credits required for this minor.....	23

Required Credits — 21 semester hours

FR 201 Intermediate French I.....	3
FR 202 Intermediate French II.....	3
FR 301 French Conversation & Composition I.....	3
FR 302 French Conversation & Composition II.....	3
FR 311 French Civilization & Literature Survey I.....	3
FR 312 French Civilization & Literature Survey II.....	3
FR 407 French for Oral Proficiency	3

Required Elective Credits — 2 semester hours (minimum)

FR 150 Practicum in Contemporary Culture	1
FR 300 Intermediate French Readings	1-3
FR 350 Practicum in Teaching French.....	2
FR 401 Intensive French.....	4
FR 402 Contemporary Life in France.....	3
FR 403 France of the Ancien Regime.....	4
FR 404 Modern France.....	4
FR 405 Business French.....	3
FR 450 Studies in French Literature	3
FR 475 Seminar in French Literature.....	2

Notes

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 French faculty member suggested before registration each semester.

Minor in French/Teaching

Required credits	23
Required Elective credits (minimum)	2
Total credits required for this minor.....	25

Required Credits — 23 semester hours

FR 201 Intermediate French I.....	3
FR 202 Intermediate French II.....	3
FR 301 French Conversation and Composition I.....	3
FR 302 French Conversation and Composition II.....	3
FR 311 French Civilization & Literature Survey I.....	3
FR 312 French Civilization & Literature Survey II.....	3
FR 350 Practicum in Teaching French.....	2
FR 407 French for Oral Proficiency	3

Required Elective Credits — 2 semester hours (minimum)

FR 150 Practicum in Contemporary Culture	1
FR 300 Intermediate French Readings	1-3
FR 401 Intensive French.....	4
FR 402 Contemporary Life in France.....	3
FR 403 France of the Ancien Regime.....	4
FR 404 Modern France.....	4
FR 405 Business French.....	3
FR 450 Studies in French Literature	3
FR 475 Seminar in French Literature.....	2

Notes

All work to be counted toward the minor in French, teaching 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 French faculty member suggested before registration each semester. This minor does not lead to teacher licensure.

Minor in Geography

Required credits	9
Required elective credits	9
Total credits required for this minor.....	18

Required Credits — 9 semester hours

GEOG 200 Human Geography	3
GEOG 225 Physical Geography	3
GEOG 264 Maps and Imagery.....	3

Required Elective Credits — 9 semester hours

Elective Credits will be selected with the approval of a faculty advisor.

Minor in German/Liberal Arts

Required credits	21
Required elective credits (minimum)	2
Total credits required for this minor.....	23

Required Credits — 21 semester hours

GER 201 Intermediate German I.....	3
GER 202 Intermediate German II.....	3
GER 301 German Conversation & Composition I.....	3
GER 302 German Conversation & Composition II.....	3
GER 311 German Civilization & Literature Survey I.....	3
GER 312 German Civilization & Literature Survey II.....	3
GER 407 German for Oral Proficiency.....	3

Required Elective Credits — 2 semester hours (minimum)

GER 150 Practicum in Contemporary Culture.....	1
GER 300 Intermediate German Readings	1-3
GER 350 Practicum in Teaching German.....	2
GER 401 Intensive German	4
GER 402 Contemporary Life in Germany.....	3
GER 403 Practicum in Germany	4
GER 404 Modern Germany.....	4
GER 405 Business German	3
GER 450 Studies in German Literature.....	3
GER 475 Seminar in German Literature.....	2

Notes

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 German faculty member suggested before registration each semester.

Minor in German/Teaching

Required credits	23
Required elective credits	2
Total credits required for this minor	25

Required Credits — 25 semester hours

QER 201 Intermediate German I	3
QER 202 Intermediate German II	3
QER 301 German Conversation and Composition I	3
QER 302 German Conversation and Composition II	3
QER 311 German Civilization & Literature Survey I	3
QER 312 German Civilization & Literature Survey II	3
QER 350 Practicum in Teaching German	2
QER 407 German for Oral Proficiency	3

Required Elective Credits — 2 semester hours (minimum)

QER 150 Practicum in Contemporary Culture	1
QER 300 Intermediate German Readings	1-3
QER 401 Intensive German	4
QER 402 Contemporary Life in Germany	3
QER 403 Practicum in Germany	4
QER 404 Modern Germany	4
QER 405 Business German	3
QER 450 Studies in German Literature	3
QER 475 Seminar in German Literature	2

Notes

All work to be counted toward the minor in German, teaching 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 German faculty member suggested before registration each semester. This minor does not lead to teacher licensure.

Minor in History

Required elective credits	18
Total credits required for this minor	18

Required Elective Credits — 18 semester 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 of their advisors.

Minor in Humanities

Required credits	9
Required supporting credits	12
Total credits required for this minor	21

Required Credits — 9 semester hours

HUM 111 The Classical Period Through the Middle Ages	3
HUM 112 The Renaissance to the Present	3
HUM 410 Advanced Seminar in the Humanities	3
or HUM 422 Directed Studies	3

Required Elective Credits — 12 semester hours

Elective Credits must be chosen from the following humanities categories: English, history, humanities, MIND, music, philosophy, theatre and visual arts. Courses taken in the elective category must focus upon a particular culture, period, topic or theme and must bear at least two prefixes. Two of these courses must be at the 300-400 level. The humanities advisor in the English Department must approve all courses for the humanities minor and copies of the approved course of study must be on file in the advisor's office and the English Department.

Minor in Legal Studies

Required credits	6
Required elective credits	15
Total credits required for this minor	21

Required Credits — 6 semester hours

PHIL 220 The Nature of Legal Reasoning	3
ID 420 Legal Research and Writing	3

Required Elective Credits — 15 semester 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
ELFS 385 Law and the Classroom Teacher	2
ENST 205 Environment, Politics and Law	2
HIST 340 American Constitutional History to 1870	3
HIST 341 American Constitutional History from 1870	3
JMC 497 Mass Communications Law	3
PSCI 306 Constitutional Law	3
SOC 141 Introduction to Criminal Justice	3
SOC 444 Sociology of Criminal Law	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 Intellectual History	3
MIND 286 Value Issues in Political Economy	3
PHIL 350 Ethics	3
PHIL 352 Business 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

Group III - Skills (select 3 credits from the following):

ECON 304 Women and the Economy	3
ECON 305 Labor/Management Economics	3
ENG 203 The Essay	3
ENG 319 Advanced Expository Techniques	3
ENST 100 Introduction to Environmental Studies	3
PSCI 150 Research in Political Science	2
PSCI 392 Political Science Internship	3
PSY 443 Motivation	3
SPCO 211 Argument and Debate	3
SPCO 341 Courtroom Communication	3
SPCO 444 Argumentation Theory	3

Note that any other internship must be approved by your legal studies advisor.

Notes

Students must complete 50 percent of their coursework at the 300- and 400-level. No more than 12 hours may be taken in one department.

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.

Minor in Mathematics Education for Elementary Education Teachers

Required credits	3
Required supporting credits	15
Total credits required for this minor	18

Required Credits — 3 semester hours

MATH 283 Informal Geometry	3
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Required Elective Credits — 15 semester hours

To be chosen from mathematics, mathematics education, statistics or computer science offerings; at least two courses must be at the 300-400 level.

Notes

Students with a minor in mathematics who plan to teach in the elementary school must:

- complete the requirements for licensure as an elementary school teacher,
- choose electives with the approval of the minor program advisor and
- successfully complete MATH 182 Fundamentals of Mathematics II, before entering this program.

This minor does not lead to teacher licensure.

Minor in Mathematics/Liberal Arts

Required credits	8
Required supporting credits	12
Total credits required for this minor.....	20

Required Credits — 8 semester hours

MATH 131 Calculus and Analytic Geometry I	4
MATH 132 Calculus and Analytic Geometry II	4

Required Elective Credits — 12 semester hours

MATH 221 Elementary Linear Algebra	3
MATH 228 Discrete Mathematics	3
MATH 229 Graph Theory	3
MATH 233 Calculus and Analytic Geometry III	4
MATH 321 Introduction to Abstract Algebra	4
MATH 335 Differential Equations I	3
MATH 336 Differential Equations II	3
MATH 341 Introduction to Modern Geometry	4
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	2
MATH 350 Elementary Probability Theory	4
MATH 351 Elementary Statistics Theory	3

Note that at least six of the twelve hours of electives must be at the 300-level or above.

Minor in Mathematics/Secondary Mathematics Teaching, Grades 7-12

Required credits	27
Total credits required for this minor.....	27

Required Credits — 27 semester hours

EDLS 363 Clinical Experience: Secondary	2
MATH 131 Calculus and Analytic Geometry I	4
MATH 132 Calculus and Analytic Geometry II	4
MATH 221 Elementary Linear Algebra	3
MATH 228 Discrete Mathematics	3
MATH 321 Introduction to Abstract Algebra	4
MATH 341 Introduction to Modern Geometry I	4
MED 441 Methods of Teaching Mathematics	3

Note

Students must meet all requirements for Professional Teacher Education as specified in this Bulletin. Does not lead to teacher licensure.

Minor in Media Studies

Required credits	9
Required elective credits	9
Total credits required for this minor.....	18

Required Credits — 9 semester hours

JMC 100 Introduction to Journalism and Mass Communications	3
JMC 390 Impact of Mass Communications on Society	3
JMC 397 Journalism History	3

Required Elective Credits — 9 semester hours

Select courses with the JMC prefix. 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.

Minor in Mexican-American Studies

Required credits	15
Required supporting credits (minimum)	3
Total credits required for this minor.....	18

Required Credits — 15 semester hours

HISP 101 Introduction to Mexican-American Studies	3
HISP 111 Introduction to Hispanic Literature	3
HISP 225 History of the Chicano in the Southwest	3
HISP 300 Social Stratification in the Mexican-American Community	3
HIST 118 History of Mexico	3

Required Elective Credits — 3 semester hours

ART 383 Pre-Columbian Art	4
ENG 238 Introduction to Folklore: Hispanic	3
GEOG 335 Geography of Middle America	3
HISP 220 Women in Hispanic Society	3
HISP 370 Chicano Psychology	3
SOC 237 Sociology of Minorities	3
SPAN 255 Music of the Hispanic World	3
SPAN 452 Mexican Literature	3

Notes

ENG 238 will fulfill the elective requirement only if taken when the Hispanic folklore is being taught in the series of Introduction to Folklore courses.

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

Minor in Philosophy

Required credits	9
Required elective credits	9
Total credits required for this minor.....	18

Required Credits — 9 semester hours

PHIL 260 History of Ancient Philosophy	3
PHIL 261 History of Modern Philosophy	3
PHIL 350 Ethics	3

Required Elective Credits — 9 semester 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 115 Philosophy and Current Affairs	1-3
PHIL 220 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 352 Business Ethics	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 Studies	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 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.

Minor in Physics

Required credits	13
Required supporting credits	12
Required elective credits	6-8
Total credits required for this minor.....	31-33

Required Credits — 13 semester hours

PHYS 240 General Physics I	5
PHYS 241 General Physics II	5
PHYS 321 Elementary Modern Physics	3

Required Supporting Credits — 12 semester hours

MATH 131 Calculus and Analytic Geometry I	4
MATH 132 Calculus and Analytic Geometry II	4
MATH 233 Calculus and Analytic Geometry III	4
(PHYS 320 Mathematical Applications (3) may be substituted for MATH 233)	

Required Elective Credits — 6-8 semester hours

Select one course from the following:

PHYS 340 Mechanics I	3
PHYS 341 Electricity and Magnetism I	3

Select one course from the following:

PHYS 343 Alternating Currents and Electronics	4
PHYS 345 Atomic and Quantum Physics	5
PHYS 347 Optics	4
PHYS 420 Thermodynamics and Statistical Physics	3

Minor in Political Science

Required credits	6
Required elective credits	12
Total credits required for this minor	18

Required Credits — 6 semester hours

PSCI 100 United States National Government	3
PSCI 105 Introduction to Political Science	3

Required Elective Credits — 12 semester hours**Group A — American Politics**

ENST 205 Environmental Politics and Law	3
PSCI 203 Colorado Politics	3
PSCI 207 Women and Politics	2
PSCI 208 Introduction to Public Administration	3
PSCI 301 Electoral Politics in the United States	3
PSCI 302 Law-Making in the United States	3
PSCI 306 Constitutional Law	3
PSCI 392 Internship	3-10
PSCI 401 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 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 435 Problems in Political Philosophy	3

Group D — Comparative Politics

PSCI 210 Politics in the European Community	3
PSCI 310 Politics of Central and East European States	3
PSCI 315 Comparative Public Policy	3
PSCI 318 Politics of the Developing States	3
PSCI 415 Problems in Comparative Politics	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.

Minor in Psychology

Required credits	7
Required supporting credits	6-7
Elective credits	3
Total credits required for this minor	16-17

Required Credits — 7 semester hours

PSY 120 Principles of Psychology	4
PSY 341 Principles of Learning	3

One course from the following

PSY 230 Human Growth and Development	4
PSY 265 Social Psychology	3
PSY 350 Theories of Personality	3

Required Elective Credits — 6-7 semester hours

Select courses from the PSY prefix.

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 50 percent of the minor coursework must be at the 300-400 level.

Minor in Sociology

Required credits	3
Required elective credits	14
Elective credit	1
Total credits required for this minor	18
Required Credits — 3 semester hours	
SOC 100 Principles of Sociology	3

Required Elective Credits — 14

Select two of the following:

SOC 235 Social Change	3
SOC 237 Sociology of Minorities	3
SOC 330 Social Organizations	3
SOC 332 Social Psychology	3
SOC 333 Social Class and Inequality	3

Select from any remaining sociology courses

Note that nine hours of the minor must be 300- or above-level courses.

Minor in Spanish

Required credits	21
Required elective credits	3
Total credits required for this minor	24

Required Credits — 21 semester 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

Select one of the following:

SPAN 321 Spanish Civilization and Culture	3
SPAN 331 Latin American Civilization and Culture	3

Required Elective Credits — 3 semester 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 452 Mexican Literature	3
SPAN 453 Spanish Literature of the 20th Century	3
SPAN 454 Latin American Literature of the 20th Century	3
SPAN 455 Readings in Spanish Literature	3
SPAN 456 Spanish and Latin American Short Story	3
SPAN 457 Literature of United States Hispanics	3
SPAN 458 Cervantes	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.

Minor in Speech Communication

Required credits	6
Required elective credits	12
Total credits required for this minor	18

Required Credits — 6 semester hours

SPCO 100 Basics of Public Speaking	1
SPCO 102 Introduction to Speech Communication	3
SPCO 103 Speaking Evaluation	2

Required Elective Credits — 12 semester hours

Select one 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
SPCO 404 Rhetorical Theory	3
SPCO 444 Argumentation Theory	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
SPCO 354 Directing Speech Communication Activities	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.

Minor in Writing

Required credits	6
Required elective credits	12
Total credits required for this minor	18

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 semester hours

ENG 203 The Essay	3
ENG 319 Advanced Expository Techniques	3

Required Elective Credits — 12 semester hours**Business Administration Computer Systems**

BA 205 Business Communications	3
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Educational Technology

ET 504 Instructional Materials Design	3
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Note that 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: Poetry or Fiction or Drama	3
(may be repeated under the different subtitles as listed)	
ENG 340 Creative Writing — Advanced: Poetry or Fiction or Drama	3
(may be repeated under the different subtitles as listed)	
ENG 513 Professional Renewal	3

Note that undergraduates must have advisor and instructor consent.

History

HIST 399 Introduction to Historical Research	3
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Journalism and Mass Communications

JMC 210 Newswriting	3
JMC 310 Feature Writing for News Media	3
JMC 410 Advanced News	3

Science

SCI 291 Scientific Writing	3
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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 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.

Programs of Study

College of Business Administration

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Location: Kepner 2053; Telephone: 970-351-2764
Robert M. Lynch, Dean; Joe F. Alexander, Associate Dean

The College of Business Administration 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, and Marketing as well as in General Business Administration. The College also offers minors in Business Administration and Computer Information Systems and jointly offers (with the College of Arts and Sciences) a Bachelor of Arts Degree in Interdisciplinary Studies with an emphasis in International Trade and Commerce.

The College of Business Administration was established in the summer of 1968 as an autonomous degree-recommending unit with a primary mission to provide education for business administration. Since that time, 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 Bulletin). The College's own mission statement has been developed to support that of the University.

Mission Statement

The College of Business Administration (COBA) contributes to the mission of the University through its undergraduate instructional programs in business administration and through faculty scholarship and service.

COBA's primary objective is to provide high quality undergraduate instruction for the benefit of its students. Grounded in the liberal arts, business classes apply theory to practical business problems. The curriculum incorporates computer technology and weighs the opportunities and challenges of competing in a global marketplace. Students interact with distinguished business leaders who give lectures and hold visiting professorships.

Faculty scholarship and service are also important objectives. While these activities often contribute to the economic development of the region, COBA supports them primarily to enhance the effectiveness of classroom teaching. Because both activities create ties among our faculty, the business community and faculty at other universities, they extend our students' opportunities for employment or placement in graduate programs.

COBA Advising Center

Location: Kepner 1055; Telephone: 970-351-1233
Robert Elton, Director, COBA Advising Center and Chair, General Business;
Lynn Karowsky, Director, Executive Professor Program and COBA Honors Program; Margaret Rusch, Student Services Specialist

The College of Business Administration 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 COBA academic programs and departments. The Advising Center monitors all admissions, transfer credits, continuation requirements and administers the COBA Honors Programs and Executive Professor Program for the College. It also provides students with information on graduate study in Business Administration.

Accounting Department

Location: Kepner 2090; Telephone: 970-351-2855
Martha Lilly, Chair

Professors — Paul Bohrer, MS, CPA; John Elsea, PhD, CPA; Allen McConnell, MS, CPA; Ronald Reed, PhD, CPA

Associate professors — Bill Cox, PhD, CPA; Joseph Donelan, PhD, CPA; Martha Lilly, PhD, CPA; John Stewart, PhD, CPA

Assistant professors — Robert Elton, MA, CPA; Terri Gutierrez, PhD, CPA

Computer Information Systems Department

Location: Kepner 95; Telephone: 970-351-2089
Steve Teglovic, Chair

Professors — William Duff, Jr., PhD; Robert Lynch, PhD; Steve Teglovic, Jr., PhD

Associate professors — Charmayne Cullom, PhD; R. John Freese, PhD

Assistant professors — Jay Lightfoot, PhD; Tod Sedbrook, PhD

Robert G. Tointon Distinguished Professor — Jack Prins, PhD

Finance Department

Location: Kepner 1090; Telephone: 970-351-2275
John Clinebell, Chair

Associate professors — Garth Allen, JD, CPCU; John Clinebell, DBA; Glen Droegemueller, JD

Assistant professors — David Johnson, PhD; Lynn Karowsky, JD; Rutilio Martinez, PhD; James McDonald, DBA; Eileen St. Pierre, PhD

Monfort Executive Professor — Junius Peake

Management Department

Location: Kepner 1090; Telephone: 970-351-2088
Sharon Clinebell, Chair

Professor — James Clinton, PhD

Associate professors — Sharon Clinebell, DBA; Karen Fowler, PhD; D. Lynn Hoffman, PhD; Daniel Rowley, PhD

Marketing Department

Location: Kepner 2090; Telephone: 970-351-2366
Nathan D. Kling, Chair

Associate professors — Joe F. Alexander, DBA; Robert C. Harris, MA; Nathan D. Kling, PhD; Denny McCorkle, DBA; R. Viswanathan, PhD

Instructor — Nancy D'Albergaria, MBA

General Business Department

Location: Kepner 1055; Telephone: 970-351-1233
Robert Elton, Chair

Business Major Requirements

Admission Requirements

Freshman students are admitted to the College of Business Administration if they unconditionally meet the Colorado Commission of Higher Education (CCHE) requirement for admission to a level II Colorado institution. This admission requirement is presently set at a CCHE composite index of 92.

The CCHE composite index is a sliding scale based on achievement test score and high school rank. A 92 index score centers on a ACT score of 22 or SAT of 910 and graduation in the top 40 percent of the high school class. A 92 index score is maintained at lower test scores or class rank provided that the candidate has offset a lower qualification on one measure with a higher qualification on the other.

Transfer students are admitted to the College of Business Administration 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 UNC College of Business Administration provided they meet the freshman admission requirements specified above.

International students are admitted to the College of Business Administration if they meet the University admission requirements noted above and score 540 or higher on the TOEFL. International students can obtain additional information about admissions from the COBA Advising Center.

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:

- They have completed 30 semester hours of university level coursework with at least 15 semester hours at UNC.
- 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 COBA department offices and at COBA's Advising Center.

Students enrolled in the Fresh Start Program should contact COBA's Advising Center for information on program-specific policies regarding admission to COBA. The College of Business Administration 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 business major or minor provided that they had met the freshman entry requirement specified above for admission to COBA and are in good academic standing at UNC.

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

Graduation Requirements

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

- complete a minimum of 126 semester hours of University coursework.
- satisfy the following requirements:
 - University requirements (e.g., English essay, General Education, etc.) and;
 - College of Business Administration requirements (e.g., Business Core, Other Required Courses, Emphasis Area Requirements, etc.) and;
 - elective coursework to bring the total to at least 126 semester hours.
- meet the following course distribution requirements:

At least 50 percent of a Business major's coursework required for the degree must be comprised of non-business courses (courses without a BA __ prefix.) To comply, a student must have completed at least 63 non-business credits in order to be eligible for graduation.

A student who intends to double major in business subjects or combine a business major with a minor in Computer Information Systems must pay particular attention to fulfilling the course distribution requirements described in number 3 above.
- 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. At least 50 percent of the credit hours in Business Administration required for the degree must be earned at UNC.

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.

English Essay Exam

Every student must pass the English Essay Examination at the University of Northern Colorado to graduate. The requirement may not be challenged or waived. This examination must be passed at least one semester before the semester the student graduates. The scheduled examination may be taken at any point, but students are expected to take it before the end of the first semester of their junior year. The examination is evaluated on a satisfactory/unsatisfactory basis and may be retaken any number of times. There is a fee to retake the examination. Additional information can be obtained from the English Department, Michener L50, phone 970-351-1576.

Second Bachelor's Degree

Students who have previously earned a Bachelor's Degree who wish to earn a second Bachelor's Degree in Business Administration must complete a minimum of 36 semester hours at UNC. Individuals should contact the COBA Advising Center for more information on the Second Bachelor's Degree option.

Three-Year Degree Program

The College offers talented and promising Business Administration majors the opportunity to complete their Bachelor's Degree in three years instead of four. Students admitted into the Accelerated Business Scholars program take 18 semester credits each Fall and Spring semester and 6 semester credits in the 5-week Interim session (mid-May to mid-June). This allows students to complete 42 semester credits per year, completing the 126 required credits in only three years. The program is open to freshmen and transfer students with less than 30 semester credits who have a CCHE index score of 118. This index is equivalent to a 3.75 high school GPA and an ACT score of 27. Re-entry students who have not attended a university for at least 5 years may transfer into the program after completing at least 12 UNC credits with a 3.25 GPA. To apply, students should contact the COBA Advising Center.

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 by 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 COBA's night classes at the COBA Advising Center, Kepner 1055, phone 970-351-1233.

Continuation Requirements

Students must attain a 2.0 ("C") cumulative grade point average in the coursework taken in COBA. Students achieving less than the required cumulative grade point average may be denied continuation of their business program.

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 Administration. 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.

UNC Business majors who plan to earn credit toward their degree from another institution must obtain prior written approval from their department chair.

Time Limitation on Credit Earned Toward a Bachelor's Degree

Any 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.

Course Prerequisites

The student is held responsible for having met the prerequisites in all courses for which he or she has registered. Students who register for classes in which they do not have the prerequisites may be dropped from the course 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 before the first class meeting.

Academic Honesty

COBA 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 course.
 - Suspension from the College of Business Administration.
 - Expulsion from the College of Business Administration.
- Students are referred to the UNC Student Handbook as to details of "University Standards of Conduct" and "Academic Expectations."

Cooperative Graduate Program with Colorado State University

The UNC College of Business Administration has established a cooperative MBA program with Colorado State University. Students may enroll and complete part of their coursework through UNC's College of Business Administration. Courses are offered in both the day and evening programs at UNC.

Information about the program can be obtained from the COBA Advising Center or at the CSU's College of Business Administration.

University of Colorado at Denver Admissions Agreement

Through an agreement with UC-Denver, promising students graduating from the UNC Business College can be automatically admitted to CU-Denver's graduate programs in Business Administration.

Information about this program can be obtained from the COBA Advising Center or at the UC-Denver Business School.

Incomplete Grades

A grade of "I" is assigned when coursework is complete 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.

International Studies Programs

The College of Business Administration works closely with the Department of Foreign Languages and the Department of Hispanic Studies in the College of Arts and Sciences to prepare students for careers in international business. Preparing students to assist Colorado businesses to compete effectively in the North American Free Trade area is of particular concern to the College of Business Administration. Interested students may pursue either of two options:

- 1) a business major, combined with a language/area studies minor. Students that select this option, combine a business specialization with a language minor and additional course work in the history, politics and culture related to the area of language study; or
- 2) an International Trade and Commerce (ITC) major. Students who choose this option work toward a Bachelor of Arts in Interdisciplinary Studies which combines coursework in Business, Economics and Foreign Language. Interested students should see the program requirements specified elsewhere in this bulletin.

Faculty advisors in the COBA Advising Center are available to guide students in considering appropriate international business study options.

Student Organizations

Students enrolled in the College of Business Administration 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	Dr. Joseph Donelan	Accounting	
Computer Management Association	Dr. Jack Prins	CIS	Data Processing Management Association
Financial Management Association of UNC	Dr. Garth Allen Dr. Eileen St. Pierre	Finance	Financial Management Association
UNC Management Club	Dr. Karen Fowler	Management	Society for Advancement of Management
Marketing Association	Dr. R. Viswanathan	Marketing	American Marketing Association
Delta Sigma Pi	Dr. William Duff	College of Business Administration	Petitioning Chapter Honoraries
Beta Alpha Psi	Dr. Joe Donelan	Accounting	Petitioning Chapter
Beta Gamma Sigma	Dr. Bill Cox	College of Business Administration	American Assembly of Collegiate Schools of Business

In addition, the College of Business Administration Student Representative Council (COBA/SRC) advises the Dean on matters of student concern and schedules college-wide events. This council is comprised of the Presidents of the five student clubs listed above.

Bachelor of Science in Business Administration

Emphasis in Accounting

Program Requirements

Required Program/Major Credits:

Business Administration core	33
Required credits	24
Supporting credits	6-7
Required elective credits	3
General Education:	
Specified credits	18-19
Remaining credits	22
Elective credits	18-20
Total credits required for this degree	126

The primary mission of the Department of Accounting is to provide high quality undergraduate instruction leading to a baccalaureate degree in Business Administration with an emphasis in Accounting. The Accounting faculty are committed to educating students to function as effective and contributing members of the accounting profession, business community, or graduate programs. Additionally, as an integral part of the College of Business Administration, the Accounting faculty are committed to the College's mission, objectives and programs.

The emphasis in accounting and the Accounting Department are approved under the State Accountancy 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 jobs including public accounting, industrial accounting, governmental and other not-for-profit accounting.

Business Administration Core — 33 semester hours

BA 101 Business Computing.....	3
BAAC 220 Principles of Accounting I	3
BAAC 221 Principles of Accounting II	3
BACS 291 Business Statistics I.....	3
BACS 300 Information Systems	3
BACS 395 Production Management.....	3
BAFN 231 Legal Environment of Business.....	3
BAFN 370 Business Finance.....	3
BAMG 350 Management of Organizations	3
*BAMG 456 Strategic Management and Business Policy	3
BAMK 360 Marketing.....	3
<i>*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 220, BAAC 221, BACS 291, BACS 395, BAFN 231, BAFN 370, BAMG 350 and BAMK 360. Only BACS 395 may be taken concurrently.</i>	

Required Credits — 24 semester 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 Advanced Accounting I	3
BAAC 421 Advanced Accounting II	3
BAAC 425 Auditing I.....	3
BAAC 428 Income Tax I.....	3

Supporting Credits — 6-7 semester hours

SPCO 100 Basics of Public Speaking.....	1
SPCO 103 Speaking Evaluation.....	2
MATH 131 Calculus and Analytic Geometry I	4
MATH 176 Topics in Calculus.....	3
Note that students may choose between MATH 131 and MATH 176 (MATH 176 is recommended).	

Required Elective Credits — 3 semester hours

BAAC 324 Cost and Managerial Accounting II	3
BAAC 426 Auditing II.....	3
BAAC 429 Income Tax II.....	3

General Education Credits, Specified —18-19 semester hours

<i>Category 1b — Intermediate Composition</i>	
BA 205 Business Communications	
or ENG 123 College Research Paper	3
<i>Category 2 — Mathematics</i>	
MATH 124 College Algebra	
or MATH 175 Topics in Finite Mathematics.....	3-4
<i>Category 5 — Social Sciences</i>	

The following courses are required for the Accounting emphasis:

ECON 103 Introduction to Economics; Macroeconomics.....	3
ECON 105 Introduction to Economics; Microeconomics	3
<i>One of the following two courses:</i>	
SOC 100 Principles of Sociology	3
PSY 120 Principles of Psychology	4
<i>One of the following two courses:</i>	
PSCI 100 United States Government.....	3
PSCI 105 Introduction to Political Science.....	3

Notes

At least 50 percent of a Business major's coursework required for the degree must be comprised of non-business courses (courses without a BA __ prefix). To comply, a student must have completed at least 63 non-business credits in order to be eligible for graduation.

Students who take BA 205 instead of ENG 123 may count a maximum of 27 semester hours of upper division (300- or 400-level) accounting courses toward the University requirement of 126 hours for graduation (BAAC prefix). Students taking ENG 123 may count 30 semester hours toward the 126 hour graduation requirement.

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- or 400-level) accounting (BAAC) courses completed at the University of Northern Colorado. The Accounting Department will administer a required assessment examination to each graduate during the semester of expected graduation.

A student transferring from another four-year institution shall be allowed to transfer a maximum of nine semester hours of upper division accounting courses (300- and 400-level).

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 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 126 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.

Bachelor of Science in Business Administration

Emphasis in Computer Information Systems

Program Requirements

Required Program/Major Credits:

Business Administration core	33
Required credits.....	21
Supporting credits.....	6-7
Required elective credits	6
General Education:	
Specified credits	18-19
Remaining credits	22
Elective credits	18-20
Total credits required for this degree	126

The Computer Information Systems emphasis prepares students to investigate, design and develop computer systems for business. 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.

Business Administration Core — 33 semester hours

BA 101 Business Computing.....	3
BAAC 220 Principles of Accounting I	3
BAAC 221 Principles of Accounting II	3
BACS 291 Business Statistics I.....	3
BACS 300 Information Systems	3
BACS 395 Production Management.....	3
BAPN 231 Legal Environment of Business.....	3
BAPN 370 Business Finance.....	3
BAMQ 350 Management of Organizations.....	3
*BAMQ 456 Strategic Management and Business Policy.....	3
BAMK 360 Marketing.....	3
<i>*BAMQ 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 220, BAAC 221, BACS 291, BACS 395, BAPN 231, BAPN 370, BAMQ 350 and BAMK 360. Only BACS 395 may be taken concurrently.</i>	

Required Credits — 21 semester hours

Take two of the following:

BACS 285 Business COBOL Programming.....	3
BACS 286 Structured Programming and Applications for Business.....	3
BACS 287 Graphical Interface Programming.....	3
<i>(If all three are taken one will count toward 3 hours of required electives.)</i>	
BACS 380 Networking and Data Communications Systems	3
BACS 390 Business Statistics II.....	3
BACS 485 Database Management Systems.....	3
BACS 487 Systems Analysis and Design	3
BACS 488 Advanced Systems Analysis and Design	3

Supporting Credits — 6-7 semester hours

SPCO 100 Basics in Public Speaking.....	1
SPCO 103 Speaking/Evaluation.....	2
MATH 131 Calculus and Analytic Geometry I.....	4
MATH 176 Topics in Calculus.....	3
Note that students may choose between MATH 131 and MATH 176 (MATH 176 is recommended).	

Required Elective Credits — 6 semester hours

BACS 381 Object-Oriented Systems.....	3
BACS 392 Systems Platforms.....	3
BACS 482 Management Support Systems.....	3
BACS 486 Advanced Database Management.....	3
BACS 495 Special Topics in CIS	3-6

General Education Credits, Specified — 18-19 semester hours

Category 1b — Intermediate Composition

BA 205 Business Communications	3
or ENG 123 College Research Paper	3

Category 2 — Mathematics

MATH 124 College Algebra	3
or MATH 175 Topics in Finite Mathematics.....	3-4

Category 5 — Social Sciences

ANT 100 General Anthropology.....	3
ECON 103 Introduction to Economics: Macroeconomics.....	3
ECON 105 Introduction to Economics: Microeconomics	3
GEOG 100 World Geography.....	3
PSCI 100 United States Government.....	3
PSCI 105 Introduction to Political Science.....	3
PSY 120 Principles of Psychology	4
SOC 100 Principles of Sociology	3

Note that students are required to take ECON 103 and ECON 105 and two additional courses listed in Category 5.

Notes

At least 50 percent of a Business major's coursework required for the degree must be comprised of non-business courses (courses without a BA __ prefix). To comply, a student must have completed at least 63 non-business credits in order to be eligible for graduation.

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 and elective credits listed in the CIS emphasis for the courses to count toward graduation.

A maximum of 12 semester credits in 300/400-level required and elective emphasis courses can be transferred from another four-year institution.

Bachelor of Science in Business Administration

Emphasis in Finance

Program Requirements

Required Program/Major Credits:

Business Administration core	33
Required credits.....	18
Supporting credits	6-7
Required elective credits	9
General Education:	
Specified credits	18-19
Remaining credits	22
Elective credits	18-20
Total credits required for this degree	126

The primary focus of the finance emphasis is to provide the students with a theoretical and practical exposure to all areas of finance: financial management, financial institutions and markets, and investments.

The emphasis in finance prepares students for careers in financial management of organizations and financial institutions. Graduates are prepared for entry level positions in financial management of large and small businesses, financial institution positions, investment related positions and financial planning. In addition, students may sit for the Chartered Financial Analyst (CFA) exam or the Certified Financial Planning (CFP) exam (see notes below) after successful completion of the finance major.

Business Administration Core — 33 semester hours

BA 101 Business Computing.....	3
BAAC 220 Principles of Accounting I	3
BAAC 221 Principles of Accounting II	3
BACS 291 Business Statistics I.....	3
BACS 300 Information Systems	3
BACS 395 Production Management.....	3
BAFN 231 Legal Environment of Business.....	3
BAFN 370 Business Finance	3
BAMG 350 Management of Organizations	3
*BAMG 456 Strategic Management and Business Policy	3
BAMK 360 Marketing.....	3
<i>*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 220, BAAC 221, BACS 291, BACS 395, BAFN 231, BAFN 370, BAMG 350 and BAMK 360. Only BACS 395 may be taken concurrently.</i>	

Required Credits — 18 semester hours

BAAC 320 Intermediate Accounting I	3
BACS 390 Business Statistics II	3
BAFN 371 Financial Markets and Institutions.....	3
BAFN 470 Financial Management.....	3
BAFN 471 Investments	3
BAFN 474 Case Problems in Financial Management.....	3

Supporting Credits — 6 to 7 semester hours

SPCO 100 Basics of Public Speaking.....	1
SPCO 103 Speaking Evaluation.....	2
MATH 131 Calculus and Analytic Geometry I	4
MATH 176 Topics in Calculus.....	3
Note that students may choose between MATH 131 and MATH 176 (MATH 176 is recommended).	

Required Elective Credits — 9 semester hours

BAFN 340 Principles of Risk and Insurance	3
BAFN 372 Introduction to Real Estate	3
BAFN 442 Topics in Financial Planning.....	3
BAFN 473 Commercial Bank Management.....	3
BAFN 475 Multinational Financial Management.....	3
BAFN 478 Student Alumni Foundation Fund.....	3
BAFN 479 Security Analysis	3

General Education Credits, Specified — 18-19 semester hours

Category 1b — Intermediate Composition

BA 205 Business Communications	3
or ENG 123 College Research Paper	3

Category 2 — Mathematics

MATH 124 College Algebra	3
or MATH 175 Topics in Finite Mathematics.....	3-4

Category 5 — Social Sciences

ANT 100 General Anthropology.....	3
ECON 103 Introduction to Economics: Macroeconomics.....	3
ECON 105 Introduction to Economics: Microeconomics	3
GEOG 100 World Geography.....	3
PSCI 100 United States Government.....	3
PSCI 105 Introduction to Political Science.....	3
PSY 120 Principles of Psychology	4
SOC 100 Principles of Sociology	3

Note that students are required to take ECON 103 and ECON 105 and two additional courses listed above.

Notes

At least 50 percent of a Business major's coursework required for the degree must be comprised of non-business courses (courses without a BA __ prefix). To comply, a student must have completed at least 63 non-business credits in order to be eligible for graduation.

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

A maximum of 9 semester credits in 300/400-level required and elective emphasis courses can be transferred from other four-year institutions.

In order to meet the requirements necessary to sit for the CFP exam, a finance major must take the following elective courses: BAFN 340, BAFN 441, BAFN 442, BAFN 479 and BAAC 428.

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 and Elective course categories in order for the courses to count toward graduation.

Bachelor of Science in Business Administration

Emphasis in General Business

Program Requirements

Required Program/Major Credits:

Business Administration core	33
Required credits.....	18
Supporting credits.....	6-7
Required elective credits	9
General Education:	
Specified credits	18-19
Remaining credits	22
Elective credits	18-20
Total credits required for this degree	126

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 COBA Advising Center in Kepner 1055, 970-351-1233.

Business Administration Core — 33 semester hours

BA 101 Business Computing.....	3
BAAC 220 Principles of Accounting I	3
BAAC 221 Principles of Accounting II	3
BACS 291 Business Statistics I.....	3
BACS 300 Information Systems	3
BACS 395 Production Management.....	3
BAFN 231 Legal Environment of Business.....	3
BAFN 370 Business Finance.....	3
BAMQ 350 Management of Organizations	3
*BAMQ 456 Strategic Management and Business Policy	3
BAMK 360 Marketing.....	3
<i>*BAMQ 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 220, BAAC 221, BACS 291, BACS 395, BAFN 231, BAFN 370, BAMQ 350 and BAMK 360. Only BACS 395 may be taken concurrently.</i>	

Required Credits — 18 semester hours

BAAC 327 Managerial Accounting	3
BACS 390 Business Statistics II.....	3
BAFN 332 Business Administration and the Law	3
BAFN 470 Financial Management.....	3
BAMK 362 Marketing Strategy	3
BAMQ 354 Organizational Behavior	3

Supporting Credits — 6 or 7 semester hours

SPCO 100 Basics of Public Speaking.....	1
SPCO 103 Speaking Evaluation.....	2
MATH 131 Calculus and Analytic Geometry I	4
MATH 176 Topics in Calculus.....	3
Note that students may choose between MATH 131 and MATH 176 (MATH 176 is recommended).	

Required Elective Credits - 9 semester hours

BAAC 329 Introduction to Income Tax.....	3
BACS 384 Business Computer Solutions.....	3
BAFN 340 Principles of Risk and Insurance	3
BAMK 368 Marketing Analysis and Research I	3
BAMQ 353 Human Resources Management	3
or BAMQ 357 Managing New Business Ventures.....	3

General Education Credits, Specified — 18-19 semester hours

Category 1b — Intermediate Composition	
BA 205 Business Communications	
or ENG 123 College Research Paper	3
Category 2 — Mathematics	
MATH 124 College Algebra	
or MATH 175 Topics in Finite Mathematics.....	3-4
Category 5 — Social Sciences	
ANT 100 General Anthropology.....	3
ECON 103 Introduction to Economics: Macroeconomics.....	3
ECON 105 Introduction to Economics: Microeconomics	3
GEOG 100 World Geography.....	3
PSCI 100 United States Government.....	3
PSCI 105 Introduction to Political Science.....	3
PSY 120 Principles of Psychology	4
SOC 100 Principles of Sociology	3

Note that students are required to take ECON 103 and ECON 105 and two additional courses listed in Category 5.

Notes

At least 50 percent of a Business major's coursework required for the degree must be comprised of non-business courses (courses without a BA __ prefix). To comply, a student must have completed at least 63 non-business credits in order to be eligible for graduation.

With the written approval of the General Business chair, students may make the following elective course substitutions: 1) Students may substitute a senior level Special Topics course taught by an Executive Professor for an elective course with the same departmental prefix. 2) Students with a 3.0 or higher grade point average may substitute BAMQ/BAMK 407 Small Business Counseling for the BAMQ or BAMK elective course.

No more than 9 semester hours of 300/400-level courses can be transferred in for the General Business program required courses.

Bachelor of Science in Business Administration

Emphasis in Management

Program Requirements

Required Program/Major Credits:

Business Administration core	33
Required credits	12
Supporting credits	6-7
Required elective credits	15
General Education:	
Specified credits	18-19
Remaining credits	22
Elective credits	18-20
Total credits required for this degree	126

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 outcome of this program is the preparation for entry level managerial or administrative positions in business or governmental agencies. Such positions include management trainees, supervisors, administrators, and other entry level positions.

Business Administration Core — 33 semester hours

BA 101 Business Computing.....	3
BAAC 220 Principles of Accounting I	3
BAAC 221 Principles of Accounting II	3
BACS 291 Business Statistics I.....	3
BACS 300 Information Systems	3
BACS 395 Production Management.....	3
BAFN 231 Legal Environment of Business.....	3
BAFN 370 Business Finance	3
BAMG 350 Management of Organizations.....	3
*BAMG 456 Strategic Management and Business Policy.....	3
BAMK 360 Marketing.....	3
<i>*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 220, BAAC 221, BACS 291, BACS 395, BAFN 231, BAFN 370, BAMG 350 and BAMK 360. Only BACS 395 may be taken concurrently.</i>	

Required Credits — 12 semester hours

BACS 390 Business Statistics II.....	3
BAMG 353 Human Resources Management	3
BAMG 354 Organizational Behavior	3
BAMG 457 Managing Complex Organizations	3

Supporting Credits — 6 to 7 semester hours

SPCO 100 Basics of Public Speaking.....	1
SPCO 103 Speaking Evaluation.....	2
MATH 131 Calculus and Analytic Geometry I	4
MATH 176 Topics in Calculus.....	3
Note that students may choose between MATH 131 and MATH 176 (MATH 176 is recommended).	

Required Elective Credits — 15 semester hours

BAAC 327 Managerial Accounting	3
BAFN 470 Financial Management.....	3
BAMG 357 Managing New Business Ventures	3
BAMG 452 Business, Government and Society.....	3
BAMG 453 Advanced Topics in Human Resource Management	3
BAMG 455 Industrial Relations	3
BAMG 458 International Management.....	3
BAMG 459 Seminar in Organizational Development.....	3
BAMK 362 Marketing Strategy	3
BAMK 407 Small Business Counseling	3
or BAMG 407 Small Business Counseling	3

General Education Credits, Specified — 18-19 semester hours

Category 1b — Intermediate Composition	
BA 205 Business Communications	3
or ENG 123 College Research Paper	3
Category 2 — Mathematics	
MATH 124 College Algebra	3-4
or MATH 175 Topics in Finite Mathematics.....	3-4
Category 5 — Social Sciences	
ANT 100 General Anthropology.....	3
ECON 103 Introduction to Economics: Macroeconomics.....	3
ECON 105 Introduction to Economics: Microeconomics	3
GEOG 100 World Geography.....	3
PSCI 100 United States Government.....	3
PSCI 105 Introduction to Political Science.....	3
PSY 120 Principles of Psychology	4
SOC 100 Principles of Sociology	3

Note that students are required to take ECON 103 and ECON 105 and two additional courses listed above. It is recommended that students with a Management emphasis take PSY 120 and SOC 100.

Notes

At least 50 percent of a business major's coursework required for the degree must be comprised of non-business courses (courses without a BA __ prefix). To comply, a student must have completed at least 63 non-business credits in order to be eligible for graduation.

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 Credits — 12 semester hours; and Required Elective Credits — 15 semester hours) in order for the courses to count toward graduation.

A maximum of 9 semester credits in 300/400-level required and elective emphasis courses can be transferred from other four-year institutions.

Special Topics or Executive Professor courses may substitute for an elective upon approval of the Management Department Chair.

BAMG 453, BAMG 455 and BAMG 459 are not offered on a regular basis.

Bachelor of Science in Business Administration

Emphasis in Marketing

Program Requirements

Required Program/Major Credits:

Business Administration core	33
Required credits	12
Supporting credits	6-7
Required elective credits	15
General Education:	
Specified credits	18-19
Remaining credits	22
Elective credits	18-20
Total credits required for this degree	126

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.

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.

Business Administration Core — 33 semester hours

BA 101 Business Computing.....	3
BAAC 220 Principles of Accounting I	3
BAAC 221 Principles of Accounting II	3
BACS 291 Business Statistics I	3
BACS 300 Information Systems	3
BACS 395 Production Management.....	3
BAFN 231 Legal Environment of Business.....	3
BAFN 370 Business Finance	3
BAMQ 350 Management of Organizations	3
*BAMQ 456 Strategic Management and Business Policy	3
BAMK 360 Marketing.....	3
<i>*BAMQ 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 220, BAAC 221, BACS 291, BACS 395, BAFN 231, BAFN 370, BAMQ 350 and BAMK 360. Only BACS 395 may be taken concurrently.</i>	

Required Credits — 12 semester hours

BAMK 361 Consumer Behavior	3
BAMK 362 Marketing Strategy	3
BAMK 368 Marketing Analysis Research I	3
BAMK 462 Marketing Problems	3

Supporting Credits — 6-7 semester hours

SPCO 100 Basics of Public Speaking.....	1
SPCO 103 Speaking Evaluation.....	2
MATH 131 Calculus and Analytic Geometry I	4
MATH 176 Topics In Calculus.....	3
Note that students may choose between MATH 131 and MATH 176 (MATH 176 is recommended).	

Required Elective Credits — 15 semester hours

Take any two 300-level courses.

BAMK 363 Promotional Strategy	3
BAMK 364 Selling and Sales Management.....	3
BAMK 365 Advertising.....	3
BAMK 366 Retailing	3
BAMK 367 Pricing Principles and Public Policy in Marketing	3

Take any three 400-level courses.

BAMK 407 Small Business Counseling.....	3
or BAMQ 407 Small Business Counseling	3
BAMK 461 Advertising Campaigns	3
BAMK 464 International Marketing.....	3
BAMK 466 Market Analysis and Research II.....	3
BAMK 468 Business-to-Business Marketing	3
BAMK 469 Distribution Logistics.....	3
BAMK 470 Direct Marketing	3
BAMK 495 Special Topics in Marketing.....	3

Note that BAMK 495 may be used only once to satisfy the 400-level elective requirement.

General Education Credits, Specified — 18-19 semester hours

Category 1b — Intermediate Composition

BA 205 Business Communications	3
or ENG 123 College Research Paper	3

Category 2 — Mathematics

MATH 124 College Algebra	3-4
or MATH 175 Topics in Finite Mathematics.....	3-4

Category 5 — Social Sciences

ECON 103 Introduction to Economics: Macroeconomics.....	3
ECON 105 Introduction to Economics: Microeconomics	3
GEOG 100 World Geography.....	3
PSCI 100 United States Government.....	3
PSCI 105 Introduction to Political Science.....	3
PSY 120 Principles of Psychology	4
SOC 100 Principles of Sociology	3

Note that students are required to take ECON 103 and ECON 105 and two additional courses listed in Category 5. It is recommended that students with an emphasis in Marketing take PSY 120 and SOC 100.

Notes

At least 50 percent of a Business major's coursework required for the degree must be comprised of non-business courses (courses without a BA __ prefix). To comply, a student must have completed at least 63 non-business credits in order to be eligible for graduation.

Students must take two courses (6 hours) from the 300-level Marketing courses listed above and three courses (9 hours) from the 400-level Marketing courses listed above.

Students are strongly advised to complete BAMK 362: Marketing Strategy before enrolling in 400-level Marketing courses whether it is listed as a prerequisite or not.

Students may substitute a BA 495: Executive Professor Special Topics II course for an elective course with prior written permission from the Marketing Department Chair.

A maximum of 9 semester hour credits in 300/400-level required and elective emphasis courses may be transferred from other four-year institutions.

Students are reminded that to graduate with a Business Administration major, 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.

Bachelor of Arts in Interdisciplinary Studies

Emphasis in International Trade and Commerce

Program Requirements

Required Program/Major credits:

International Trade Commerce core.....	33
Business Administration credits	33-34
Recommended electives	3-9
General Education:	
Specified credits	9-10
Remaining credits	31
Elective credits	0-11
Total credits required for this degree	120

The International Trade and Commerce (ITC) is a cooperative program of the College of Arts and Sciences and the College of Business Administration. Students interested in this program should see an advisor in the College of Business Administration Advising Center.

The ITC emphasis area will develop a better understanding of international trade and commerce by building upon coursework in economics, foreign language and business. This program is designed for students that intend to join firms or public agencies that operate or have interests outside the United States. The program combines language, cultural and political studies focused on a particular country or geographic area with an exposure to basic business subjects.

ITC Core — 33 Semester hours

Language and/or Proficiency	12
ECON 300 Microeconomics and ECON 345 International Trade or ECON 350 Macroeconomics and ECON 346 International Finance	6
Thesis	3
Area Studies	12

Note that area studies courses must be approved by the student's advisor and might include coursework from anthropology, history, geography, political science and communications that provide students a foundation to enhance their language training. Language proficiency is estimated to require at least 12 hours of study at the intermediate level or above. Demonstrated proficiency fulfills the language requirement regardless of the actual number of language credits taken. A Thesis (3 semester hours) is an exit requirement for the program. The thesis topic and faculty thesis advisor must be approved by the program director. The student will enroll for the thesis as a directed study in the department of the thesis advisor.

Required Business Administration Credits — 33-34 semester hours

BA 101 Business Computing.....	3
BAAC 220 Principles of Accounting I	3
BAAC 221 Principles of Accounting II	3
BACS 291 Business Statistics I	3
BACS 300 Information Systems	3
BACS 395 Production Management.....	3
BAFN 231 Legal Environment in Business.....	3
BAFN 370 Business Finance	3
BAMG 350 Management of Organizations	3
BAMK 360 Marketing.....	3
MATH 131 Calculus and Analytic Geometry I or MATH 176 Topics in Calculus	3-4

Recommended Elective Credits — 3-9 semester hours

BAMK 464 International Marketing.....	3
BAMQ 458 International Management.....	3
BAFN 475 Multinational Financial Management.....	3

General Education Credits, Specified — 9-10 semester hours

Category 2 — Mathematics

MATH 124 College Algebra or MATH 175 Topics in Finite Mathematics.....	3-4
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Category 5 — Social Sciences

ECON 103 Introduction to Economics: Macroeconomics.....	3
ECON 105 Introduction to Economics: Microeconomics	3

Notes

Unless specifically exempted, ITC students are subject to the admission, continuation, disciplinary and graduation policies of the College of Business Administration. The ITC program requires a minimum of 120 semester hours. Students may not include more than 60 hours in business coursework to complete the ITC degree. A maximum of 15 semester hours of business courses may be transferred from other institutions.

STUDENTS MUST FORMALLY APPLY TO THE ITC COMMITTEE BEFORE BEING ADMITTED TO THE PROGRAM AND MUST FULFILL THE ADMISSION REQUIREMENTS IN PLACE AT THE TIME OF APPLICATION. STUDENTS MUST DECLARE A BUSINESS MINOR WHEN ENTERING THIS PROGRAM.

Minor in Business Administration

Required credits	33-34
General Education, specified	12
Total credits required for this minor.....	33-46

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 33-46 semester hours depending on the student's selections in General Education.

Required Credits — 33 to 34 semester hours

BA 101 Business Computing.....	3
BAAC 220 Principles of Accounting I	3
BAAC 221 Principles of Accounting II	3
BACS 291 Business Statistics I.....	3
BACS 300 Information Systems	3
BACS 395 Production Management.....	3
BAFN 251 Legal Environment of Business.....	3
BAFN 370 Business Finance.....	3
BAMQ 350 Management of Organizations	3
BAMK 360 Marketing.....	3
MATH 131 Calculus and Analytic Geometry I	
or MATH 176 Topics In Calculus	3-4

Note that students may choose between MATH 131 and MATH 176.

Notes

Students may transfer a maximum of 18 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.

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 175 or MATH 124 (MATH 176 or MATH 131).

Minor in Computer Information Systems

Required credits	12
Required elective credits	6
Total credits required for this minor.....	18

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 — 12 semester hours

BACS 285 Business COBOL Programming	3
BACS 381 Object-Oriented Systems.....	3
BACS 485 Database Management Systems	3
BACS 487 Systems Analysis and Design.....	3

Required Elective Credits — 6 semester hours

BACS 380 Networking and Data Communications Systems.....	3
BACS 482 Management Support Systems	3
BACS 486 Advanced Database Management	3
BACS 488 Advanced Systems Analysis and Design.....	3
BACS 495 Special Topics in CIS	1-3

Notes

Business majors who wish admission to a Computer Information Systems minor must obtain written approval from the College of Business Advising Coordinator.

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.

Programs of Study

College of Education

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Location: McKee Hall 125; Telephone: 970-351-2817
 Gary R. Galluzzo, Dean; Michael J. Gimmestad, Associate Dean; Harvey Rude,
 Associate Dean

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 core program is 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 four units: the School for the Study of Teaching and Teacher Education; the Division of Educational Leadership and Policy Studies; the Division of Professional Psychology; and the Division of Special Education. In addition, the College operates the Office of Professional Services, which provides support to the University-wide professional teacher education program. Other major units in the College are the Center for Diversity in Teaching, the Center for Educator Induction, the Center for Educational Leadership, the Bresnahan-Halstead Center on Mental Retardation and Developmental Disabilities, the Kephart Memorial Child Study Center and the Colorado State Office of the North Central Association.

Every undergraduate student must pass the English Essay Examination at the University of Northern Colorado to graduate. The requirement may not be challenged or waived. This examination must be passed at least one semester before the semester the student graduates. The scheduled examination may be taken at any point, but students are expected to take it before the end of the first semester of their junior year. The examination is evaluated on a satisfactory/unsatisfactory basis and may be retaken any number of times. There is a fee to retake the examination. Additional information can be obtained from the English Department, Michener L50, phone 970-351-1576.

Division of Educational Leadership and Policy Studies

Location: McKee Hall 418; Telephone: 970-351-2861
 Director: Bruce G. Barnett

Educational Leadership Program

Professors — Rosemary Caffarella, PhD; Gene E. Hall, PhD; Richard A. King, PhD
 Associate professors — Bruce G. Barnett, PhD; Kathryn Whitaker, PhD
 Assistant professors — Judith H. Berg, EdD; Thomas G. Gavin, PhD
 Affiliated faculty — Kenneth Humphrey, EdD, Director, North Central Association of Colorado

College Student Personnel Administration Program

Professors — Bernard C. Kinnick, EdD; Nancy A. Scott, PhD; Sue E. Spooner, PhD; Douglas L. Stutler, PhD
 Associate professors — Gerald E. Tanner, PhD; Joyce Washington, EdD
 Assistant professors — Stephen T. Hulbert, EdD; Judy Jones, PhD

The mission of the Division is to develop educators who have the vision and the ability to successfully 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 ELPS programs and the scholarship of its faculty and students emphasize:

- Formal and informal roles and strategies of educational leaders
- 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

The School for the Study of Teaching and Teacher Education

Location: McKee Hall 227; Telephone: 970-351-2908
Harvey Rude, Associate Dean/Director; Edward Caffarella, Associate Director; Sandra Welsler, Director, Office of Professional Services; Lucy Montoya, Coordinator, Center for Diversity in Teaching; Linda Brookhart, Coordinator, Center for Educator Induction

The School for the Study of Teaching and Teacher Education administers programs that prepare students for teacher licensure at the elementary, middle grades and secondary program levels. The School also offers graduate programs in the program areas of Early Childhood Education, Educational Psychology, Educational Technology, Elementary Education, Middle Level Education and Reading. The School for the Study of Teaching and Teacher Education provides specialized resources and support through the Office of Professional Services, the Center for Diversity in Teaching, and the Center for Educator Induction.

Early Childhood Education

Location: McKee 213; Telephone: 970-351-2702

Professor — Phillip Wishon, PhD

Assistant professors — Marcia Broughton, MA; Fong Yun Lee, EdD

Early Childhood Education offers graduate programs at both the masters and doctoral levels. 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 programs are based on an interdisciplinary focus which emphasizes fundamental as well as current educational issues, research competencies, professional skills development, and field-based studies.

Elementary Education

Location: McKee 213; Telephone: 970-351-2702

Professors — Bruce W. Broderius, EdD; Fredrick L. Silverman, EdD; Elaine V. Vilscek, PhD

Associate professors — Patricia J. Hagerty, EdD; Richard L. Needham, EdD; Yvonne Siu-Runyan, PhD

Assistant professor — B.J. Lindauer, EdD

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.

Middle Level Education

Location: McKee 213; Telephone: 970-351-2702

Assistant professor — Douglas A. MacIsaac, EdS; Barbara Whinery, PhD

The Middle Level Education program is designed to prepare educators to teach young adolescents, ages ten to fifteen, in middle school grades five through eight. Programs are provided at the graduate and undergraduate levels which prepare teachers as "reflective developers." 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.

Reading

Location: McKee 213; Telephone: 970-351-2702

Professors — Arnold H. Burrton, EdD; Roger G. Eldridge, Jr., PhD; Jo-Ann M., Mullen, EdD

Associate professors — Karen S. Crabtree, EdD; Deborah A. Powell, EdD

Assistant professor — Judith A. Stockhouse, MA

Reading offers graduate programs at the master's and doctoral levels. 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 Campus Child Care Center, the Reading Clinic, the Laboratory School (K-12), and public as well as private schools.

The Division of Professional Psychology

Location: McKee Hall 248; Telephone: 970-351-2731
Director: Judith A. Praul

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, 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 Agency 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.

Counselor Education and Counseling Psychology

Sarah F. Shaw, Program Coordinator

Professors — Michael J. Gimmestad, PhD; Wendell A. Osorno, PhD; Judith A. Praul, EdD; Nancy A. Scott, PhD; Sarah F. Shaw, EdD; William M. Walsh, PhD; I. David Welch, EdD

Associate professor — David M. Gonzalez, PhD

Assistant professors — Tracy Bostwick, PhD; M. Sean O'Halloran, PhD; Basilia Softas-Nall, PhD

School Psychology

Rik Carl D'Amato, Program Coordinator

Professor — Ellis P. Copeland, PhD

Associate professors — Achilles N. Bardos, PhD; Rik Carl D'Amato, PhD

Assistant professor — Janice Martin, PhD

Educational Psychology

Location: McKee Hall 213; Telephone: 970-351-2702

Professors — Kyle R. Carter, PhD; John B. Cooney, PhD; Randy J. Lennon, PhD; Jeanne E. Ormrod, PhD; Dale Shaw, PhD

Associate professors — Kathryn F. Cochran, PhD; Teresa McDevitt, PhD; Steven M. Pulos, PhD

Assistant professors — Susan Burger, PhD; Mark Conostas, PhD

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 research on basic learning mechanisms and theory.

The degree 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.

Educational Technology

Location: McKee Hall 213; Telephone: 970-351-2702

Professor — Edward P. Caffarella, PhD

Assistant professors — Jeffrey Bauer, PhD; Kay Persichitte, PhD; Brenda Sugrue, PhD

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.

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 delivery 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.

Foundations of Education

Location: McKee Hall 213; Telephone: 970-351-2702

Professors — Michael Jacobs, EdD; David Roat, PhD

Associate professor — John Halcón, PhD

Assistant professor — Cathy Pohan, PhD

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.

The Division of Special Education

Location: McKee Hall 318; Telephone: 970-351-2691

Director: Allen Huang

Professors — Clifford Baker, EdD; Antonio Carvajal, EdD; James DeRuiter, PhD; Kay A. Ferrell, PhD; B. Robert Gonzales, EdD; Allen Huang, EdD; J. Melvin Lane, EdD; John Luckner, EdD; D. Kim Reid, PhD; Harvey Rude, EdD

Associate professors — George Betts, EdD; Lewis Jackson, EdD; David Kappan, MA

Assistant professors — Diane Bassett, PhD; Teresa Bunsen, EdD; Sarah DeHaas-Warner, PhD; Patricia Lee, EdD; Madeline Milian-Perrone, EdD; Stuart Orndahl, PhD; Francie R. Murry, PhD; D. William Muir, MA; Barbara G. Rhine, EdD

The Division of Special 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 Breckenridge, Colorado featuring renowned speakers.

Faculty in Special 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.

Professional Education Programs

The University of Northern Colorado offers professional education programs which lead to teacher licensure at the elementary, middle grades, secondary, and K-12 program levels. Admission to each program is based upon the student's academic record and a number of other relevant measures of academic and professional achievement and potential. At the time that the information was being prepared and sent to press, the School for the Study of Teaching and Teacher Education was engaged in a major review and revision of its programs. As a result, students admitted to a professional teacher education program after January 1, 1995 are required to contact the School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee Hall to obtain detailed information concerning the structure and requirements leading to Colorado initial teacher licensure.

Standards of Professional Practice for Continuation

Students admitted to professional 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 education program. Students who do not attain or uphold such standards are subject to academic sanctions, including denial, suspension or dismissal from the professional education program.

Program Completion and Licensure

Candidates for initial Colorado Licensure are required by the Colorado Department of Education to demonstrate competence in basic skills, general education knowledge (liberal arts), professional education knowledge, and content area knowledge (academic major) by successfully passing a test in each of the four areas. Students who wish to take the tests must register for the Program of Licensure for Colorado Educators (PLACE) examination directly with National Evaluation Systems. Test bulletins, testing dates and more information are available from the School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103.

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 School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103 or correspond with the respective State Department of Education early in their program to learn of any additional requirements.

Licensure/Endorsement Areas

The following programs have been approved by the Colorado State Board of Education for licensure/endorsement:

- Audiologist, K-12
- Bilingual/Bicultural Endorsement K-6 (Requires completion of elementary teacher licensure program)
- Communication (Speech), 7-12
- Elementary, K-6
- English, 7-12
- Foreign Languages, 7-12 — French, German, Spanish
- Mathematics, 7-12
- Middle School Teacher, 5-9
- Music, K-12
- Physical Education, K-6, 7-12
- Reading Teacher, K-6, 7-12
- Reading Specialist, K-12
- School Administrator — Principal, K-6, 7-12
- School Administrator — Superintendent, K-12
- School Counselor, K-6, 7-12
- School Library Media, K-12
- School Nurse, K-12
- School Psychologist, K-12
- Science, 7-12 — Biological Science, Chemistry, Earth Science, Physical Science, Physics
- Social Studies, 7-12 — Geography, History, Social Science
- Special Education Director K-12
- Special Education Teacher — Early Childhood Special Education, ages 0-5; Moderate Needs, ages 5-21; Orientation and Mobility, K-12; Profound Needs, ages 0-21; Severe Needs-Affective, ages 5-21; Severe Needs-Cognitive, ages 5-12, 12-21; Severe Needs-Communication, ages 5-21; Severe Needs-Hearing, ages 0-21; Severe Needs-Vision, ages 0-21
- Speech/Language Pathology, K-12
- Threat Arts (Drama), 7-12
- Visual Arts (Art), K-12

Additional information regarding licensure/endorsement areas is available through the School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103.

Master of Arts in Agency Counseling

Program Requirements

Complete the required credits specified here.....52

This program is accredited by the Council for Accreditation of Counseling and Related Educational Programs.

Philosophy

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 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.

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 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 Agency 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. Specific program objectives include skill development in the following:

- Counseling children, adolescents and adults both individually and in groups to maximize personal, social and environmental experiences.
- Consulting with and assisting various community agencies and referral sources in the development of treatment interventions.
- Providing selected diagnostic and evaluative services for individuals and communities.
- Analyzing, integrating and applying a conceptual framework for working with developmental, learning and personality difficulties of individuals and groups.
- Initiating research relative to community and/or organizational mental health services.

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 3.00 on the last 67

semester hours of coursework. A Minnesota Multiphasic Personality Inventory - 2 (MMPI - 2) profile is 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:

- Two years of relevant work experience involving human interactions after receiving the baccalaureate degree and before admission.
- 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.

Prerequisites

Two years of teaching or work experience involving human interactions after receiving the baccalaureate degree and before admission.

Required Credits — 52 semester hours

Core Requirements

EPRE 530 Life Span Development.....	3
EPRE 600 Introduction to Graduate Research	3
PPSY 607 Theories of Counseling	3
PPSY 610 Theories of Personality	2
PPSY 657 Legal and Ethical Aspects of Counseling and Psychology	3
PPSY 670 Psychological Testing and Measurement	3

Additional Requirements

PPSY 558 Abnormal Psychology	3
PPSY 565 Psychology of Prejudice	2
PPSY 605 Group Laboratory Experience	1
PPSY 612 Practicum in Individual Counseling	5
PPSY 616 Career Theory, Counseling and Assessment.....	3
PPSY 624 Substance Abuse.....	3
PPSY 655 Community Psychology and Social Systems	3
PPSY 662 Group Dynamics and Facilitation.....	2
PPSY 665 Family Systems	3
PPSY 673 Individual Tests of Intelligence and Personality.....	2
PPSY 692 Externship.....	8

Note

Comprehensive examination required.

Master of Arts in Agency Counseling

Emphasis in Marriage and Family Therapy

Program Requirements

Complete the required credits specified here.....52

Complete emphasis area credits specified here.....16

This program emphasis is accredited by the Council for Accreditation of Counseling and Related Programs.

This emphasis in marriage and family therapy may be an elected addition to the Master of Arts in Agency Counseling.

Philosophy

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 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.

Emphasis Area 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 emphasis are conceptualized within this framework and 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. Specific program objectives include skill development in the following:

- Therapy for families and couples to facilitate strong family relations and interpersonal commitments.
- Parent education and family communication to enhance the ability to work with parents and families.
- Consultation with and assistance to various community agencies in the development of prevention programs.
- Initiation of research relative to community programs and family and couples interventions.

Admission

Must be admitted and enrolled in the Master of Arts in Agency Counseling (see Admission Requirements for this degree).

Prerequisites

Must be admitted and enrolled in the Master of Arts in Agency Counseling.

In addition to meeting the course requirements for the Master of Arts in Agency Counseling the following courses are required.

Required Emphasis Area Courses — 16 semester hours

PPSY 664 Therapeutic Parenting	2
PPSY 666 Couple and Marriage Therapy	2
PPSY 668 Sexuality Counseling	3
PPSY 669 Advanced Methods: Marriage and Family Therapy	3
PPSY 694 Practicum in Family Therapy	4
PPSY 695 Seminar: Contemporary Issues in Family Therapy	2

Suggested Elective

PPSY 585 Family Counseling and Education in School Settings.....	2
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Master of Arts in Elementary School Counseling

Program Requirements

Complete the required credits specified here.....52

This program is accredited by the Council for Accreditation of Counseling and Related Educational Programs.

Philosophy

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.

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. 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 Elementary 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 and middle schools. Specific program objectives include skill development enabling students to:

- Provide counseling and guidance services for adults when appropriate.
- Provide inservice training in guidance-related areas.
- Initiate evaluative and other research related to children, their families and environment.
- Coordinate and manage guidance services appropriate to elementary and middle school settings.
- Evaluate cognitive and affective characteristics of learning.
- Explore career development as it relates to young children.

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 3.00 on the last 67 semester hours of coursework. A Minnesota Multiphasic Personality Inventory - 2 (MMPI - 2) profile is 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:

- Two years of teaching or relevant work experience involving human interactions after receiving the baccalaureate degree and before admission.
- 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.

Two years of teaching or relevant work experience involving human interactions after receiving the baccalaureate degree and before admission.

Students entering the master's program should have completed a course in Life Span Development or Human Growth and Development. Those who have not completed coursework in this area will need to complete it as deficiency coursework not to be included in the 52 hours required for the degree.

Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103 for information.

Required Credits — 52 semester hours

Core Requirements

EPRE 600 Introduction to Graduate Research	3
EPRE 630 Child and Adolescent Psychology	3
PPSY 607 Theories of Counseling	3
PPSY 610 Theories of Personality	2
PPSY 657 Legal and Ethical Aspects of Counseling and Psychology	3
PPSY 670 Psychological Testing and Measurement	3

Requirements for Elementary School Counseling

PPSY 565 Psychology of Prejudice	2
PPSY 602 Foundations of School Guidance	3
PPSY 604 Career Development and Occupational Systems	2
PPSY 605 Group Laboratory Experience	1
PPSY 606 Theories and Practices in Group Guidance	2
PPSY 608 Organization, Administration and Consultation in Guidance Services	3
PPSY 611 Externship in Guidance Services	5
PPSY 612 Practicum in Individual Counseling	5
PPSY 613 Externship in Counseling with Children	5
PPSY 624 Substance Abuse	3
PPSY 671 Testing: Analysis and Interpretation	2

Elective

Note

Comprehensive examination required.

Master of Arts in Secondary and Post-Secondary School Counseling

Program Requirements

Complete the required credits specified here.....52

This program is accredited by the Council for Accreditation of Counseling and Related Educational Programs.

Philosophy

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

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. 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 Secondary and Post-Secondary School Counseling program is designed at the master's level to prepare professionals to counsel with adolescents and adults in school settings. Specific program objectives include skill development enabling students to:

- Work with adolescents and adults both individually and in groups to maximize personal and academic experiences related to school and social life.
- Provide students with educational counseling for the formation of programs to meet individual needs.
- Provide students with career development information based on individual need, strengths and assets.
- Serve as a consultant to teachers, parents and others and provide for the affective needs of students.
- Coordinate and manage guidance services appropriate to the particular school setting.
- Initiate evaluative and other research relative to school guidance services.

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 3.00 on the last 67 semester hours of coursework. A Minnesota Multiphasic Personality Inventory - 2 (MMPI - 2) is 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:

- Two years of teaching or relevant work experience involving human interactions after receiving the baccalaureate degree and before admission.
- 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.

Two years of teaching or relevant work experience involving human interactions after receiving the baccalaureate degree and before admission.

Students entering the master's program should have completed a course in Life Span Development or Human Growth and Development. Those who have not completed coursework in this area will need to complete it as deficiency coursework not to be included in the 52 hours required for the degree.

Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103 for information.

Required Credits — 52 semester hours

Core Requirements

EPRE 600 Introduction to Graduate Research	3
EPRE 630 Child and Adolescent Psychology	3
PPSY 607 Theories of Counseling	3
PPSY 610 Theories of Personality	2
PPSY 657 Legal and Ethical Aspects of Counseling and Psychology	3
PPSY 670 Psychological Testing and Measurement	3

Additional Requirements

PPSY 565 Psychology of Prejudice	2
PPSY 602 Foundations of School Guidance	3
PPSY 604 Career Development and Occupational Systems	2
PPSY 605 Group Laboratory Experience	1
PPSY 606 Theories and Practices in Group Guidance	2
PPSY 608 Organization, Administration and Consultation in Guidance Services	3
PPSY 611 Externship in Guidance Services	5
PPSY 612 Practicum in Individual Counseling	5
PPSY 614 Externship in Counseling with Youth and/or Adults	5
PPSY 624 Substance Abuse	3
PPSY 671 Testing: Analysis and Interpretation	2

Elective

Note

Comprehensive examination required.

Master of Arts in Secondary and Post-Secondary School Counseling

Emphasis in College Student Personnel Administration

Program Requirements
 Complete the required credits specified here.....54

This emphasis area is specifically designed for those who wish to counsel in a college setting.

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

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. 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.

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 3.00 on the last 67 semester hours of coursework. A Minnesota Multiphasic Personality Inventory - 2 (MMPI - 2) profile is 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:

- Two years of teaching or relevant work experience involving human interactions before receiving the baccalaureate degree and before admission.
- 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.

Prerequisites
 Two years of teaching or relevant work experience involving human interactions after receiving the baccalaureate degree and before admission.

Students entering the master's program should have completed a course in Life Span Development or Human Growth and Development. Those who have not completed coursework in this area will need to complete it as deficiency coursework not to be included in the 54 hours required for the degree.

Required Credits — 54 semester hours

Core Requirements

EPRE 600 Introduction to Graduate Research	3
PPSY 607 Theories of Counseling	3
PPSY 610 Theories of Personality	2
PPSY 657 Legal and Ethical Aspects of Counseling and Psychology	3
PPSY 670 Psychological Testing and Measurement	3

Additional Requirements

CSFA 583 Crisis Intervention.....	1
CSFA 650 College Environment and Student Development: Theory and Research.....	4
CSFA 651 Philosophical, Historical and Cultural Foundations of Student Affairs in Higher Education	3
CSFA 658 Management and Administration in Student Affairs.....	4
CSFA 675 Field Experience in Student Affairs	2
PPSY 604 Career Development and Occupational Information Systems.....	2
PPSY 605 Group Laboratory Experience	1
PPSY 606 Theories of Group Guidance	2
PPSY 612 Practicum in Individual Counseling	5
PPSY 623 Counseling Diverse Populations	2
PPSY 624 Substance Abuse.....	3
PPSY 655 Community Psychology and Social Systems	3
PPSY 692 Externship.....	8

Note
 Comprehensive examination required.

Doctor of Philosophy in College Student Personnel Administration

Program Requirements

Complete the required credits specified here.....66
 Complete program elective credits specified here.....9

Student affairs professionals provide services to students in higher education settings of all kinds. With the goal of positively influencing each student's full development, professionals function as consultants, educators and administrators. The UNC doctoral program in College Student Personnel Administration trains professionals to satisfy this goal by featuring a blending of humanistic values with effective management principles.

The program of studies is designed to prepare professionals for college and university positions in all areas of 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 generalists for student affairs administration positions at the highest levels.

Admission

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

Prerequisites

A basic helping skills course such as PPSY 612 or equivalent is required for admission. If such skills are not already in the applicant's repertoire, this deficiency must be made up through coursework at either UNC or a nearby institution.

EPRE 600 and 602 or the equivalent in an introductory statistics and research course are required for admission. If these were not a part of the master's degree curriculum, the deficiency may be made up by taking these courses at UNC. When such deficiencies are made up, the courses taken do NOT count as degree credit toward the PhD.

Required Credits — 66 semester hours

Core Requirements

CSPA 650 College Environments and Student Development: Theory and Research	3
CSPA 651 Philosophical, Historical and Cultural Foundations of Student Affairs in Higher Education	3
CSPA 655 Multiculturalism in Higher Education	3
CSPA 658 Management and Administration in Student Affairs.....	3
CSPA 682 Legal Issues in Student Affairs	3
CSPA 684 Group Leadership in Student Affairs	2
CSPA 750 College Students: Culture, Characteristics, Campus Life	2
CSPA 758 Seminar in College Student Personnel Administration	1
(Taken three times at 1 credit each.)	
CSPA 771 Administrative Leadership in Student Affairs.....	3
<i>Choose one of the following:</i>	
CSPA 652 Enrollment Management Services.....	3
or	
CSPA 653 Services for Environmental and Student Development.....	3
<i>Theory to Practice</i>	
CSPA 622 Directed Studies (variable credit)	1
or	
PPSY 601 Practicum (variable credit).....	1

Note that at least a one credit project is required. This constitutes an application of theory drawn from the core to the practice of student affairs.

Field Experience or Internship

CSPA 661 Practicum in College Teaching	2
CSPA 670 Internship in College Student Personnel Administration.....	6
CSPA 675 Field Experience in Student Affairs: (variable subtitle).....	2

Note that as part of the doctoral program in College Student Personnel Administration at UNC, every graduate student is required to complete a minimum of four semester hours of credit in field-based experiences using either CSPA 661, CSPA 670 or CSPA 675. Sites are to be selected with the advice and consent of the advisor in conjunction with the office/supervisor on the site. A seminar that meets every other week during the semester is a required part of enrollment in a field experience or internship. To enroll in a field experience or internship, which are non-scheduled courses, the student must obtain a non-scheduled course form and the signatures of the program coordinator and the on-site supervisor. To meet this requirement, the student must obtain experience in at least two different sites.

Research and Statistics

EPRE 603 Analysis of Variance	3
Plus two additional statistics courses at 3 hours each	6
EPRE 700 Advanced Research Methods	3
CSPA 753 Evaluative Strategies for Student Affairs.....	2
CSPA 755 Advanced Research Seminar	1
CSPA 797 Doctoral Proposal Research	4
CSPA 799 Doctoral Dissertation	12

Note that EPRE 600 and 602 or the equivalent are prerequisites to admission. Students lacking an introductory course in Research Methods and/or statistics should plan to take one or both of the above to remedy the deficiency. Credits for this work do not count toward the PhD degree.

Elective Credits — 9 semester hours

Notes

Research Tool Policy — Competency in two research tools is required of Ph.D. students at UNC in CSPA. The first tool, Applied Statistics, is contained in the curriculum as specified above. It requires passing the statistics and research methodology sequence with an overall GPA of 3.00 or better. For the second research tool, the student may choose among the options explained below. Hours taken to satisfy the second research tool requirement may not be included in the total 75 semester hours of doctoral credit required by the program curriculum.

- Foreign Language: Pass the ETS (or other faculty approved) examination in any major modern foreign language with a score at the 50th percentile or better.
- Computer Proficiency: Complete a minimum of 9 semester hours in courses relating to computer use at the graduate level with grades of B or better. (An alternative method for meeting this option is to prepare and demonstrate a computer application design which meets a student affairs software need. This application must be approved by the program committee and certified by the Graduate School.)
- Cognate: A cognate area consisting of not less than 12 credit hours of coherently related courses which contribute to the student's proposed area of research may be proposed as a part of the Plan of Study. The Plan including the Cognate, must be approved by the student's program committee as well as the Graduate School.

Psychology Requirements

Doctoral students in CSPA are required to have a knowledge of appropriate areas in the field of psychology. Those students whose previous education has not included this knowledge will be required to take a minimum of 12 semester hours of psychology selected with the advice and consent of the program advisor.

Other Requirements

All CSPA Ph.D. students must take and pass both a written comprehensive examination and an oral examination before filing the dissertation proposal.

Doctor of Education in Counselor Education

Program Requirements

Complete the required credits specified here (minimum).....93

This program is accredited by the Council for Accreditation of Counseling and Related Educational Programs.

This program is designed to develop counselor educators and supervisors for elementary, middle/junior high, secondary and higher education settings. Emphasis is placed on supervision, instruction, group, consultation, research and evaluation skills.

Admission

Application must be completed and on file in the Professional Psychology office by February 15, with decisions announced by the first week of April.

- Total score of 1500 for the Verbal, Quantitative and Analytical subtests of the GRE, is recommended.
- A master’s degree in counseling or a related area.
- Three letters of recommendation.
- Grade Point Average of 3.25 in the last 60 hours of academic work is desired.
- Written statement regarding the relationship of the doctoral program to the future career goals of the applicant.
- Two years of counseling, teaching or other acceptable work experience.

After the student’s admission to the Graduate School, 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 Ed.D. Students

Students entering the doctoral program should have completed courses in the following areas at the graduate level:

- Introductory Research
- Tests and Measurement
- Descriptive Statistics
- Learning Theory
- Developmental/Child/Adolescent/Adult Psychology
- Personality Theories
- Organization and Administration of Guidance
- Career Development and Placement
- Counseling Theories
- Group Counseling/Guidance
- Testing: Analysis and Interpretation

Students who have not completed coursework in these areas will need to complete these courses as deficiency coursework not to be included in the 93 hours required for the degree. All deficiency coursework and PPSY 702 must be completed before students will be eligible for the first letter of encouragement. Students will be required to satisfactorily complete doctoral comprehensive examinations and dissertations in addition to coursework.

Required Credits — 93 semester hours

<i>Counseling Core</i>	
PPSY 702 Practicum in Counseling	4
PPSY 707 Seminar in Personality and Counseling Theories	3
<i>Supervision Core</i>	
PPSY 712 Advanced Practicum in Individual Counseling	4
PPSY 714 Practicum in Supervision of Counseling (2)	6
PPSY 715 Seminar in Counselor Supervision and Theory	2
PPSY 773 Practicum in Supervision of Group Facilitation	3
<i>Group Core</i>	
PPSY 693 Practicum in Group Facilitation	4
<i>Instruction and Consultation Core</i>	
PPSY 655 Community Psychology and Social Systems	3
PPSY 657 Legal and Ethical Aspects of Counseling and Psychology	3
PPSY 660 Systems Analysis and Consultation Theory	2
PPSY 668 Sexuality Counseling	3
PPSY 681 Systems Intervention Practicum	3
PPSY 755 Supervised Practicum in College Teaching (taken twice)	6
PPSY 792 Internship in Counselor Education	12
<i>Research and Evaluation</i>	
EPRE 602 Elements of Statistics	3
EPRE 603 Analysis of Variance	3
EPRE 700 Advanced Research Methods	3
PPSY 716 Research Seminar in Counselor Education	3
PPSY 733 Research Apprenticeship	2
(one hour each semester for two consecutive semesters)	
PPSY 781 Evaluation of Psychological Services	3
<i>Special Populations</i>	
<i>Choose one of the following courses:</i>	
PPSY 568 Psychology of Women	2
PPSY 565 Psychology of Prejudice	2
PPSY 569 Violence Against Women and Children	2
PPSY 623 Counseling Diverse Populations	2
PPSY 654 Child Abuse and Neglect	2
<i>Dissertation</i>	
PPSY 797 Doctoral Proposal Research	4
PPSY 799 Doctoral Dissertation	12

Doctor of Psychology in Counseling Psychology

Program Requirements

Complete the required credits specified here (minimum).....109

This program is designed to develop individuals who will be effective counseling psychologists in community, agency or system settings. Such a program would focus primarily on attaining the objectives of training effective persons for therapy and assessment of individuals and groups, supervising others in helping relations and researching and evaluating programs relative to counseling. Secondly, the objectives are teaching and training professionals and paraprofessionals in psychology and documenting the effectiveness of these programs and consulting in prevention and treatment models.

Admission

Applications must be completed and on file in the Professional Psychology office by February 15, with decisions announced by the first week of April.

- Total score of 1500 for the Verbal, Quantitative and Analytical subtests of the GRE is recommended.
- A master's degree in counseling or a related area.
- Three letters of recommendation from individuals who are familiar with the student's academic and clinical skills.
- Grade Point Average of 3.25 in the last 60 hours of academic work is desired.
- Written statement regarding the relationship of the doctoral program to the future career goals of the applicant.
- Two years of counseling, teaching or other acceptable work experience.

After the student's admission to the Graduate School, 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

Students entering this doctoral program should have completed courses in the following areas at the graduate level:

- Introductory Research
- Tests and Measurement
- Descriptive Statistics
- Developmental/Child/Adolescent/Adult Psychology
- Personality Theories
- Abnormal Psychology
- Career Development and Placement
- Group Counseling/Guidance
- Theories of Learning

Students who have not completed coursework in these areas are required to complete these courses as deficiency credits. The deficiencies are not included in the 106 hours required for the degree. All deficiency coursework and PPSY

702 must be completed before students will be eligible for the first letter of encouragement. Students will be required to satisfactorily complete a doctoral comprehensive examination and dissertation in addition to coursework.

Required Credits — 109 semester hours

Required Core (All Required) — 25 semester hours

PSY 590 Seminar in History and Systems	3
PPSY 655 Community Psychology and Social Systems	3
PPSY 657 Legal and Ethical Aspects of Counseling and Psychology	3
PPSY 665 Family Systems	3
PPSY 668 Sexuality Counseling	3
PPSY 707 Seminar in Personality and Counseling Theories	3
PPSY 758 Advanced Psychopathology	3
PPSY 777 Applied Neuropsychology	4

Elective Core (Supervision Courses not included) — 3 semester hours

Practica (All Required) — 22 semester hours

PPSY 693 Practicum in Group Facilitation	4
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 793 Intake Practicum	1
PPSY 794 Clinic Practicum	2

Supervision — 2 semester hours

PPSY 715 Seminar in Counselor Supervision and Theory	2
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Statistics and Research (All required) — 11 semester hours

EPRE 602 Elements of Statistics	3
EPRE 603 Analysis of Variance	3
EPRE 700 Advanced Research Methods	3
PPSY 733 Research Apprenticeship (1 hour each)	2

Elective Supervision Practica (one required)

PPSY 681 Systems Intervention Practicum	3
PPSY 713 Practicum in Supervision of Play Therapy	3
PPSY 773 Practicum in Supervision of Group Facilitation	3
PPSY 774 Practicum in Supervision of Family Therapy	3

Special Populations

Choose one of the following courses:

PPSY 565 Psychology of Prejudice	2
PPSY 623 Counseling Diverse Populations	2

Assessment (All required) — 10 semester hours

PPSY 675 Intelligence Assessment	3
PPSY 678 Practicum in Personality and Clinical Assessment	5
PPSY 782 Introduction to Rorschach Administration and Scoring	2

Internship

PPSY 791 Internship in Counseling Psychology	15
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Dissertation

PPSY 797 Doctoral Proposal Research	4
PPSY 799 Doctoral Dissertation	12

Master of Arts in Educational Psychology

Program Requirements

Complete the required credits specified here.....20
 Complete program elective credits specified here.....10

Admission

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 typically conducted within four weeks of receipt of the program. 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, GRE scores and transcripts from previous undergraduate work.

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 67 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.

Note that in the case of GRE scores and GPA, exceptions may be considered if warranted by special circumstances and individual situations. Students take the common core of courses listed below and select a concentration in consultation with their advisor. Appropriate emphasis areas might include Learning and Cognitive Processes; Research, Measurement and Evaluation; Human Development; or expertise in a content area such as science, mathematics, reading or social studies.

Required Credits — 20 semester hours

EPRE 530 Life Span Developmental Psychology	3
EPRE 540 Theories and Principles of Learning	3
EPRE 602 Elements of Statistics	3
EPRE 600 Introduction to Graduate Research	3
EPRE 661 Trends and Issues In Educational Psychology	3
EPRE 663 Apprenticeship	2
EPRE 670 Evaluation: Models and Designs	3
or	
EPRE 674 Measurement I: Educational Testing	3

Elective Credits — 10 semester hours

Students define a concentration area in consultation with their advisor.

Note

EPRE 603 and EPRE 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.

Doctor of Philosophy in Educational Psychology

Program Requirements

Complete the required credits specified here.....	45
Complete the program elective credits specified here.....	3
Concentration area requirements	17-19
Program Total.....	66

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.

Admission

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 1650 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 emphasis areas: 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 emphasis area chosen, students must take a minimum of 66 hours to graduate.

Core Requirements — 45 Semester Hours — All Doctoral Students

<i>Learning and Cognitive Processes</i>	
EPRE 682 Cognition and Instruction	3
EPRE 685 Advanced Seminar in Learning and Cognition	3
<i>Human Development</i>	
EPRE 630 Childhood and Adolescence.....	3
EPRE 631 Youth, Adulthood and Aging	3
<i>Research, Statistics and Measurement</i>	
EPRE 603 Analysis of Variance	3
EPRE 610 Statistical Applications in Educational Research.....	3
EPRE 670 Evaluation: Models and Designs	3
or	
EPRE 675 Measurement II: Advanced Techniques	3
or	
EPRE 680 Qualitative Research Methods.....	3
EPRE 700 Advanced Research Methods	3
<i>Professional Development</i>	
EPRE 661 Trends and Issues in Educational Psychology.....	3
EPRE 663 Apprenticeship.....	2
<i>Dissertation</i>	
EPRE 797 Doctoral Proposal Research	4
EPRE 799 Doctoral Dissertation	12

Complete One of the Following Concentration Area Requirements

Learning and Cognitive Processes Concentration — 18 semester hours

<i>Required Credits — 9 semester hours</i>	
PSY 625 Principles of Neuropsychology.....	3
EPRE 635 Individual Differences in Cognition	3
EPRE 685 Advanced Seminar in Learning and Cognition	3
<i>Required Elective Credits — 9 semester hours</i>	

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.

Human Development Concentration — 17-19 semester hours

<i>Required Credits — 11-12 semester hours</i>	
EPRE 684 Advanced Seminar in Human Development.....	3
EPRE 694 Practicum	3-9
PSY 664 Advanced Social Psychology.....	3
PSY 625 Principles of Neuropsychology.....	3
or	
BIO 524 Behavioral Genetics	2
<i>Required Elective Credits — 6-7 semester hours</i>	
EDEC 539 Issues in Parent Education	3
GERO 625 Issues and Concepts in Gerontology.....	4
PPSY 675 Intelligence Assessment.....	3
PPSY 758 Advanced Psychopathology	3
EPRE 654 Seminar in College Teaching	3

Research, Statistics and Measurement Concentration — 18 semester hours

<i>Required Credits — 9 semester hours</i>	
EPRE 671 Evaluation: Advanced Techniques	3
EPRE 675 Measurement II: Advanced Techniques	3
EPRE 680 Qualitative Research Methods.....	3
<i>Required Elective Credits — 9 semester hours</i>	
EPRE 654 Seminar in College Teaching	3
EPRE 692 Internship in Educational Psychology.....	3
EPRE 694 Practicum	3
STAT 604 Advanced Experimental Design	3
STAT 605 Multivariate Analysis I	3
STAT 606 Multiple Linear Regression Models	3
STAT 607 Nonparametric Statistics	3
STAT 609 Sampling Methods	3
STAT 615 Multivariate Analysis II	3

Program Electives3
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., EPRE 670, EPRE 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.

Notes

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 EPRE 600, EPRE 602, EPRE 530, EPRE 540 and EPRE 674. The remaining core courses may count as electives in the doctoral program: EPRE 661, EPRE 670 and EPRE 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 emphasis 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 comprehensives 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 Specialist in School Psychology

Program Requirements

Complete the required credits specified here.....77-84

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..

Admission

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

- Academic transcripts of all college or university training. A grade point average of at least 3.3 in the last 100 hours of academic work is preferred (sent to the Graduate School by January 15).
- Three letters of recommendation from immediate supervisors or professors. These letters should be addressed to the Graduate School/School Psychology Program.
- 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 following 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. The following graduate courses or areas of study are prerequisite to the program: Tests and Measurements, Abnormal Psychology, Descriptive and Inferential Statistics and Theories of Personality. Students who have not had these courses will be required to complete them upon entry into the program. 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.

Required Credits — 77-84 semester hours

*Recommended to meet State of Colorado School Psychologist Licensure requirements.

Psychological Foundations

PPSY 763 Seminar in School Psychology.....	2
•EPRE 630 Childhood and Adolescent Psychology.....	3
or	
•Psy 550 Cognitive Development.....	3
•PPSY 607 Theories of Counseling.....	3
•EPRE 540 Theories and Principles of Learning.....	3
or	
•PPSY 638 Behavioral Applications to Professional Psychology.....	3
•PPSY 655 Community Psychology and Social Systems.....	3
•PPSY 657 Legal and Ethical Aspects of Counseling and Psychology.....	3
•PPSY 660 Psychological Consultation: Theory and Practice.....	2
•PPSY 781 Evaluation of Psychological Services.....	3

Assessment for Intervention

*PPSY 612 Practicum in Individual Counseling.....	5
*PPSY 674 Intellectual and Cognitive Assessment.....	5
*PPSY 678 Practicum in Personality and Clinical Assessment.....	5
*PPSY 779 Practicum in School Psychology.....	3

Choose two of the following:

*PPSY 617 Play Therapy: Theory and Practicum.....	3
*PPSY 676 Infant and Toddler Neuropsychology.....	3
*PPSY 681 Systems Intervention Practicum.....	3
*PPSY 694 Practicum in Family Therapy.....	4

Choose one of the following three options:

*PPSY 665 Family Systems.....	3
or	
*PPSY 585 Family Counseling and Education in School Settings.....	2
*PPSY 605 Group Laboratory Experience.....	1
and	
*PPSY 606 Theories and Practice in Group Guidance.....	2

Professional Education (minimum of 9 hours required)

*EDRD 617 Evaluation and Correction of Individual Reading Problems.....	4
PPSY 569 Violence Against Women and Children.....	2
or	
PPSY 654 Child Abuse and Neglect.....	2
PPSY 580 Computer Applications to Professional Psychology.....	2
*PPSY 672 Neuropsychology of LD and TBI.....	3
*PPSY 603 Counseling Children and Adolescents.....	3

To meet the professional educational requirements, other courses, with advisor approval, from EDAD, EDSE or EDF may be substituted.

Multicultural Understanding

Choose one of the following:

*PPSY 565 Psychology of Prejudice.....	2
*PPSY 623 Counseling Diverse Populations.....	2

Supervised Field Work

PPSY 789 Internship in School Psychology (two semesters).....	12
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Note

Written comprehensive examinations are required in this program.

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 School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103 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 that they desire licensure.

Near the end of the semester that the licensure program is to be completed, the candidate should complete application forms in the Office of Professional Services. 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.

Doctor of Philosophy in School Psychology

Program Requirements

Complete the required credits specified here.....117-129

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, consultancy, 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.

Admission

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

- Academic transcripts of all college or university training. A grade point average of 3.5 in the last 90 hours of academic work is preferred.
- Scores on the Graduate Record Examination. (Transcripts and GRE scores must be sent to the Graduate School before January 15.)
- Three letters of recommendation from immediate supervisors or professors. These letters should be addressed to the Graduate School/School Psychology Program.
- 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 following 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. The following graduate courses or areas of study are prerequisites to the program: Tests and Measurements, Abnormal Psychology and Theories of Personality. Students who have not had these courses will be required to complete them upon entry into the program. 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.

Required Credits — 117-129 semester hours

*Recommended to meet State of Colorado School Psychologist licensure requirements.

Psychological Foundations

PPSY 763 Seminar in School Psychology.....	2
*EPRE 630 Childhood and Adolescent Psychology.....	3
or	
*PPSY 550 Cognitive Development.....	3
or	
*EPRE 684 Advanced Seminar in Human Development.....	3
*PPSY 607 Theories of Counseling.....	3
or	
*PPSY 707 Seminar in Personality and Counseling Theories.....	3
PPSY 758 Advanced Psychopathology.....	3
*PPSY 655 Community Psychology and Social Systems.....	3
*PPSY 657 Legal and Ethical Aspects of Counseling and Psychology.....	3
*PPSY 660 Systems Analysis and Consultation Theories.....	2
*EPRE 540 Theories and Principles of Learning.....	3
or	
*PPSY 638 Behavioral Applications to Professional Psychology.....	3
PSY 590 Seminar in History and Systems.....	3
PPSY 777 Applied Neuropsychology.....	4

Assessment for Intervention

*PPSY 674 Intellectual and Cognitive Assessment.....	5
*PPSY 678 Practicum in Personality and Clinical Assessment.....	5
*PPSY 775 Supervision of Psychological Testing.....	3
*PPSY 779 Practicum in School Psychology.....	3
*PPSY 612 Practicum in Individual Counseling.....	5
or	
*PPSY 702 Practicum in Counseling.....	4
Choose two of the following:	
*PPSY 559 Introduction to Clinical Hypnosis.....	2
*PPSY 617 Play Therapy: Theory and Practicum.....	3
*PPSY 676 Infant and Toddler Neuropsychology.....	3
*PPSY 681 Systems Intervention Practicum.....	3
*PPSY 694 Practicum in Family Therapy.....	4
*PPSY 626 Introduction to Neuropsychological Assessment.....	4
*PPSY 605 Group Laboratory Experience.....	1
and	
*PPSY 606 Theories and Practice in Group Guidance.....	2
*PPSY 755 Supervised Practicum in College Teaching.....	(1-6)
and	
*EPRE 654 Seminar in College Teaching.....	(1-3)
*PPSY 778 Clinical Neuropsychology Practicum.....	2

Multicultural Understanding

Choose any one of the following:

*PPSY 565 Psychology of Prejudice.....	2
*PPSY 623 Counseling Diverse Populations.....	2

Research

*EPRE 700 Introduction to Doctoral Research.....	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

*EPRE 602 Elements of Statistics.....	3
EPRE 603 Analysis of Variance.....	3
EPRE 610 Statistical Applications in Educational Research.....	3

Option Two

*STAT 501 Statistical Methods I.....	4
STAT 502 Statistical Methods II.....	4
STAT 605 Multivariate Analysis.....	3
or	
STAT 606 Multiple Linear Regression Models.....	3
or	
EPRE 610 Statistical Applications in Educational Research.....	3

2. Applied Research

PPSY 580 Computer Applications to Psychology.....	2
PPSY 663 Research Apprenticeship: School Psychology.....	2
PPSY 781 Evaluation of Psychological Services.....	3
EPRE 675 Measurement II: Advanced Techniques.....	3
or	
EPRE 680 Qualitative Research Methods.....	3

Supervised Field Work

*PPSY 789 Internship in School Psychology (3 semesters).....	12
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Professional Education — (minimum of 6 hours required)

PPSY 569 Violence Against Women and Children.....	2
or	
PPSY 654 Child Abuse and Neglect.....	2
*PPSY 672 Neuropsychology of LD and TBI.....	3
*EDRD 617 Evaluation and Correction of Individual Reading Problems.....	4
PPSY 568 Psychology of Women.....	2
PPSY 603 Counseling Children and Adolescents.....	3

Electives in Professional Education.....1

With Advisor approval and/or other courses from EDAD, EDF, or EDSE, to meet State of Colorado Licensure Standards.

Elective Credits

If additional hours are needed, students may choose courses in consultation with their advisors.

Continues on following page

Note

Written and oral examinations and a dissertation are requirements of this program.

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 proficiency examination(s). Students should contact the School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103 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 that they desire licensure.

Near the end of the semester that the licensure program is to be completed, the candidate should complete application forms in the School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103. 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.

Master of Arts in Educational Leadership

Program Requirements

Complete the required credits specified here.....24
Complete the program elective credits specified here.....12

The University of Northern Colorado has a long history of preparing individuals to assume leadership roles in education. Over the years, superintendents, principals, program directors, professors and other persons in leadership positions in Colorado and across the nation have received academic degrees from the University. UNC graduates assume leadership roles in public and private schools, post-secondary institutions and other education-related organizations.

The underlying philosophy of the Master of Arts (MA) degree program is that educational leaders possess knowledge of self, others, organizations 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 experience reflective of a pluralistic society and promote continual learning.

The MA program in Educational Leadership is exemplified by these 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.
- Leaders effect positive change in individuals and organizations.

Required Credits — 24 semester hours

The Master of Arts degree requires a minimum of 36 semester hours of credit. The core leadership experiences comprise 21 hours, while the remaining 15 hours consist of 3 hours of introduction to research and 12 hours of electives.

ELPS 601 Understanding Self: Developing a Personal Vision for Educational Leadership.....	3
ELPS 602 Using Inquiry: Framing Problems and Making Decisions for Education Leadership.....	3
ELPS 603 Shaping Organizations: Management and Leadership in Education.....	5
ELPS 604 Understanding People: Professional Development and Educational Leadership.....	5
ELPS 605 Understanding Environments: Social, Political, Economic and Legal Influences in Educational Leadership.....	5
EPRE 600 Introduction to Graduate Research.....	3

Elective Credits — 12 semester hours

Students select additional elective courses (minimum of 12 semester hours) which are to be approved by their academic advisors and related to their personal, professional and academic goals. Electives may include courses from the ELPS Division, other programs within the College of Education or disciplines across the University.

Possible program electives are:

ELPS 606 Internship in Educational Leadership.....	1-3
ELPS 607 Staff Evaluation Training.....	2
ELPS 631 Leadership Issues in Elementary Schools.....	2
ELPS 632 Leadership Issues in Middle Schools.....	2
ELPS 633 Leadership Issues in Secondary Schools.....	2
ELPS 650 School Finance and Budgeting.....	3
ELPS 651 School Business Management.....	3
ELPS 652 Personnel Management in Higher Education.....	3
ELPS 653 Finance and Resource Management in Higher Education.....	3
ELPS 654 Instructional Leadership.....	3
ELPS 655 Seminar in Learning in Adulthood.....	3
ELPS 657 School and Community Relations.....	3
ELPS 658 School Personnel Administration.....	3
ELPS 659 Collective Bargaining and Conflict Management in Education.....	3
ELPS 660 Law and the Administrator.....	3
ELPS 661 Law and Higher Education.....	3
ELPS 662 Staff Development and Training.....	3
ELPS 663 Developing Grants and Contracts.....	2
ELPS 664 Organization and Administration of Community Colleges.....	3
ELPS 665 Policy Analysis and Development.....	3
ELPS 666 Planning and Change in Education.....	3
ELPS 667 Supervision.....	3
ELPS 668 Higher Education in the United States.....	2
ELPS 669 College and University Curriculum.....	3
ELPS 670 The Principalsip: Leadership at the School Site Level.....	3

Notes

Satisfactory performance on a concluding activity approved by the Division faculty, in accordance with Graduate School policy, must be demonstrated.

Students are to present a portfolio of professional development for review by faculty at the conclusion of the ELPS 601, 602, 603, 604 and 605 sequence. This portfolio review process will be used to assist the student in the selection of additional elective courses.

Students seeking a Colorado Principal's License must apply for admission into that program. That is normally done after the ELPS 601, ELPS 602, ELPS 603, ELPS 604 and ELPS 605 sequence has been completed.

Educational Specialist in Educational Leadership

Program Requirements

Complete the required credits specified here.....30

The University of Northern Colorado has a long history of preparing individuals to assume leadership roles in education. Over the years, superintendents, principals, program directors, professors and other persons in leadership positions in Colorado and across the nation have received academic degrees from the University. UNC graduates assume leadership roles in public and private schools, post-secondary institutions and other education-related organizations.

The underlying philosophy of the Educational Specialist degree (Ed.S.) program is that educational leaders possess knowledge of self, others, organizations 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 Ed.S. program in Educational Leadership is exemplified by these 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.
- Leaders effect positive change in individuals and organizations.

Admission

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 and an essay regarding an educational issue.

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

Required Credits

The Ed.S. represents advanced study in educational leadership and policy. Completion of the program may satisfy Colorado requirements for the Colorado Administrator license (central office including superintendent) or prepare students for leadership roles in post-secondary education. Students must have completed the prerequisite core learning experiences in educational leadership (ELPS 601, 602, 603, 604 and 605) or equivalent study as approved by the advisor. This 21 semester hour core does not satisfy the course requirements of the Ed.S.

The Ed.S. Degree requires 30 hours beyond the master's. The 30 hours are distributed as follows:

Educational Leadership — 12-18 semester hours

Research — 6 semester hours, including

EPRE 602 Elements of Statistics.....3

Field-Based Learning — 3 semester hours

ELPS 606 Internship in Educational Leadership3

or

ELPS 695 Practicum in Educational Leadership3

Electives — 0-9 semester hours

Doctor of Education in Educational Leadership

Program Requirements

Complete the required credits specified here — minimum 64 (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, program directors, professors and other persons in leadership positions in Colorado and across the nation have received academic degrees from the University. UNC graduates assume leadership roles in public and private schools, post-secondary institutions and other education-related organizations.

The underlying philosophy of the Doctor of Education (Ed.D.) program is that educational leaders possess knowledge of self, others, organizations 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 doctoral program in Educational Leadership is exemplified by these 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.
- Leaders effect positive change in individuals and organizations.

The Ed.D. program uses a community-of-scholars model of interaction among students and faculty. The students are viewed as developing colleagues with progressively higher levels of responsibility. Cooperative research and other scholarly projects are encouraged among faculty members and students.

The Educational Leadership Approach to Doctoral Study

A sampling of the features which make this program attractive to current and aspiring educational leaders includes:

- a commitment to the professional development of each individual student
- a content knowledge base which is challenging, provocative, research-based and yet practical and useful
- a program which is individually designed by each student with guidance by an advisor and program planning committee
- a cohort approach to learning for two semesters of enrollment
- instructional techniques and ways of working with students that emphasize the principles and practices of adult learning
- a commitment by faculty to work with students as colleagues
- a belief that all students who enter the program can successfully finish and in doing so will continue to contribute to the field of education through their coursework, field-based learning and their research.

Admission

Ed.D. program applicants must submit an application form, official transcripts, 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 and an essay on a current issue. 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 April 1, including the interview, are given priority screening for Fall admissions of that year and have increased opportunities for financial assistance. The application period normally closes on July 1 for Fall admission.

Program Requirements

The doctoral program expands upon the foundation gained in study for the master's, specialist or licensure programs. It provides opportunities for candidates to develop not only breadth in understanding leadership, policy, and research methodologies, but also depth in one or several 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 contribute to knowledge of a critical issue in educational leadership.

Entering doctoral students who already possess a specialist's degree complete a minimum of 41 semester hours of graduate credit beyond the specialist's degree. Students with a master's degree enroll in a minimum of 64 semester hours beyond the master'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 high degree of individualized program development to reflect the personal, professional and academic goals of each student. Consequently, each doctoral student admitted to the program works with an advisor and a program planning committee to develop a learning plan. Despite this flexibility, there are minimum requirements that must be completed by all Ed.D. students:

Major in Educational Leadership — 21 semester hours

A doctoral major provides depth in understanding leadership issues beyond what may have been learned in study before program admission. Students enroll in 12 hours of Doctoral Core courses (two six-hour courses) that are taken sequentially in the Fall and Spring semesters (ELPS 751, ELPS 753). To broaden and deepen their understanding of leadership and related policy issues, students take 9 or more hours determined in consultation with their program planning committee.

Research Core — 12 semester hours

At least 12 hours of doctoral level work (beyond EPRE 600 or its equivalent) are directed toward developing research design and data analysis skills. Nine hours include the following courses (or equivalents approved by the doctoral program planning committee): EPRE 602, EPRE 603, EPRE 700. The other courses may be selected from offerings in such fields as Educational Psychology, Sociology or Statistics.

Support Area — 9 semester hours

Students identify a support area outside the field of educational leadership which relates directly to their program objectives. A support area is defined as a body of knowledge represented by a minimum of 9 semester hours of coursework.

Field-Based Learning — 3 semester hours

Besides formal academic coursework, students engage in a field-based learning experience(s) to enhance their practical knowledge and skills. Learning experiences can be an internship (ELPS 606) which is role specific (e.g., taking on the role and responsibilities of a superintendent, principal, or university administrator) and/or a practicum (ELPS 695) which is task specific (e.g., conducting a small-scale study or directing a staff development activity).

Electives — as needed

Students select additional course(s) with the guidance of their program committee to meet their specialized career needs.

Dissertation — 16 semester hours

Before beginning the dissertation, students identify needed resources and refine their skills in order to develop a scholarly dissertation proposal. As part of this development process they must enroll for 4 hours of Doctoral Proposal Research (ELPS 797). Twelve semester hours of dissertation credit (ELPS 799) must be taken.

Doctoral students, in consultation with their advisors, select a program planning committee, comprised of at least three faculty members. This committee works with the student in designing a course of studies which conforms to the standards of the Graduate School and the Educational Leadership program, and also meets the expectations and goals of the student. The program planning committee is convened early in the student's doctoral program (i.e., no later than the semester following the completion of 10 semester hours) to develop an approved program of studies. The committee is also responsible for the development of the student's comprehensive examination.

Course Requirements

Educational Leadership — Minimum 21 semester hours, including	
ELPS 751 Doctoral Core I.....	6
ELPS 753 Doctoral Core II.....	6
Speciality Area	9

Research Core — Minimum 12 semester hours, including

EPRE 602 Elements of Statistics.....	3
EPRE 603 Analysis of Variance.....	3
EPRE 700 Advanced Research Methods.....	3
Research Elective.....	3

Support Area — Minimum 9 semester hours

Field-Based Learning: Minimum 3 semester hours

ELPS 606 Internship in Educational Leadership.....	3
or	
ELPS 695 Practicum in Educational Leadership	3
Electives (as needed; see list below)	

Dissertation — 16 semester hours

ELPS 797 Doctoral Proposal Research	4
ELPS 799 Doctoral Dissertation	12

Residency

Students must complete at least two academic semester/summer terms of study in residence after having been admitted to the doctoral degree program. A semester/term in residence is defined as registration for at least nine hours of graduate credit of on-campus work applicable to the doctoral degree. Courses numbered 622 (Directed Study) and 797 (Dissertation Proposal) cannot be counted in the nine or more credit hours unless a student also completes at least six credit hours of on-campus coursework applicable to the doctoral degree. Departmental prefix 799 may not be used under any circumstances to meet the residency requirement.

Possible program electives are:

ELPS 650 School Finance and Budgeting	3
ELPS 651 School Business Management	3
ELPS 652 Personnel Management in Higher Education	3
ELPS 653 Finance and Resource Management in Higher Education	3

ELPS 654 Instructional Leadership	3
ELPS 655 Seminar in Learning in Adulthood	3
ELPS 657 School and Community Relations	3
ELPS 658 School Personnel Administration	3
ELPS 659 Collective Bargaining and Conflict Management in Education	3
ELPS 660 Law and the Administrator	3
ELPS 661 Law and Higher Education	3
ELPS 662 Staff Development and Training	3
ELPS 663 Developing Grants and Contracts	2
ELPS 664 Organization and Administration of Community Colleges	3
ELPS 665 Policy Analysis and Development	3
ELPS 666 Planning and Change in Education	3
ELPS 667 Supervision	3
ELPS 668 Higher Education in the United States	2
ELPS 669 College and University Curriculum	3
ELPS 670 The Principalship: Leadership at the School Site Level	3
ELPS 675 The Superintendency: Leadership at the School District Level	3
ELPS 685 Administrative and Organization Behavior	3
ELPS 690 Executive Leadership	3

Master of Arts in Educational Media

Program Requirements
Complete the required credits specified here.....36-39

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 Educational Media Specialist (K-12) endorsement.

Admission

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) following midterm exams. All complete applications received by midterm are processed that term. 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, GRE scores and transcripts from previous undergraduate work.

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.
- 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 required.

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

Required Credits — 36-39 semester hours

EPRE 540 Theories and Principles of Learning.....	3
EPRE 600 Introduction to Graduate Research	3
ET 500 Introduction to Performance Technology.....	3
ET 502 Instructional Development.....	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
EDFE 610 Field Experience (K-6).....	3
(Required for K-6, K-12 Endorsement)	
EDFE 610 Field Experience (7-12).....	3
(Required for 7-12, K-12 Endorsement)	
EDRD 614 Children's and Adolescent's Literature.....	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. Any coursework to be transferred must have been completed within five years of the time of transfer.

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 Office of Professional Services in McKee Hall 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.

Master of Arts in Educational Technology

Program Requirements

Complete the required credits specified here.....21
 Complete program elective credits specified here.....9

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.

Admission

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) following midterm exams. 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 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.

Required Credits — 21 semester hours

EPRE 540 Theories and Principles of Learning	3
EPRE 600 Introduction to Graduate Research	3
EPRE 602 Elements of Statistics.....	3
or	
EPRE 670 Evaluation: Models and Design	3
ET 500 Introduction to Performance Technology.....	3
ET 502 Instructional Development	3
ET 503 Computers In Education	3
ET 504 Instructional Materials Design.....	3

Elective Credits — 9 semester hours

Elective courses to be selected to develop or support a student's teaching or research interests.

Doctor of Philosophy in Educational Technology

Program Requirements

Complete the required credits specified here.....55
Complete program elective credits (approved in plan of study).....12

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 between 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.

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 either instructional development/design, interactive technologies, or technology integration.

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.

Admission

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 and if needed during the summer. 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:

- Graduate Record Examination Scores
- Transcripts from all previous undergraduate and graduate work
- Two page statement of career goals
- Three letters of recommendation
- 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 1650 on the Graduate Record Examination taken within the last five years with individual verbal, quantitative and analytical scores above 500.
- Grade point average of 3.20 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.

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.

At the end of the doctoral student's first semester in residence or 15 semester hours in the program and at the end of the student's second semester or 30 semester hours, the educational technology program notifies the student in writing that the student is: 1) encouraged to continue in the program, 2) discouraged from continuing in the program, or 3) placed on review for one semester. If the student is placed on review he or she is then reviewed again at the end of the next term. At that time, the student is either encouraged to continue in the program or is asked to terminate the 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 student must also have received two letters of encouragement from the educational technology program faculty before taking the written comprehensive examination. Two unsuccessful performances on the written examination will result in dismissal from the program. Successful performance on the written comprehensive examination is a prerequisite to entrance to the oral examination. 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. Two unsuccessful performances on the oral examination will result in dismissal from the program. Successful performance on both written and oral examination is a prerequisite to both doctoral candidacy and the dissertation.

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. Once the dissertation proposal has been accepted by the research committee and by the Graduate School, the student's name will be submitted to the Graduate School for admission to doctoral candidacy. The doctoral dissertation will be examined by members of the research committee in an oral defense.

Required Credits — 55 semester hours

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 core and emphasis 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 core and specialize in one of the three emphasis areas.

Educational Technology Core

ET 524 Design of Computer Assisted Instruction	3
ET 602 Instructional Analysis and Design	3
ET 610 Production of Instructional Materials	3
ET 784 Doctoral Seminar in Educational Technology	3
ET 797 Doctoral Proposal Seminar	4
EPRE 682 Cognition and Instruction	3

Research Methodology Core

EPRE 602 Elements of Statistics	3
EPRE 603 ANOVA	3
EPRE 610 Statistical Packages for Educational Research.....	3
or	
EPRE 680 Qualitative Research Methods.....	3
EPRE 700 Advanced Research Methods	3

Each student will complete 12 semester hours of coursework in one of the three emphasis areas. Three of these hours must be in an internship practicum.

Emphasis Area: Instructional Development/Design

ET 650 Corporate Course Design	3
ET 692 Internship: Instructional Development/Design	3
or	
ET 693 Practicum: Instructional Development/Design.....	3
ET 702 Instructional Design Theory.....	3
ET 782 Research in Instructional Development/Design.....	3

Emphasis Area: Interactive Technologies

ET 613 Instructional Telecommunications	3
ET 615 Distance Education: Theories and Practice	3
ET 627 Computer Assisted Instruction Authoring Systems.....	3
ET 628 Interactive Video Technologies	3
ET 692 Internship: Interactive technologies.....	3
or	
ET 693 Practicum: Interactive Technologies	

ET 725 Programming Languages for Educational Application.....	3
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Emphasis Area: Technology Integration

ET 680 Integration of Technology into Curriculum.....	3
ET 692 Internship: Technology Integration	3
or	
ET 693 Practicum: Technology Integration.....	3
ET 735 Design of Complex Technology Systems.....	3
ET 780 Diffusion of Technological Innovations.....	3

Dissertation

ET 799 Doctoral Dissertation	12
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Elective Credits — 12 semester hours

(Selected in consultation with the advisor)

General Electives	6
Electives from outside Educational Technology and program required courses.....	6

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., EPRE 670, EPRE 671, EPRE 689 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.

Master of Arts in Elementary Education

Program Requirements

Complete the required credits specified here.....24
 Complete program elective credits specified here.....9

The Master of Arts Degree in Elementary Education prepares a licensed classroom teacher to address instructional programs more effectively as a master teacher and curricular leader. Students seeking this degree must have evaluations by the College of Education and The School for the Study of Teaching and Teacher Education and also are required to document two years of successful teaching experience, before the awarding of the M.A. degree. Program flexibility allows the experienced teacher to pursue global and specific content. Researched applications in elementary education and related areas are highlighted.

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

Required Credits — 15 semester hours

EDEL 601 Practicum in Elementary Education	3
EDEL 612 Elementary School Curriculum	3
EDEL 619 Pluralism in Education.....	3
EDRD 612 Reading in the Elementary School	3
EPRE 600 Introduction to Graduate Research	3
Note that EDEL 601, EDRD 612 must be taken and completed at UNC.	

Elective Credits — 6 semester hours

EDEL 620 Researched Applications for Instruction in Mathematics, K-9	3
EDEL 640 Researched Applications for Instruction in the English Language Arts, K-9	3

EDEL 650 Researched Applications for Instruction in Social Studies, K-9.....	3
EDEL 679 Researched Applications for Appraisal, Evaluation and Clinical Supervision of Teaching in the Elementary and Middle School.....	3
SCED 671 Science Curriculum in the Elementary School	2
Choose two from the above for a total of 6 credits. EDEL 620, EDEL 645, EDEL 650 and EDEL 679 must be taken and completed at UNC.	

General Electives — 9 semester hours

Complete sufficient electives for a total of at least 30 semester hours. These must be selected in consultation with the advisor and approved in advance, in writing, by the major advisor. Electives may be taken in general elementary education (600 numbered level courses), within other program areas in the College of Education (i.e., EDEC, EDRD, EDMS, SPED, ET, etc.), or within other areas in the University that would strengthen professional skills (i.e., science, mathematics, English, art, music, etc.). 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.

Notes

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 a 3.00 GPA on the last 100 quarter/66 semester hours for full admission to this program. Applicants with a GPA between 2.75 and 3.00 may be admitted by the School on a probationary basis. Applicants admitted under probation must attain a 3.00 GPA on the first 12 semester hours completed in the program.

Master of Arts in Elementary Education

Emphasis in Middle School

Program Requirements

Complete the required credits specified here.....24
 Complete program elective credits specified here.....9

The Master of Arts Degree in Elementary Education 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. They may obtain middle school licensure by completing the Post Baccalaureate Licensure Program concurrently with their master's program. Students must have a teaching license before completing the master's program. Students must also complete a 4 hour written comprehensive examination.

Required Credits — 24 semester hours

<i>Middle School Education Core</i>	
EDMS 601 Practicum	3
EDMS 665 Theory, Philosophy and Curriculum in Middle School	3
EDMS 667 Assessment, Design and Evaluation of Elementary and Middle School Curriculum.....	3
EDMS 669 Integrated Curriculum for the Middle School	3
EDMS 670 Instructional Practices in Middle Grades.....	3
EPRE 600 Introduction to Graduate Research	3
EDEL 619 Pluralism in Education.....	3

Note that the practicum 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.

Reading — 3 semester hours

EDRD 620 Reading in the Middle and the Secondary School.....	3
or	
EDRD 621 Critical Reading and Thinking in Content Subjects.....	3

Electives — 9 semester 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. program. The following courses may be relevant to a student's professional development.

EDEL 614 Literature for Children, Adolescents and Young Adults.....	2
EDEL 620 Researched Application for Instruction in Math K-9.....	3
EDEL 640 Researched Application for Instruction in Language Arts K-9.....	3
EDEL 650 Researched Application for Instruction in Social Studies K-9	3
EPRE 530 Life Span Developmental Psychology	3
PPSY 562 Teacher Effectiveness	3
SCED 671 Science Curriculum in the Elementary Schools	3

Notes

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 a 3.00 GPA on the last 100 quarter/66 semester hours for full admission to this program. Applicants with a GPA between 2.75 and 3.00 may be admitted by the School on a probationary basis. Applicants admitted under probation must attain a 3.00 GPA on the first 12 semester hours completed in the program.

Master of Arts in Elementary Education: Early Childhood Education Emphasis in Primary Education

Program Requirements

Complete the required credits specified here.....26
Complete program elective credits specified here.....7-9

Prerequisites

Students who are not licensed in elementary education must have their transcript evaluated by the College of Education and by the School for the Study of Teaching and Teacher 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.

Required Credits — 26 semester 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/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 Grades	3
EPRE 600 Introduction to Graduate Research	3

Elective Credits — 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	1-4

EDEC 662 Research and Teaching in Early Childhood and Primary Education	3
EDEC 663 Educational Assessment, Evaluation and Prescription for the Young Child	3
EDEC 677 Problem Solving 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 Researched Applications for Instruction in the English Language Arts, K-9	3
EDEL 650 Researched Applications for Instruction in Social Studies, K-9	3
EDRD 614 Literature for Children, Adolescents and Young Adults	3
EDRD 617 Evaluation and Improvement of Reading and Related Abilities	3
EPRE 630 Child and Adolescent Psychology	3
SCED 671 Science Curriculum in the Elementary School	2

(Other courses accepted with the approval of the academic advisor.)

Notes

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.

Applicants must have a 3.00 GPA on the last 100 quarter hours/66 semester hours for full admission to this program. Applicants with a GPA between 2.75 and 3.00 may be admitted by the Division on a probationary basis. Applicants admitted under probation must attain a 3.00 GPA on the first 12 semester hours completed in the program.

Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the Office of Professional Services in McKeel103 for information.

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, 601, 660, 664, 670 and 675.

Doctor of Education in Elementary Education

Program Requirements

Complete the required credits specified here.....46-48
 Complete program elective credits specified here.....21

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 School for the Study of Teaching and Teacher 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.

Required Research Credits — 25 semester hours

EPRE 602 Elements of Statistics.....	3
EPRE 603 ANOVA.....	3
EPRE 700 Advanced Research Methods.....	3
*EDEL 797 Doctoral Proposal Research.....	4
*EDEL 799 Doctoral Dissertation.....	12

Note that EPRE 602 is to be taken concurrently with EDEL 710.

EPRE 603 must be taken concurrently with EDEL 711. 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 semester hours

*EDEL 725 Seminar in Elementary School Mathematics.....	2
*EDEL 745 Seminar in Elementary School English.....	2
*EDEL 755 Seminar in Elementary School 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
EDF 740 Psychological Foundations of Education.....	2
EDF 765 Sociological Foundations of Education.....	2
EDF 785 Philosophical Foundations of Education.....	2

Note that a minimum of 15 semester hours must be selected in consultation with the advisor.

Elective Credits — 21 semester 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

EPRE 597 Special Topics: Qualitative Methods in Research and Evaluation.....	3
EPRE 674 Measurement: Educational Testing.....	3

ET 528 Programming.....	3
ET 503 Computer-Based Education.....	3
*EDEL 612 Elementary School Curriculum.....	3
*EDEL 619 Pluralism in Education.....	3
*EDRD 612 Reading in the Elementary School.....	3
*EDEL 601 Practicum in Elementary Education.....	3
*EDEL 620 Researched Applications for Instruction in Mathematics, K-9.....	3
*EDEL 645 Researched Applications for Instruction in the English Language Arts, K-9.....	3
*EDEL 650 Researched Applications for Instruction in Social Studies, K-9.....	3
*EDEL 679 Researched Applications for Appraisal, Evaluation and Clinical Supervision of Teaching in the Elementary and Middle School.....	3
SCED 671 Science Curriculum in the Elementary School.....	2
EDEL 660 Critical Issues in Early Childhood Education.....	3
EDEL 662 Research and Teaching 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 Elementary Education Workshops (maximum 4).....	4
EDEL 622 Directed Studies.....	1-3
EDEL 678 Outcomes-Based Education.....	3
EDRD 614 Literature for Children, Adolescents and Young Adults.....	3
EDRD 645 Reading/Literacy Research.....	3

*Note that 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, SPED, ET, EDF, etc.) or within other colleges/areas in the University that would strengthen professional skills (i.e., sciences, business, foreign languages, women's studies, anthropology, visual arts, aerospace studies, black studies, community health, communication, social sciences, mathematics, music, college student personnel administration, English, multicultural studies, psychology, humanities, recreation, etc.)

Applicants must have a 3.00 GPA on the last 100 quarter/66 semester hours for full admission to this program. Applicants with a GPA between 2.75 and 3.00 may be admitted by the School on a probationary basis. Applicants admitted under probation must attain a 3.00 GPA on the first 12 semester hours completed in the program.

Doctor of Education in Elementary Education: Early Childhood Education

Program Requirements

Due to a major review and revision process, students should contact the School for the Study of Teaching and Teacher Education, Office of Professional Services, McKee 103 to obtain detailed information regarding the program.

Applicants must have a 3.00 GPA on the last 100 quarter/66 semester hours for full admission to this program. Applicants with a GPA between 2.75 and 3.00 may be admitted by the School on a probationary basis. Applicants admitted under probation must attain a 3.00 GPA on the first 12 semester hours completed in the program.

Master of Arts in Reading

Program Requirements

Complete the required credits specified here.....25
 Complete program elective credits specified here.....9

The Master of Arts degree program in Reading prepares a student to function more effectively as an elementary or secondary classroom teacher; to direct reading programs, staff development and curriculum development at a school level and for many literacy-related jobs. Students may also fulfill requirements for institutional recommendation for endorsement as an Elementary Reading Teacher or a Secondary Reading Teacher. Students seeking this endorsement must have three letters of recommendations and evaluations by the School for the Study of Teaching and Teacher Education for admission. Students must meet with their assigned advisor to plan their program of study after formal notification of admission. Students seeking endorsement must provide evidence of two or more years of teaching experience in an accredited and/or established elementary or secondary school while holding a Type A or teaching license equivalent certificate before such recommendation will be made. Supervised practicum experiences and research are arranged by the Reading Center.

Reading Elementary

Students who are not licensed in elementary education must have evaluations by the College of Education and by the School for the Study of Teaching and Teacher Education. Students will be required to demonstrate appropriate literacy and competency in computer applications as part of this program (ET 503 is a recommended course. This may increase the minimum hours to 37.) Students who desire the Elementary Reading Teacher Endorsement should note the specified courses.

Required Reading Credits, Elementary — 10 semester hours

*Required for Elementary Teacher Endorsement

**Only 3 hours of 500-level EDRD courses will apply toward degree.

*EDRD 612 Reading in the Elementary School	3
*EDRD 645 Reading/Literacy Research	3
EDRD 601 Practicum in Literacy	1-3
or	
*EDRD 692 Clinical Practicum and Internship: Elementary/Middle/Secondary	4

Electives in Reading and Language Arts — 9 semester hours

**EDRD 508 Reading Workshop	1-3
**EDRD 515 Current Trends and Issues in Reading/Language Education	3
**EDRD 519 Reading and Writing Development of Preschool/Primary Children	2
*EDRD 614 Literature for Children, Adolescents and Young Adults	3
EDRD 615 Topical Seminar in Literacy Education	3
*EDRD 617 Evaluation and Improvement of Reading and Related Abilities	3
EDRD 620 Reading in the Middle and Secondary School	3
EDRD 621 Critical Reading and Thinking in Content Subjects	3
EDRD 642 Teaching the Writing Process in Schools	3
EDRD 670 Directing a School-Wide Reading/Writing Program	3
(EDRD 670 is strongly recommended for the Endorsement of the Reading Teacher.)	
EDRD 694 Reading Center Internship: College Reading, Literacy, Supervision	2
EDEL 640 Researched Applications for Instruction in the English Language Arts K-9	3

Required Professional Credits — 6 semester hours

EPRE 600 Introduction to Graduate Research	3
*EDEL 619 Pluralism in Education	3

General Electives — 9 semester hours

General electives must be selected in consultation with the advisor and approved in advance, in writing, by the major advisor. There must be a link among the elective courses in accord with the student's career plans in reading. Prefixes of suggested related fields are EDAD, EDEC, EDEL, EDSE, ENQ/EED, EPRE, ET, MATH/MED, PPSY, PSY, SPAN and COMM. For students applying for the Elementary Reading Teacher Endorsement, electives must be taken in at least one supporting area, such as tests and measurements, special education, child and adolescent development, speech and hearing, guidance and counseling, language development, curriculum, multicultural/multilingual, and writing/English.

Reading Secondary

Students who are not licensed in secondary education must have evaluations by the College of Education and by the School for the Study of Teaching and Teacher Education. Students will be required to demonstrate appropriate literacy and competency in computer applications as part of this program. (ET 503 is a recommended course. This may increase the minimum hours to 37.) Students who desire the Secondary Teacher Endorsement should note the specified courses.

Required Reading Credits, Secondary — 10 semester hours

*Required for Elementary Teacher Endorsement

**Only 3 hours of 500-level EDRD courses will apply toward degree.

*EDRD 620 Reading in the Middle and Secondary School	3
*EDRD 645 Reading/Literacy Research	3
EDRD 601 Practicum in Literacy (can be repeated)	4
or	
*EDRD 692 Clinical Practicum and Internship: Elementary/Secondary	4

Electives in Reading and Language Arts — 9 semester hours

**EDRD 508 Reading Workshop	1-3
**EDRD 515 Current Trends and Issues in Reading/Language Education	3
EDRD 612 Reading in Elementary School	3
*EDRD 614 Literature for Children, Adolescents and Young Adults	3
EDRD 615 Topical Seminar in Literacy Education	3
*EDRD 617 Evaluation and Improvement of Reading and Related Abilities	3
EDRD 621 Critical Reading and Thinking in Content Subjects	3
EDRD 642 Teaching the Writing Process in Schools	3
EDRD 670 Directing a School-Wide Reading/Writing Program	3
(EDRD 670 is strongly recommended for the Endorsement of the Reading Teacher.)	
EDEL 645 Researched Applications for Instruction in the English Language Arts K-9	3

Required Professional Credits — 6 semester hours

EPRE 600 Introduction to Graduate Research	3
*EDEL 619 Pluralism in Education	3

General Electives — 9 semester hours

General electives must be selected in consultation with the advisor and approved in advance, in writing, by the major advisor. There must be a link among the elective courses in accord with the student's career plans in reading. Prefixes of suggested related fields are EDAD, EDEC, EDEL, EDSE, ENQ/EED, EPRE, ET, MATH/MED, PPSY, PSY, SPAN and COMM. For students applying for the Secondary Reading Teacher Endorsement, electives must be taken in at least three supporting areas, such as: adolescent literature, tests and measurements, special education, adolescent development, speech and hearing, guidance and counseling, language development, curriculum, multicultural/multilingual, and writing/English.

Applicants must have a 3.00 GPA on the last 100 quarter/66 semester hours for full admission to this program. Applicants with a GPA between 2.75 and 3.00 may be admitted by the School on a probationary basis. Applicants admitted under probation must attain a 3.00 GPA on the first 12 semester hours completed in the program.

Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103 for information.

Doctor of Education in Reading

Program Requirements

Complete the required credits specified here.....51
 Complete program electives specified here15

The Ed.D. in Reading prepares a student for positions in public and private schools as reading coordinator or other leadership roles, in colleges or universities, in the educational publishing industry, in research and development companies, in businesses, in government entities and in many other literacy-related professions.

Graduate applicants for this degree must have three letters of recommendation and complete the Reading Program application form as well as the Graduate School application. They must have evaluations by the College of Education; the School for the Study of Teaching and Teacher Education; and the Graduate School to determine admissibility. Applicants must provide evidence of two or more years of teaching experience in an accredited public or private school.

Students will be required to demonstrate appropriate literacy and competency in computer applications as part of this program (ET 503 is a recommended course). All elective courses in the Ed.D. in Reading program must be selected in consultation with the advisor and approved in advance, in writing, by the major advisor. There must be a link among the elective courses in accord with the student's career path in reading.

Students who hold an endorsement as Reading Teacher: Elementary or Secondary and who are seeking a Reading Specialist K-12 endorsement, must secure endorsement at the alternative level by completing course requirements at the level alternate to the existing endorsement and an advanced supervised practicum as a reading specialist.

Required Credits in Reading — 30 semester hours

EDRD 712 Psychology of Reading	3
<i>Take at least two seminars (EDRD 745 and/or EDEL 745)</i>	
EDRD 745 Topical Seminar in Reading (can be repeated)	2-4
EDEL 745 Seminar in Elementary English.....	2
EDRD 795 Supervised Practicum in College Teaching	3
<i>or</i>	
EDRD 701 Advanced Practicum in Literacy	3
EDRD 797 Doctoral Proposal Research	1-4
EDRD 799 Doctoral Dissertation	12
Electives in Reading at 600-700-level to complete 30 hours (EDRD 717, EDRD 671, EDRD 701 or EDRD 694 required for Reading Specialist Endorsement.)	

Required Research/Inquiry Credits — 12 semester hours

EPRE 602 Elements of Statistics.....	3
EPRE 603 Analysis of Variance.....	3
EPRE 680 Qualitative Research Methods	3
<i>or</i>	
EPRE 670 Evaluation: Models and Designs.....	3
EPRE 700 Advanced Research Methods.....	1

Required Professional Development Credits — 9 semester hours

Choose from the following:

EDEL 612 The Elementary School Curriculum	3
EDEL 678 Outcomes-Based Education	3
EDEL 679 Researched Application in Appraisal, Evaluation and Clinical Supervision of Teaching in the Elementary and Middle School	3
EDF 640 Psychological Foundations of Education	3
EDF 665 Sociological Foundations of Education	3
EDF 667 Modern Curriculum Trends and Issues	2
EDF 685 Philosophical Foundations of Education	3
EDMS 665 Middle School Theory, Philosophy and Curriculum	3
EDMS 667 Assessment, Design and Evaluation of Middle School Curriculum	3
EDRD 750 The Contributing Professional in Reading	3
EPRE 630 Child and Adolescent Psychology.....	3

General Electives — 15 semester hours

Students choose electives with major advisor's written approval.

Notes

Students applying for the Reading Specialist Endorsement must consult with their advisor to be certain they meet all qualifications.

Applicants must have a 3.00 GPA on the last 100 quarter/66 semester hours for full admission to this program. Applicants with a GPA between 2.75 and 3.00 may be admitted by the School on a probationary basis. Applicants admitted under probation must attain a 3.00 GPA on the first 12 semester hours completed in the program.

Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103 for information.

Master of Arts in Special Education Emphasis in Early Childhood Special Education

Program Requirements
Complete the required credits specified here.....39-48

Admission

In addition to meeting the admission requirements of the Graduate School, the student must possess a grade average of 3.0 or above on the most recent 60 semester hours of A, B, C, D, F grades, 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.

This master's program is designed to prepare teachers who will work with infants and young children (birth to 5) with special needs. Typically, the duration of this program should be two semesters plus a summer session. However, 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. The program consists of the required courses and practicum requirements agreed upon by the student and advisor.

Required Credits — 39-48 semester 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

Early Childhood/Special Education

EDSE 530 Parent/Professional Partnerships	3
EDSE 531 Assessment of Infants and Young Children with Special Needs....	3
EDSE 532 Early Intervention for Infants and Toddlers with Special Needs....	3
EDSE 533 Methods in Early Childhood Special Education	3
EDSE 534 Research and Policy in Early Childhood Special Education	3
EDEC 660 Critical Issues in Early Childhood Education	3
EDEC 675 Play and Psychosocial Development in Early Childhood	3

Graduate Study

EPRE 600 Introduction to Graduate Research	3
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Practicum

EDSE 535 Practicum in Early Childhood Special Education	3-12
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Notes

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.

A master's degree or a department approved licensure program is required before the University of Northern Colorado will recommend the student for endorsement in Teacher IV Early Childhood Special Education. Students who seek a Colorado endorsement in the Special Education Teacher IV Early Childhood Special Education Program or request an institutional recommendation for licensure from UNC must meet Colorado licensure requirements. 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.

Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the School for the Study of Teaching an Teacher Education: Office of Professional Services in McKee 103 for information.

Master of Arts in Special Education Emphasis in Moderate Needs

Program Requirements

Complete the required credits specified here.....33-42
Complete the elective credits specified4

Admission

In addition to meeting the admission requirements of the Graduate School, the student must possess a grade average of 3.0 or above on the most recent 60 semester hours of A, B, C, D, F grades, 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. The student must have completed one year teaching experience or equivalent.

Students who seek a Colorado endorsement in the Special Education Teacher I Moderate Needs Program or request an institutional recommendation for licensure from UNC must meet Colorado licensure requirements.

This master's program is designed to prepare teachers who will work with students who have moderate needs. Typically, the duration of this program should be two semesters. However, 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 and additional courses addressing competencies in the scope and sequence of regular education curriculum and methodology (EDEL 612: The Elementary School Curriculum—3 semester hours; EDEL 620: Researched Applications for Instruction in Mathematics K-9—3 semester hours; EDRD 612: Reading in the Elementary School—3 semester hours). Students not endorsed in Elementary Education and/or Early Childhood Education are also 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 wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103 for information.

Required Credits — 33-42 semester 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 504 Transition Planning and Service Delivery for Students with Special Needs	3
Special Education Moderate Needs	
EDSE 601 Supporting Special Needs 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
Graduate Study	
EPRE 600 Introduction to Graduate Research	3
Practicum with Students with Moderate Needs	
EDSE 603 Practicum with Moderately Handicapped Students	3-12

Elective Credits — 4 semester hours

EDRD 617 Evaluation and Improvement of Reading and Related Abilities	4
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Notes

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

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

Master of Arts in Special Education Emphasis in Profound Needs

Program Requirements
Complete the required credits specified here.....39-48

Admission
In addition to meeting the admission requirements of the Graduate School, the student must possess a grade average of 3.0 or above on the most recent 60 semester hours of A, B, C, D, F grades, 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 arrange for a personal interview.

This master's program is designed to prepare teachers who will work with profound needs students. Typically, the duration of this program should be two semesters plus a summer session. However, if a student enters the master of arts program in special education without a current teacher licensure, she or he is required to complete course requirements listed under Professional Teacher Education. The program consists of the required additional (separate) admission requirements and courses and practicum requirements agreed upon by the student and advisor.

Required Credits — 39-48 semester hours

Special Education Core

- EDSE 500 Field of Special Education3
- EDSE 501 The Exceptional Learner3
- EDSE 502 Communication, Collaboration and Consultation for Special Educators3
- EDSE 503 Effective School Environments for Learners with Exceptional Needs3
- EDSE 504 Transition Planning and Service Delivery for Students with Special Needs.....3

Profound Needs

- EDSE 520 Survey of Learners with Profound Needs3
- EDSE 521 Assessment of Learners with Profound Needs3

- EDSE 522 Methods of Teaching Learners with Profound Needs, Birth to 8 Years3
- EDSE 523 Methods of Teaching Learners with Profound Needs, 9 to Adult ..3
- EDSE 524 Seminar in Education of Learners with Profound Needs3
- EDSE 525 Research and Policy for Learners with Profound Needs.....3

Graduate Study

- EPRE 600 Introduction to Graduate Research3

Practicum

- EDSE 526 Practicum with the Severely/Profoundly Handicapped3-12

Notes
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 students with profound needs. The multiple criteria approach does not assume that each of these factors carry equal weights; any one factor might well outweigh all others.

A master's degree or a department approved licensure program is required before the University of Northern Colorado will recommend the student for endorsement in Teacher III Profound Needs. Students who seek a Colorado endorsement in the Special Education Teacher III Profound Needs Program or request an institutional recommendation for licensure from UNC must meet Colorado licensure requirements. 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.

Master of Arts in Special Education Emphasis in Severe Needs: Affective

Program Requirements
Complete the required credits specified here.....36-45

Admission
In addition to meeting the admission requirements of the Graduate School, the student must possess a grade average of 3.0 or above on the most recent 60 semester hours of A, B, C, D, F grades, 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.

This master's program is designed to prepare teachers who will work with students with affective needs. Typically, the duration of this program should be two semesters plus a summer session. However, 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. The program consists of the required courses and practicum requirements agreed upon by the student and advisor.

Required Credits — 36-45 semester hours

Special Education Core

- EDSE 500 Field of Special Education3
- EDSE 501 The Exceptional Learner3
- EDSE 502 Communication, Collaboration and Consultation for Special Educators.....3
- EDSE 503 Effective School Environments for Learners with Exceptional Needs3
- EDSE 504 Transition Planning and Service Delivery for Students with Special Needs.....3

Affective Needs

- EDSE 602 Behavioral Disorders: Characteristics, Identification and Intervention3
- EDSE 606 Instructional Methods for Students with Special Needs.....3
- EDSE 608 Case Studies with Students with Special Needs3
- EDSE 610 Interventions for Students with Severe Affective Needs3
- EDSE 611 Seminar in Severe Affective Needs3

Graduate Study

- EPRE 600 Introduction to Graduate Research3

Practicum

- EDSE 612 Practicum with Students with Severe Affective Needs, Ages 5-21.....3-12

Notes
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 behaviorally disordered students. The multiple criteria approach does not assume that each of these factors carry equal weights; any one factor might well outweigh all others.

A master's degree or a department approved licensure program is required before the University of Northern Colorado will recommend the student for endorsement in Teacher II Severe Needs: Affective. Students who seek a Colorado endorsement in the Special Education Teacher II Severe Needs: Affective Program or request an institutional recommendation for licensure from UNC must meet Colorado licensure requirements. 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.

Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103 for information.

Master of Arts in Special Education

Emphasis in Severe Needs: Cognitive

Program Requirements
 Complete the required credits specified here.....39-45

Admission
 In addition to meeting the admission requirements of the Graduate School, the student must possess a grade average of 3.0 or above on the most recent 60 semester hours of A, B, C, D, F grades, 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.

This master's program is designed to prepare teachers who will work with students with cognitive needs. Typically, the duration of this program should be two semesters plus a summer session. However, 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. The program consists of the required courses and practicum requirements agreed upon by the student and advisor.

Required Credits — 39-45 semester 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 Learner with Exceptional Needs	3
EDSE 504 Transition Planning and Service Delivery for Students with Special Needs.....	3

Cognitive Needs

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

Graduate Study

EPRE 600 Introduction to Graduate Research	3
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Practicum (6 hours minimum required)

EDSE 623 Practicum with Severe Cognitive Needs, Ages 5-21	3-12
EDSE 624 Practicum with Severe Cognitive Needs, Ages 5-12	3-12
EDSE 625 Practicum with Severe Cognitive Needs, Ages 13-21	3-12

Notes
 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 mentally retarded students. The multiple criteria approach does not assume that each of these factors carry equal weights; any one factor might well outweigh all others.

A master's degree or a department approved licensure program is required before the University of Northern Colorado will recommend the student for endorsement in Teacher II Severe Needs: Cognitive. Students who seek a Colorado endorsement in the Special Education Teacher II Severe Needs: Cognitive Program or request an institutional recommendation for licensure from UNC must meet Colorado licensure requirements. 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.

Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103 for information.

Master of Arts in Special Education

Emphasis in Severe Needs: Communication

Program Requirements

Complete the required credits specified here.....39-45

Admission

In addition to meeting the admission requirements of the Graduate School, the student must possess a grade average of 3.0 or above on the most recent 60 semester hours of A, B, C, D, F grades, provide a minimum of two letters of recommendation from previous employers or academic professors, provide a statement of philosophy and professional goals in relation to the needs in the field and, if possible, arrange for a personal interview.

This master's program is designed to prepare teachers who will work with students with communication needs. Typically, the duration of this program should be two semesters plus a summer session. However, 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. The program consists of the required courses and practicum requirements agreed upon by the student and advisor.

Required Credits — 39-45 semester 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 504 Transition Planning and Service Delivery for Students with Special Needs.....	3

Communication Needs

CMDS 683 Advanced Topics in Language Disorders.....	3
EDSE 606 Instructional Methods for Student 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 630 Seminar in Severe Needs Communication.....	3

Graduate Study

EPRE 600 Introduction to Graduate Research	3
<i>Practicum (6 hours minimum required)</i>	
EDSE 631 Practicum with Severe Communication Needs, Ages 5-21.....	3-12
EDSE 632 Practicum with Learning Disabled Students, Ages 5-12	1-12
EDSE 633 Practicum with Learning Disabled Students, Ages 13-21	1-12

Notes

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 learning disabled students. The multiple criteria approach does not assume that each of these factors carry equal weights; any one factor might well outweigh all others.

A master's degree or a department approved licensure program is required before the University of Northern Colorado will recommend the student for endorsement in Teacher II Severe Needs: Communication. Students who seek a Colorado endorsement in the Special Education Teacher II Severe Needs: Communication Program or request an institutional recommendation for licensure from UNC must meet Colorado licensure requirements. 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.

Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the School for the Study of Teaching & Teacher Education: Office of Professional Services in McKee 103 for information.

Master of Arts in Special Education

Emphasis in Severe Needs: Hearing

Program Requirements	
Complete the prerequisite credits specified here	14
Complete the required credits specified here	47-56

Admission

In addition to meeting the admission requirements of the Graduate School, the student must complete the following and submit them to the Director of Special Education at the time of application to the Graduate School: 1) a letter of intent stating future goals as a teacher of the hearing impaired; and 2) two letters of recommendation from faculty in major area of study in undergraduate program. In addition, a personal interview must be scheduled.

This program is designed to prepare teachers who will work with children with hearing impairments. Typically, the duration of this program should be four semesters. However, if a student enters the master of arts program in special education without a teacher licensure, he or she is required to complete additional (separate) admission requirements and course requirements listed under the Professional Teacher Education and additional courses addressing competencies in the scope and sequence of regular education curriculum and methodology. (EDEL 612: The Elementary School Curriculum—3 credit hours; EDEL 620: Researched Applications for Instruction in Mathematics K-9—3 credit hours; EDRD 612: Reading in the Elementary School—3 credit hours). Students not endorsed in Elementary Education and/or Early program consists of the required courses and practicum requirements agreed upon by the student and advisor. This program meets the standards of the Colorado State Department of Education and the Council on Education of the Deaf.

Prerequisites — 14 semester hours

CMDS 266 Normal Speech and Language Development	3
CMDS 370 Basic Audiology	4
EDSE 450 Introduction to Hearing Impaired	3
EDSE 451 Basic Sign Language.....	4

Required Credits — 47-56 semester 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 504 Transition Planning and Service Delivery for Students with Special Needs.....	3

Severe Needs: Hearing

EDSE 551 American Sign Language	4
EDSE 552 Advanced Sign Language.....	4
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
EDSE 659 Seminar in Education of the Hearing Impaired.....	3
Graduate Study	
EPRE 600 Introduction to Graduate Research	3
Practicum	
EDSE 657 Practicum, Severe Needs: Hearing	6-12

Notes

Retention/Exit Requirements: 1) maintain a 3.0 GPA for retention in the UNC Graduate School and the Severe Needs: Hearing Program; 2) satisfactorily complete the written comprehensive examination; 3) 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.

A master's degree or a department approved licensure program is required before the University of Northern Colorado will recommend the student for endorsement in Teacher II Severe Needs: Hearing. Students who seek a Colorado endorsement in the Special Education Teacher II Severe Needs: Hearing Program or request an institutional recommendation for licensure from UNC must meet Colorado licensure requirements. 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.

Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103 for information.

Master of Arts in Special Education

Emphasis in Severe Needs: Vision

Program Requirements

Complete the required credits specified here.....47-62

Admission

In addition to meeting the admission requirements of the Graduate School, the student must possess a grade average of 3.0 or above on the most recent 60 semester hours of A, B, C, D, F grades, 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.

This master's program is designed to prepare teachers who will work with visually handicapped students. Typically, the duration of this program should be three semesters. However, 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. 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 VH, students may complete licensure and degree requirements in a minimum of 47 semester hours if they desire endorsement in education of visually handicapped only. A total of 62 semester hours are required to complete requirements in both visually handicapped and orientation and mobility if no prior coursework in VH has been completed. It is preferable for students to enroll fall semester.

Required Credits — 47-62 semester 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 504 Transition Planning and Service Delivery for Students with Special Needs.....	3

Severe Needs: Vision

EDEL 612 Elementary School Curriculum	3
EDSE 540 Independent Living for Individuals with Visual Handicaps	1-2
EDSE 542 Assessment and Methods for Teaching Students with Visual/Multiple Disabilities	3
EDSE 543 Braille Codes and Formats	1-3
EDSE 544 Technology for Students with Visual Handicaps.....	2
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

Graduate Study

EPRE 600 Introduction to Graduate Research	3
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Practicum

EDSE 644 Practicum in Education of Students with Visual Handicaps, K-12	2-12
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Association for Education and Rehabilitation of Blind and Visually

Impaired (AERBVI) Licensure: Orientation and Mobility	4
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EDSE 547 Independence in Orientation and Mobility	4
EDSE 647 Applied Methods in Orientation and Mobility	2
EDSE 648 Practicum in Orientation and Mobility.....	9

Note that 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.

Association for Education and Rehabilitation of Blind and Visually Impaired (AERBVI) Licensure: Rehabilitative Teaching

EDSE 549 Rehabilitative Teaching of the Visually Handicapped	3
EDSE 646 Practicum in Rehabilitative Teaching of Individuals with Visual Handicaps, K-12.....	6-12

Note that students earning licensure in rehabilitative teaching through AERBVI must complete the above program with faculty consent. This can be combined with Orientation and Mobility.

Notes

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 visually handicapped students. The multiple criteria approach does not assume that each of these factors carry equal weights; any one factor might well outweigh all others.

A master's degree or a department approved licensure program is required before the University of Northern Colorado will recommend the student for endorsement in Teacher II Severe Needs: Vision. Students who seek a Colorado endorsement in the Special Education Teacher II Severe Needs: Vision Program or request an institutional recommendation for licensure from UNC must meet Colorado licensure requirements. 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.

Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103 for information.

Master of Arts in Special Education Emphasis in Teaching the Gifted and Talented

Program Requirements

Complete the required credits specified here.....38-44
Complete the program elective credits specified here3-12

In addition to meeting the admission requirements of the Graduate School, the student must possess a current teaching certificate, must have at least two years teaching experience and must have a grade point average of 3.0 on the last 60 semester hours of instruction. 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.

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. Typically, the duration of this program should be two semesters plus a summer session for participation in the Summer Enrichment Program. The program consists of the required courses and practicum requirements agreed upon by the student and advisor.

Required Credits — 38-44 semester 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

Gifted and Talented Program Courses

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 586 Trends, Issues and Thinking Skills in Gifted Education.....	2
PPSY 627 Counseling Interventions and Techniques for Talented and Gifted Students.....	3

Graduate School Requirements

EPRE 600 Introduction to Graduate Research	3
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Practicum

EDSE 584 Practicum in Teaching the Gifted and Talented.....	6-12
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Note that a minimum of 6 hours are required during the Summer Enrichment Program. The maximum for the M.A. program is 12 hours.

Elective Credits — 3-12 semester hours

Electives will be selected with the approval of the major advisor.

Notes

In addition to admission to the program and satisfactory completion of all coursework, each student must pass a written comprehensive examination as well as an oral examination before she or he is allowed to graduate.

Doctor of Education in Special Education

Program Requirements

Complete the required credits specified here.....76
 Complete elective credits specified here9

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.

Admission

In addition to meeting the admission requirements of the Graduate School, the student must receive a positive recommendation by the Division of Special Education 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 of Special Education for evaluation. The Division requires submission of 1) a resume, 2) a written statement of academic and professional goals, 3) three letters of recommendation and 4) a published or professional writing sample. A personal interview with members of the faculty is also required.

The Committee reviews each application for admission to determine evidence of 1) potential for scholarship, 2) relevant formal training at the undergraduate and/or graduate level, 3) evidence of successful teaching or clinical experience with persons who have exceptionalities for a minimum of two years, 4) potential for leadership, 5) professional commitment, 6) clarity and rationality of professional and personal goals, 7) potential for effective teaching and 8) 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, he or she 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 population. 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 Special 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.

Required Credits — 76 semester hours

Note that students will be required to demonstrate literacy and competency in computer applications as part of the program.

Doctoral Core Courses — 26 semester hours

EDSE 720 Professional Development.....	1
EDSE 722 Theoretical Foundations of Special Education I.....	3
EDSE 722 Theoretical Foundations of Special Education II.....	3
EDSE 723 Seminar in Facilitating Personal and Professional Development in Special Education I.....	3
EDSE 724 Seminar in Facilitating Personal and Professional Development in Special Education II.....	3
EDSE 725 Professional Readings in Special Education.....	4
EDSE 726 Seminar in Low Prevalence Exceptionalities.....	3
EDSE 727 Seminar in High Prevalence Exceptionalities.....	3
EDSE 728 Seminar in Professional Writing.....	3

Apprenticeships — 12 semester hours

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.

EDSE 729 Apprenticeship in Special Education.....	12
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Externships — 4 semester hours (minimum)

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.

EDSE 730 Externship in Special Education.....	4
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Topical Seminars — 9 semester hours (minimum)

Topical seminars are offered as three hour courses. A minimum of three topical seminars are required.

EDSE 731 Topical Seminar in Special Education.....	9
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Methods of Inquiry Courses — 9 semester hours

EPRE 602 Elements of Statistics.....	3
EPRE 603 Analysis of Variance.....	3
EPRE 700 Advanced Research Methods.....	3

Doctoral Proposal and Dissertation — 16 semester hours

EDSE 797 Doctoral Proposal Research.....	4
EDSE 799 Doctoral Dissertation.....	12

Elective Credits — 9 semester hours (minimum)

Students are to select 9 semester hours of courses from outside of the Division of Special 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: Vocational preparation of children and youth with exceptionalities; education of preschool children with exceptionalities; emphasis in one of the categorical areas of special education (acoustically handicapped, autism, learning disabilities, emotionally disturbed, gifted, mental retardation, visually handicapped, etc.); education of minority, ethnic and cultural groups, curriculum development, appraisal/interpretational/pupil program prescription; programming and management; special education administration; university teaching; research; other areas as designed by the student and his or her advisor.

Notes

Candidates for the doctorate at the University of Northern Colorado must meet all requirements of the Graduate School. It is the responsibility of the student to make certain that these requirements are met, in addition to specific requirements outlined in the preceding sections.

The student is expected to engage in knowledge generating processes from the first semester of residency under the direction of a research advisor within the Division of Special Education. This work is expected to continue throughout the program and to culminate in scholarly productions such as publications and professional presentations.

Licensure Programs in Review

Due to a major review and revision process, students making application to the following licensure programs are requested to contact the School for the Study of Teaching and Teacher Education, Office of Professional Services, McKee 103 to obtain detailed information concerning the structure and requirements leading to Colorado initial teacher licensure.

- Arts, Music, Physical Education
- Elementary Education
- Middle Level Education
- Post-Baccalaureate — Middle Level Education
- Secondary Education
- Special Education K-12

Post-Baccalaureate Licensure in Early Childhood Education

Program Requirements
Complete the required credits specified here.....18-22

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 Certificate, 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 — 18-22 semester hours
 EDRD 519 Reading/Writing Development of Preschool/Primary Children2
 or
 EDEC 648 Psycholinguistics in Early Childhood.....3

EDEC 539 Parent Education and Involvement in Early Childhood/Primary.....3
 EDEC 660 Critical Issues in Early Childhood and Primary Education3
 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 in Early Childhood1-4

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 a 3.00 GPA on last 100 quarter hours/66 semester hours for full admission to this program. Applicants with a GPA between 2.75 and 3.00 may be admitted by the Division on a probationary basis. Applicants under probation must attain a 3.00 GPA on the first 12 semester hours completed in this program.

Post Master's Licensure Program in Special Education Administration

Program Requirements

Complete the required credits specified here.....35-45

Admission

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 — 35-45 semester 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
<i>Special Education Administration</i>	
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 730 Externship in Special Education Administration	1-12
EDSE 718 Advanced Seminar in Education of Students with Hearing and/or Visual Handicaps	3
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 School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103 for information.

Licensure in Reading

Reading Teacher Endorsements

Endorsement Requirements

Elementary (K-6)32
Secondary (7-12).....32

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.

To be successfully endorsed as Reading Teacher (Elementary or Secondary), an applicant must meet the following requirements:

- Have three letters of recommendation and evaluation by the School for the Study of Teaching and Teacher Education.
- 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.
- Have successfully completed an approved 5th year graduate program in an accepted institution of higher education.
- Have completed the following course requirements with a letter grade of "B" or better.

Elementary Reading Teacher Endorsement Course Requirements

EDRD 612 Reading in the Elementary School3
 EDRD 614 Literature for Children, Adolescents and Young Adults3
 EDRD 617 Evaluation and Improvement of Reading and Related Abilities4
 EDRD 645 Reading/Literacy Research3
 EDRD 692 Clinical Practicum and Internship: Elementary4
 EDEL 619 Pluralism in Education3
 *One elective course in reading (see advising sheet)3
 **Three elective courses outside of reading in a least one supporting area9

**EDRD 670, Directing A School Wide Reading/Writing Program (3) or EDRD 642, Teaching the Writing Process in School (3) are the recommended courses for an elective.*

***Elective courses outside of reading must be approved by the advisor from the following areas: Tests and Measurements, Special Education, Child and Adolescent Development, Speech and Hearing, Guidance and Counseling, Language Development, Curriculum, Multicultural/Multilingual, Writing/English.*

Secondary Reading Teacher Endorsement Course Requirements

EDRD 614 Literature for Children, Adolescents and Young Adults3
 EDRD 617 Evaluation and Improvement of Reading and Related Abilities4
 EDRD 620 Reading in the Middle and Secondary School.....3
 EDRD 621 Critical Reading and Thinking in Content Subjects3
 EDRD 645 Reading/Literacy Research3
 EDRD 692 Clinical Practicum and Internship: Secondary.....4
 EDEL 619 Pluralism in Education3
 *Three elective courses outside of reading in at least one supporting area.....9

**Elective courses outside of reading must be approved by the student's advisor. Courses may be elected from the following areas: Tests and Measurements, Special Education, Child and Adolescent Development, Speech and Hearing, Guidance and Counseling, Language Development, Curriculum, Multicultural/Multilingual, Writing/English.*

Notes

EDRD 670, Directing A School Wide Reading/Writing Program (3) and EDRD 642, Teaching the Writing Process in Schools (3) are also highly recommended course electives.

Applicants must have a 3.00 GPA on the last 100 quarter/66 semester hours for full admission to this program. Applicants with a GPA between 2.75 and 3.00 may be admitted by the School on a probationary basis. Applicants admitted under probation must attain a 3.00 GPA on the first 12 semester hours completed in the program.

Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103 for information.

Licensure in Reading Reading Specialist Endorsement

Reading Specialist Endorsement Requirements18-27

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.

To be successfully endorsed as Reading Specialist, an applicant must meet the following requirements:

- Have three letters of recommendation and evaluation by the School for the Study of Teaching and Teacher Education.
- Have successfully completed an approved 6th year graduate program of studies in reading in an accepted institution of higher education (may be an endorsement program).
- Graduate studies in the teaching of reading to qualify for a K-12 Reading Teacher Endorsement. (An elementary or secondary Reading Teacher shall have completed preparation in reading at the level alternate to the initial reading endorsement.)
- Have completed the following course requirements with a letter grade of "B" or better.

Reading Specialist Endorsement Course Requirements

EDRD 671 Directing a District-Wide Reading/Writing Program	3
EDRD 701 Advanced Practicum in Literacy (must be related to reading specialist's school position)	3
or	
EDRD 694 Reading Center Internship: Adult Reading, Literacy and/or Supervision (must be related to supervision)	3

EDRD 712 Psychology of Reading	3
EDRD 717 Advanced Diagnostic/Instructional Problems in Literacy Development	3
EPRE 600 Introduction to Graduate Research (or equivalent)	3
<i>At least one of the following:</i>	
EPRE 602 Elements of Statistics	3
EPRE 603 Analysis of Variance	3
EPRE 610 Statistical Packages for Educational Research	3
EPRE 680 Qualitative Research Methods	3
EPRE 670 Evaluation: Models and Designs	3
EPRE 671 Evaluation: Advanced Methods	3

Notes

EDRD 750, The Contributing Professional in Reading (3) is highly recommended for Reading Specialist Endorsement.

Applicants must have a 3.00 GPA on the last 100 quarter/66 semester hours for full admission to this program. Applicants with a GPA between 2.75 and 3.00 may be admitted by the School on a probationary basis. Applicants admitted under probation must attain a 3.00 GPA on the first 12 semester hours completed in the program.

Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103 for information.

Licensure Program in Special Education Emphasis in Teaching Students with Profound Needs

Program Requirements

Required Special Education credits	27
Required Liberal Arts major with minimum credits..... (recommended by advisor)	39
General Education	40
PTE program	37-39
Total credits required for this degree	149-157

This program is designed for students who seek teaching licensure in Special Education: Teaching the Severely/Profoundly Handicapped in addition to their Liberal Arts major.

Its second goal is to prepare for an advanced degree in Special Education. The program fosters the educational professionalism and teaching components that are essential to the education of the severely/profoundly handicapped in school and community.

Required Special Education Credits — 33-39 semester hours

EDSE 300 Foundations and Communication in Special Education	3
EDSE 301 Development and Learning in Exceptional Students	3
EDSE 302 Educational Intervention for Meeting the Needs of Exceptional Individuals	3
EDSE 303 Assessment of Exceptional Individuals	3
EDSE 400 Introduction to Students with Profound Needs	3
EDSE 401 Parents of Children with Profound Needs	3
EDSE 402 Assessment of Students with Profound Needs	3
EDSE 403 Methods of Teaching Students with Profound Needs, Birth-8	3
EDSE 404 Methods of Teaching the Severely/Profoundly Handicapped 9-Adulthood	3

Note that students not already in possession of a Colorado teaching certificate must complete 12 semester hours of EDPE 444, Supervised Teaching. Holders of current Colorado teaching licenses seeking a second endorsement in Profound Needs may petition for a reduction in the number of credits of supervised teaching based on education and experience. In no case will the number of credits of supervised teaching in Profound Needs be reduced to less than 6.

School Library Media Endorsement

K-12 School Library Media Endorsement33
K-6 School Library Media Endorsement30
7-12 School Library Media Endorsement30

School Library Media Endorsement is available at three levels: K-12, K-6 and 7-12.

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 or teaching license (or equivalent) teaching certificate;
- 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 (non-degree) program in Educational Media in an accepted institution of higher education including field experience appropriate for the level of endorsement.

The University of Northern Colorado 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 University of Northern Colorado Licensure Officer. Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103 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 Endorsement Course Requirements

ET 502 Instructional Development3
 ET 503 Computer Based Education3
 ET 504 Instructional Materials Design3
 ET 530 Media Cataloging and Classification3
 ET 533 Reference and Information Management3
 ET 535 Administration of Instructional Resources3
 ET 536 Media Selection, Utilization and Evaluation3
 EPRE 600 Introduction to Graduate Research3
 EDRD 614 Children's and Adolescent Literature3
 EDFE 610 Field Experience (K-6).....3
 (required for K-6, K-12 endorsement)
 EDFE 610 Field Experience (7-12).....3
 (required for 7-12, K-12 endorsement)

Administrators' Licensure (Non-Degree)

This program of study satisfies requirements for the Administrators' License in the State of Colorado. It is a post-masters program, but many of the requirements may be satisfied by study for the Ed.S. in Educational Leadership or equivalent prior graduate study. In addition to completing a master's degree and a planned program of study in educational administration, a candidate must successfully pass the appropriate examination for licensure.

Admission

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 education issue and a Professional Assessment Form. Admission decisions are made throughout the year.

Required Courses

This program of study expands upon the foundation gained in study for the Master's Degree. It provides opportunities for candidates to acquire knowledge about the role of the superintendent and skills which relate to the day-to-day demands of central office administrative positions. This licensure program may be completed in conjunction with an advanced graduate degree (Ed.S. or Ed.D.).

Entering students who already possess a Master's Degree in Educational Leadership or a Principals' License need a minimum of 39 semester hours of graduate study. The Administrators' Licensure program requires completion of the core learning experience in educational leadership (ELPS 601, ELPS 602, ELPS 603, ELPS 604 and ELPS 605), either as part of the Master's Degree, Principals' Licensure Program, or as prerequisite for the Administrators' License.

Principals' Licensure (Non-Degree)

This program of study satisfies requirements for the Principals' License in the state of Colorado. It is a post-masters program, but many of the requirements may be satisfied by study for the M.A. in Educational Leadership or equivalent prior graduate study. In addition to completing a master's degree and a planned program of study in educational leadership, a candidate must successfully pass the appropriate examination for licensure.

Admission

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 a Professional Assessment Form. Admission decisions are made throughout the year.

Required Credits

*ELPS 601 Understanding Self: Developing a Personal Vision for Educational Leadership	3
*ELPS 602 Using Inquiry: Framing Problems and Making Decisions for Educational Leadership	3
*ELPS 603 Shaping Organizations: Management and Leadership in Education	5
*ELPS 604 Understanding People: Professional Development and Educational Leadership	5
*ELPS 605 Understanding Environments: Social, Political, Economic and Legal Influences in Educational Leadership	5
**ELPS 606 Internship in Educational Leadership	1-9
ELPS 607 Staff Evaluation Training.....	2
ELPS 670 The Principalship: Leadership at the Individual School Site Level.....	3
*Courses required in the M.A. in Educational Leadership	
**Minimum of 3 semester hours required for UNC endorsement	

The program has five major categories. Each category has a minimum required number of semester hours, including the courses listed:

<i>Superintendents' Core — 12 semester hours, including:</i>	
ELPS 675 The Superintendency: Leadership at the District Level.....	3
ELPS 685 Organization and Administrative Theory	3
<i>Administrative Functions — 12 semester hours, including:</i>	
ELPS 660 Law and the Administrator	3
ELPS 650 School Finance and Budgeting	3
or	
ELPS 651 School Business Management	3
<i>Instructional Leadership — 6 semester hours, including:</i>	
ELPS 654 Instructional Leadership	3
<i>Research — 3 semester hours</i>	
<i>Field Experience — 6 semester hours, including:</i>	
ELPS 606 Internship in Educational Leadership.....	3

Notes

Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103 for information.

Elective Credits

Students must complete a total of 45 graduate hours, including at least four elective courses (minimum of 12 semester hours, taken within the last five years) which deal with topics of particular relevance to the personal, professional and academic goals of the individual student. Courses taken as part of a master's degree in a field outside of Educational Leadership may be used to fulfill this requirement, provided that they have been completed within the past five years, are relevant to the goals of the student, and conform to all other restrictions identified by the Graduate School.

Notes

This program may be completed in conjunction with an advanced graduate degree (M.A. or Ed.S.).

Students must participate in a portfolio presentation and review after the completion of the ELPS 601, ELPS 602, ELPS 603, ELPS 604 and ELPS 605 sequence. The feedback from this review by faculty and practitioners should be used in the selection of elective learning experiences and in the initial development of a professional portfolio.

Students must have completed a master's degree before receiving an endorsement for licensure.

Students wishing to obtain Colorado licensure in this area are required to pass proficiency examination(s). Students should contact the School for the Study of Teaching and Teacher Education: Office of Professional Services in McKee 103 for information.

Minor in Early Childhood**Total credits required for this minor.....18****Required Credits — 18 semester hours**

EDEC 233 The Child Within the Family.....	3
EDEC 333 Development and Guidance of Young Children (with lab)	3
EDEC 439 Parent/Child/Teacher Relationships.....	3
EDEC 460 Primary Curriculum and Methods	3
EDEC 462 Classroom Management in Early Childhood	3
EDEC 463 Diagnostic Teaching in Early Childhood.....	3
<i>Child Care Center Director</i>	
EDEC 231 Development of Infants and Toddlers (with lab)	3
EDEC 334 Preschool/Kindergarten Curriculum and Methods	3
EDEC 437 Administration of Programs for Young Children.....	3
FND 250 Human 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.

Minor in Reading**Total credits required for this minor.....20****Required Credits — 3-9 semester hours**

*EDRD 410 Achieving Effective Instruction in Developmental Reading	3
*EDRD 411 Reading Diagnosis and Individualization	3
*EDRD 414 Literature for Children, Adolescents and Young Adults.....	3
**EDRD 423 Reading and Writing in the Content Area	2

*Elementary Licensure

**Secondary Education Licensure.

Elective Credits — 11-17 hours

In addition to above, select courses from below to total 20 semester hours:

EDRD 308 Reading Workshop.....	1-10
EDRD 401 Reading Practicum.....	1-3
EDRD 414 Literature for Children, Adolescents and Young Adults	3
EDRD 415 Current Trends and Issues in Reading/Language Education	3
EDRD 419 Reading and Writing Development of Preschool/Primary Children.....	2

Note that elective courses are to be chosen in consultation with advisor.

Minor in Special Education**Total credits required for this minor.....18**

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. A second goal is to prepare students for an advanced degree in Special Education. The minor meets the core requirements for special education endorsements in Colorado. Additional requirements in other special education programs must be met before students with a minor are eligible for special education endorsement.

Required Credits — 12 semester hours**Special Education Core**

EDSE 300 Foundations and Communication in Special Education.....	3
EDSE 301 Development and Learning in Exceptional Students	3
EDSE 302 Educational Interventions for Meeting the Needs of Exceptional Individuals	3
EDSE 303 Assessment of Exceptional Individuals	3

Required Elective Credits — 6 semester hours (minimum)

EDSE 400 The Severely/Profoundly Handicapped	3
EDSE 350 Structure of Language.....	3
EDSE 380 Introduction to Education of the Gifted and Talented.....	3
EDSE 440 Introduction to the Education of the Visually Handicapped	3
EDSE 450 Introduction to Hearing Impaired	3
EDSE 451 Basic Sign Language.....	4

Programs of Study

College of Health and Human Sciences

Communication Disorders:

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Location: McKee 22; Telephone: 970-351-2877
Vincent A. Scalla, Dean; Donna Bottenberg, Associate Dean

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, Coaching, Fitness and Exercise, Physical Education, Recreation, Audiology, Speech-Language Pathology, Dietetics, Gerontology, Nursing, Public Health, Human Rehabilitative Services, Rehabilitation Counseling and Vocational Evaluation. 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: The Department of Communication Disorders, the Department of Community Health and Nutrition, the Department of Human Services, The School of Kinesiology and Physical Education and the 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.

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.

Faculty and students in the Community Health Clinic plan and provide comprehensive health education and health promotion programs for individuals, groups and agencies in the region. This clinic also provides Health Risk Appraisal Services. The Dietetics Program conducts research and offers nutritional assessment and counseling in its clinic area.

The Human 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 Clinic 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.

English Essay Exam

Every student must pass the English Essay Examination at the University of Northern Colorado to graduate. The requirement may not be challenged or waived. This examination must be passed at least one semester before the semester the student graduates. The scheduled examination may be taken at any point, but students are expected to take it before the end of the first semester of their junior year. The examination is evaluated on a satisfactory/unsatisfactory basis and may be retaken any number of times. There is a fee to retake the examination. Additional information can be obtained from the English Department, Michener L50, phone 970-351-1576.

Department of Communication Disorders

Audiology

Speech-Language Pathology

Location: McKee 27; Telephone: 970-351-2734
R. Steven Ackley, Chair

Professors — R. Steven Ackley, PhD; Donna J. Bottenberg, PhD; Francis A. Griffith, PhD;

Associate professors — John Baumgartner, PhD; Kathryn Bright, PhD; Ellen Meyer Gregg, PhD; Dennis R. Ingrisano, PhD

Assistant professors — Linda Cleeland, MA, MEd; Kathleen Fahey, PhD

Instructors — Julie Hanks, MA; Linda Jelden, MA

Research associate — H. Gustav Mueller, PhD

Clinical staff — Laurie Kastner-Wells, MS; Jenny Weber, MA

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 Clinic. 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 Clinic and various other centers and programs on- and off-campus.

The educational programs offered through this department are as follows:

Audiology — 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 master's degree program. The certifying master's 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.
- Auditory Electrophysiology 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 Clinic and ancillary clinics in Colorado. The program is accredited for audiological services through the Professional Services Board (PSB) of the Boards of Examiners in Speech-Language Pathology and Audiology (BESPA) of the American Speech-Language-Hearing Association (ASHA). The M.A. Audiology program leading to certification is accredited by the Colorado Department of Education (CDE) and by the Educational Standards Board (ESB) of the BESPA.

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.

Speech-Language Pathology — This program prepares students in the diagnosis and treatment of speech and language disorders.

UNC offers an undergraduate pre-professional major and a professional certifying master's degree program and a master's degree program that does not lead to certification. The master's degree program that leads to certification is accredited by the CDE and by the ESB (BESPA).

Areas emphasized include the diagnosis and treatment of articulation, voice, fluency, dysphagia, neurogenics and language disorders in persons ranging in age from young children through older adults.

The certifying master's degree program offers extensive supervised clinical experiences through the UNC Speech-Language Pathology and Audiology Clinic. The speech-language pathology services of this clinic are accredited by the Professional Services Board of the BESPA. The graduate degree program is accredited by the Colorado Department of Education, for persons who plan to work in the schools and by the Educational Standards Board of the BESPA.

Career opportunities include positions in schools; hospitals; ear, nose and throat medical practices; rehabilitation centers; and private practice.

Department of Community Health and Nutrition

Public Health Program

Food, Nutrition and Dietetics Program

Location: Michener L136; Telephone: 970-351-2755
Larry R. Harrison, Chair

Community Health

Professors — Bryan E.M. Cooke, PhD, MPH, CHES; William G. Parkos, PhD; James Robinson, III, EdD

Associate professor — Kathleen Zavela, PhD, MPH, CHES

Assistant professor — Larry R. Harrison, MS

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:

- Bachelor of Science: Community Health Education
- Minor in Community Health Education
- Minor in School Health Education
- Master of Public Health

Students in these programs are prepared to work with people in all ages — helping them prevent disease and developing positive healthy lifestyles.

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, the College of Health and Human Services Clinic provides students with opportunities to practice health education skills as part of regular classroom activities.

The Bachelor of Science program is the only one of its kind in the western United States approved by the Society of Public Health Education and 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, smoking cessation programs, employee fitness seminars, adolescent health programs, child abuse prevention and wellness programs for the elderly.

Dietetics

Administered by the Department of Community Health and Nutrition
Location: Michener L136; Telephone: 970-351-2755
Larry R. Harrison, Chair; Sherrie Frye; Program Coordinator

Associate professor — Sherrie Frye, PhD, RD

Assistant professor — Bruce Rengers, PhD, RD

The Dietetics major offers a wide range of studies applicable to community, clinical, private practice and management aspects of nutrition in health care.

To complete the professional preparation, graduates must complete a dietetic internship or an approved pre-professional practice program (AP4) before taking the registered dietitian examination.

Dietetic graduates are prepared for career opportunities in nutrition, dietetics, education, management and research.

Department of Human Services

Gerontology

Human Rehabilitative Services

Recreation

Location: McKee Hall 41; Telephone: 970-351-2403
Dennis A. Gay, Chair

Gerontology

Administered by the Department of Human Services
Karen A. Roberto, Coordinator

Professor — Priscilla J. Kimboko, PhD; Karen Roberto, PhD

Associate professor — Robbyn R. Wacker, PhD

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: Bachelor of Science in Gerontology; Minor in Gerontology; Master of Arts in Gerontology with emphases in Management/Administration, Direct Services or General Studies; and a Graduate Certificate in Gerontology.

Human Rehabilitative Services

Administered by the Department of Human Services
Location: McKee Hall 41; Telephone: 970-351-2403
Dennis A. Gay, Chair

Professors — Dennis A. Gay, PhD; Vincent A. Scalia, EdD; Richard R. Wolfe, PhD

Associate professors — Juliet H. Fried, EdD; Raymond E. Nelson, PhD; Joseph N. Ososkie, PhD

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 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 programs:

- *Region VIII Rehabilitation Continuing Education Program*

- *Rehabilitative Services Clinic*

Juliet H. Fried, EdD, Executive Director; Roger Grimm, MA, Vocational Evaluator

Recreation

Administered by the Department of Human Services
Location: McKee Hall 41; Telephone: 970-351-2403
N. R. Van Dinter, Coordinator

Professor — Norbert Van Dinter, EdD

Associate professor — Cynthia W. Blanding, PhD

The Recreation Program has been a pioneer in the design and development of professional recreation curricula at the undergraduate and graduate levels since it was established in 1964. The Program has been directly responsible for the professional preparation of more than 1,300 undergraduate and graduate 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, Boy's Club, Campfire, Inc.), universities and city, state and national 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 sponsors a Recreation Majors Club, subscribes to pertinent job bulletins and maintains detailed files on Internship placements available throughout the world. Additionally, the Program co-sponsors a Therapeutic Activities Program where students are provided an opportunity to work with disabled individuals and learn how to put classroom theory into practice. This concept of "learning through doing" is further emphasized through numerous volunteer opportunities and the Internship experience.

The graduate program is unique to the State of Colorado. The curriculum is designed to prepare students as administrators, supervisors and educators in a variety of leisure service agencies. Courses are scheduled to assist commuting, part time and working individuals to complete their degree within a reasonable time frame. Full time students are encouraged to gain practical experience before graduation and with the close proximity of the Denver metropolitan area, opportunities for employment are numerous.

The UNC Recreation program received National Recreation and Park Association/ American Association for Leisure and Recreation accreditation in March of 1990.

School of Kinesiology and Physical Education

Kinesiology Physical Education

Location: Butler-Hancock Hall 223; Telephone: 970-351-1712
David Stotlar, Director

Kinesiology

Administered by the School of Kinesiology and Physical Education
Location: Butler-Hancock Hall 223; Telephone: 970-351-2565

Professor — Catherine G. Ratzin Jackson, PhD

Associate professors — Robert J. Brustad, PhD; Steven P. Hooker, PhD; Daniel Libera, MA; Carole M. Schneider, PhD

Instructor — Shannon Courtney, MA

Kinesiology is the study of human movement with special emphasis on sport, dance and exercise performance. This study provides a foundation for students entering the professions of physical education, dance, coaching, athletic training and fitness and exercise kinesiology. Undergraduate emphasis areas are available in athletic training, fitness and exercise, mechanical and social psychological kinesiology. Courses provide a scientific basis for the study of physical activity, emphasizing theoretical and practical approaches to the improvement of human performance. Each emphasis in the program area provides classroom, laboratory and supervised practical experience.

Graduate programs in kinesiology provide an opportunity to go into greater depth in the study of human movement. Many research opportunities are available in the kinesiology laboratories. Physiological kinesiology facilities are available for the assessment of biochemical and general physiological adaptations to acute and chronic exercise. Emphasis is on the physiological adaptations of the muscular and cardiorespiratory systems to exercise. Mechanical kinesiology facilities include a motion analysis system for three-dimensional data acquisition using high speed 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 psychological kinesiology is primarily conducted with individuals in natural or "field" settings. In addition, laboratory equipment is also available for motor learning and motor control research.

Physical Education

Administered by the School of Kinesiology and Physical Education
Location: Butler-Hancock Hall 223; Telephone: 970-351-2565

Professors — Cynthia Carlisle, EdD; Carolyn Cody, PhD; Allen Phillips, EdD; Jim Stiehl, PhD; David Stotlar, EdD; Zung Vu Tran, PhD

Associate professors — Juan Miguel Fernandez-Balboa, EdD

Assistant professors — Elizabeth Bate, PhD; Scott Hall, EdD; Christy Howard, MS; Kathy Malpass, MS; J. Kevin Taylor, PhD; Marcia Walker, PhD

Instructors — Mike Breske, MA; O. Kay Dalton, MA; Martin English, MA; Terry Hensley, MA; Nancy Hinrichs, MA; Raymond D. Martinez, MS; Jack Maughan, MA; Bobby Rollins, MA

Physical Education offers many majors in physical education. Majors in this field provide students an in-depth understanding of pedagogy, kinesiology and the analysis of sport skills.

The strength of Physical Education programs at UNC is based on a unique emphasis. The undergraduate programs prepare students to create and provide meaningful movement experiences for persons from early childhood through adulthood. The curriculum is comprised of both required and elective courses that provide opportunities for developing expertise in understanding human movement. In all classes, the theory and application of physical activity is explained — both the "whys" and "hows" are examined carefully. Focus is on putting theory into practice to improve human performance and all undergraduate programs provide experiences on the sports fields, in the classrooms and in the laboratories.

Minors in physical education and coaching are offered. The physical education minor is a teaching minor, whereas the minor in coaching is designed to provide skills and theory to students who wish to study coaching in a non-teaching setting.

Graduate programs in Physical Education provide students with an opportunity to go into greater depth in the study of pedagogy, sport administration and coaching. Both theory and professional applications are emphasized.

Many laboratory research opportunities are available within the building used by the School of Kinesiology and Physical Education. 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 ropes course and indoor climbing facility.

School of Nursing

Location: McKee Hall 529; Telephone: 970-351-2293
Sandra Baird, Director

Professors — Sandra Baird, EdD; Judy Richter, PhD; Nancy White, PhD

Associate professors — Nancy Beardslee, EdD; Kathryn Blair, PhD; Virginia Kinnick, PhD; Pam Larsen, PhD; Deb Leners, PhD; Judy Malkiewicz, PhD; Jan Hoot Martin, PhD; Diane Peters, PhD.

Assistant professors — Lory Clukey, MS; Faye Hummel, MS; Jane Koeckeritz, PhD; Carol Roehrs, MS; Linda Sullivan, MS

Instructors — Wanda Lewis, MA; Diane Meador, MS

The undergraduate program in nursing is a nine (9) semester program leading to a bachelor of science degree. Qualified students are prepared to be professional nurses and receive a foundation for graduate study in nursing. The Master of Science in Nursing Program has two emphases available: a clinical emphasis in chronic illness of the adult or child with a role emphasis in education; and the Family Nurse Practitioner emphasis.

The School of Nursing subscribes to a philosophy that views the patient holistically. Congruent with the belief in the dignity and worth of mankind is the belief that the individual has a right to be an active participant in decisions concerning his or her well-being. Nursing is an independent professional discipline requiring critical inquiry and discriminating judgment to assist individuals and groups to attain and maintain health.

Nursing students have a variety of clinical experiences in hospitals, nursing homes, industry, schools and public health agencies, primarily in northern and southeastern Colorado communities. Clinical practice is concurrent with nursing theory (classes) and is guided by nursing faculty.

Bachelor of Arts in Communication Disorders: Audiology

Program Requirements

Required program/major credits	43
Elective credits	37
General Education	40
Total credits required for this degree	120

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.

Required Credits — 43 semester hours

CMDS 160 Introduction to Human Communication and Its Disorders	3
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 I	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
EDSE 451 Basic Sign Language	3
ZOO 115 Human Biology	3
ZOO 245 Introduction to Human Anatomy-Physiology	4

Note

Laboratory material fees are assessed for the following credits CMDS 370, CMDS 474 and CMDS 483.

Bachelor of Arts in Communication Disorders: Speech-Language Pathology

Program Requirements

Required program/major credits	44
Recommended elective credits	3
Elective credits	33
General Education	40
Total credits required for this degree	120

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 Credits — 44 semester hours

CMDS 160 Introduction to Human Communication and Its Disorders	3
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 I	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
ZOO 115 Human Biology	3
ZOO 245 Introduction to Human Anatomy—Physiology	4

Strongly Recommended Elective

EDSE 451 Basic Sign Language	3
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Note

Laboratory material fees are assessed for the following credits CMDS 370, CMDS 474, CMDS 483, CMDS 485.

Master of Arts in Communication Disorders: Audiology

Certifying Master's Degree

Program Requirements

Complete the required credits specified here.....53-56

This program is designed to prepare students for entry level activity as audiologists. Audiologists are professional practitioners responsible for the prevention, diagnosis, treatment and management of hearing disorders in children and adults.

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, e.g., speechreading and auditory training.
- Diagnosis for and dispensing of, hearing aids and other amplification and auditory prosthetic devices.
- 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 to complete the Clinical Fellowship Year (CFY) required by the American Speech-Language Hearing Association (ASHA) for the Certificate of Clinical Competence (CCC). Certified audiologists find employment in schools, private practice, hospitals, rehabilitation facilities, industry, free-standing clinics and otolaryngological practices.

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. Admission to the Graduate School does not guarantee admission to the Audiology graduate program.

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.

Required Credits — 53-56 semester hours

CMD5 515 Referenced and Research Writing.....	1
CMD5 555 Neuroanatomy and Neurophysiology of Communication.....	3
CMD5 570 Rehabilitative Audiology.....	3
CMD5 571 Speech and Hearing Science	3
CMD5 572 Noise	2
CMD5 573 Auditory Physiology and Pathology.....	3
CMD5 574 Clinical Practicum in Audiology	1
CMD5 580 Practicum in Rehabilitative Audiology	4
CMD5 582 Pediatric/Educational Audiology	3
CMD5 584 Screening Procedures in Speech-Language Pathology.....	1
CMD5 594 Practicum and Advanced Topics in Audiology.....	4
CMD5 671 Psychoacoustics	2
CMD5 675 Differential Diagnosis of Auditory Problems	5
CMD5 678 Hearing Aids and Uses of Amplification.....	3
CMD5 692 Internship in Medical Settings	12 or 15
HRS 610 Interpretation and Evaluation of Behavioral Research.....	3

(or its equivalent)

Notes

In addition to the required courses shown above CMD5 673, Practicum in School Audiology, is required for licensure as an Educational Audiologist by the Colorado Department of Education.

If the student decides to complete a thesis, 6 hours of CMD5 699, Thesis: Communication Disorders and 3 hours of EPRE 602, Elements of Statistics, are required.

Successful completion of a written comprehensive exam is required to complete the Master of Arts program.

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. This program is accredited by the Educational Standards Board of the Boards of Examiners in Speech-Language Pathology and Audiology and by the Colorado Department of Education.

Laboratory material fees are assessed for the following credits CMD5 571, CMD5 574, CMD5 580, CMD5 584 and CMD5 594.

Master of Arts in Communication Disorders: Audiology

Non-Certifying Degree

Program Requirements

Complete the required credits specified here.....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.

Admission

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. Admission to the Graduate School does not guarantee admission to the Audiology program.

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.

Required Credits — 31 semester hours

CMD5 515 Referenced and Research Writing.....	1
CMD5 555 Neuroanatomy and Neurophysiology of Communication.....	3
CMD5 570 Rehabilitative Audiology.....	3
CMD5 571 Speech and Hearing Science	3
CMD5 572 Noise	2
CMD5 573 Auditory Physiology and Pathology.....	3
CMD5 582 Pediatric/Educational Audiology	3
CMD5 671 Psychoacoustics	2
CMD5 675 Differential Diagnosis of Auditory Problems	5
CMD5 678 Hearing Aids and Uses of Amplification.....	3
HRS 610 Interpretation and Evaluation of Behavioral Research.....	3

Notes

If the student decides to complete a thesis, six hours of CMD5 699, Thesis: Communication Disorders and three hours of EPRE 602, Elements of Statistics, must be taken in addition to the requirements described above.

Successful completion of a written comprehensive exam is required to complete the Master of Arts program. Laboratory material fees are assessed for the following course: CMD5 571.

Master of Arts in Communication Disorders: Speech-Language Pathology

Certifying Master's Degree

Program Requirements

Complete the required credits specified here.....64-70

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.

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. Admission to the Graduate School does not guarantee admission to the Speech-Language Pathology graduate program.

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.

Required Credits — 64-70 Semester Hours

CMDS 515 Referenced and Research Writing.....	1
CMDS 555 Neuroanatomy and Neurophysiology of Communication.....	3
CMDS 561 Voice Disorders and Cleft Palate	3

CMDS 565 Neurogenic Communication Disorders	4
CMDS 569 Advanced Diagnostic Procedures	4
CMDS 571 Speech and Hearing Science	3
CMDS 583 Entry/Primary Speech-Language Pathology Practicum	2
CMDS 585 Advanced Graduate Practicum in Speech-Language Pathology.....	4
CMDS 592 Internship in Public Schools	12 or 15
CMDS 616 Speech and Language Services in the Public Schools.....	1
CMDS 660 Clinical Phonology	3
CMDS 662 Stuttering	3
CMDS 681 Experimental Phonetics	3
CMDS 683 Advanced Topics in Language Disorders.....	3
CMDS 692 Internship in Medical Settings	12 or 15
HRS 610 Interpretation and Evaluation of Behavioral Research (or its equivalent).....	3

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 12-15 semester hours each. Students who elect to complete a thesis may be exempted from one of these internships, with the consent of their academic advisor and they must complete CMDS 699, Thesis: Communication Disorders, for six semester hours and EPRE 602, Elements of Statistics, for three semester hours, in addition to the requirements shown above.

Successful completion of a written comprehensive exam is required to complete the Master of Arts program.

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 Educational Standards Board of the Board of Examiners in Speech-Language Pathology and Audiology and by the Colorado Department of Education.

Laboratory material fees are assessed for the following credits CMDS 569, CMDS 571, CMDS 583 and CMDS 585.

Master of Arts in Communication Disorders: Speech-Language Pathology

Non-Certifying Degree

Program requirements

Complete the required credits specified here.....32

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.

Admission

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. Admission to Graduate School does not guarantee admission to the Speech-Language Pathology non-certifying master's degree program.

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 and must be prepared to spend a longer period of time than usual for completion of the master's degree.

Required Credits — 32 semester hours

CMDS 515 Referenced and Researched Writing.....	1
CMDS 555 Neuroanatomy and Neurophysiology of Communication.....	3
CMDS 561 Voice Disorders and Cleft Palate	3
CMDS 565 Neurogenic Communication Disorders	4
CMDS 571 Speech and Hearing Science	3
CMDS 586 Basic Clinical Strategies in Speech-Language Pathology/Audiology	2
CMDS 616 Speech and Language Services in the Public Schools.....	1
CMDS 660 Clinical Phonology	3
CMDS 662 Stuttering	3
CMDS 681 Experimental Phonetics	3
CMDS 683 Advanced Topics in Language Disorders.....	3
HRS 610 Interpretation and Evaluation of Behavioral Research (or its equivalent).....	3

Notes

If the student decides to complete a thesis, six hours of CMDS 699, Thesis: Communication Disorders and three hours of EPRE 602, Elements of Statistics, must be taken in addition to the requirements described above.

Successful completion of a written comprehensive exam is required to complete the Master of Arts program.

Laboratory material fees are assessed for the following course: CMDS 571.

Bachelor of Arts in Dietetics

Program Requirements

Required program/major credits	40
Required supporting credits	57
General Education:	
24 credits already included in requirements above	
Remaining credits	16
Elective credits	1-2
Total credits required for this degree	120

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 approved by 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 foodservice management positions in business and industry. At the senior level, a student may apply for a dietetic internship or an approved pre-professional practice program (AP-4) under the supervision of a registered dietitian. After completion of the internship or pre-professional program, the student is eligible to take the examination required to become a registered dietitian.

Required Credits — 40 semester hours

FND 210 Medical Terminology	2
FND 251 Introductory Nutrition	3
FND 252 Nutrition in the Life Cycle.....	3
FND 342 Food Science I	4
FND 343 Food Science II	4
FND 410 Professional Development Seminar	3
FND 430 Clinical Nutrition I	3

FND 431 Clinical Nutrition II	3
FND 446 Foodservice Systems Management	3
FND 447 Quantity Foodservice	3
FND 451 Advanced Nutrition	3
FND 452 Community Nutrition	3
FND 455 Nutrition for Fitness and Athletic Performance	3
or	
FND 420 Maternal and Child Nutrition	3

Required Supporting Credits — 57 semester hours

Sciences — 24 semester hours

BIO 351 Microbiology	4
CHEM 108 Fundamentals of General and Organic Chemistry	5
CHEM 208 Fundamentals of Human Biochemistry	5
ZOO 115 Human Biology	3
ZOO 341 Human Anatomy	3
ZOO 350 Human Physiology	4

Business — 11 semester hours

BA 101 Business Communications	2
BAAC 220 Principles of Accounting I	3
BAMG 350 Management of Organizations	3
BAMK 360 Marketing	3

Other — 22 semester hours

ANT 110 World Cultures	3
ECON 105 Introduction to Economics: Microeconomics	3
ENG 127 Basic Technical Writing	3
NURS 315 Clinical Research and Theory	3
PSY 120 Principles of Psychology	4
SPCO 100 Basics of Public Speaking	1
SPCO 103 Speaking Evaluation	2
STAT 250 Statistics for Health Sciences	3

Note

Dietetic majors are charged a laboratory fee when they enroll in the following courses FND 342, FND 343.

Bachelor of Science in Gerontology

Program Requirements

Required program/major credits	38
Required elective credits	5
General Education:	
Specified credits	10
Remaining credits	30
Minor or concentration area	18
Total credits required for this degree	120

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 Credits — 38 semester hours

BIO 415 Biology of Aging	2
GERO 205 Introduction to Gerontology	3
GERO 460 Community Resources for the Elderly	4
GERO 465 Management Concepts in Aging Services	3
GERO 490 Senior Seminar and Research in Gerontology	3
GERO 492 Undergraduate Internship in Gerontology	12
HRS 394 Practicum in Human Services	2
HRS 480 Human Service Helping Skills	3
PSY 331 Maturity and Aging	3
SOC 371 Sociology of Aging	3

Required Elective Credits — 5 semester hours

Select from the following:

CH 236 Health and Lifestyles Among the Elderly	3
CMDS 470 Communication Disorders of the Aging	2
FND 252 Nutrition in the Life Cycle II	3
GERO 235 Issues in Adulthood	3
GERO 395 Special Topics	3
REC 251 Leisure, Recreation and the Older Adult	3
HRS 394 Practicum in Human Services	2
SOC 322 Women and Aging	3

General Education, Specified Credits — 10 semester hours

Category 5 — Social Sciences

PSY 230 Human Growth and Development	4
SOC 100 Principles of Sociology	3

Category 2 — Mathematics

STAT 250 Statistics for Health Sciences	3
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Category 6 — Science and Mathematics

ZOO 115 Human Biology (L)	3
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Master of Arts in Gerontology

Emphasis in Direct Service

Program Requirements

Complete the required credits specified here.....49

The master of arts program 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.

Admission

In addition to meeting the admission requirements of the Graduate School, the student must send DIRECTLY TO THE DEPARTMENT: a) 2 letters of recommendation, b) Miller Analogies Test scores, and c) a Statement of Interest covering the following topics (maximum 10 pages double-spaced):

- 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.
- 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 emphasis area?
- 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.
- 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.

Master of Arts in Gerontology

Emphasis General Studies

Program Requirements

Complete the required credits specified here.....46

The master of arts program 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.

Admission

In addition to meeting the admission requirements of the Graduate School, the student must send DIRECTLY TO THE DEPARTMENT: a) 2 letters of recommendation, b) Miller Analogies Test scores, and c) a Statement of Interest covering the following topics (maximum 10 pages double-spaced):

- 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.
- What are your career and educational goals? Why have you chosen the Generalist emphasis area? In what role and in what organizational setting would you ultimately like to be employed?
- 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.
- 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.

Required Credits — 49 semester hours

GERO 560 Community Resources for the Elderly	4
GERO 565 Management Concepts in 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
HRS 630 Human Services Counseling Theories and Techniques	3
HRS 694 Practicum in Human Services Counseling.....	6
Two advisor-approved electives whose content focuses on direct practice skills or service issues	6

Notes

Successful completion of a written comprehensive exam is required to complete the Master of Arts program.

The following course requires a laboratory materials fee: HRS 694.

Required Credits — 46 semester hours

GERO 560 Community Resources for the Elderly	4
GERO 565 Management Concepts in 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
BIO 415 or 515 Biology of Aging	2
GERO 655 Program Planning and Evaluation in Gerontology	3
or	
NURS 505 Nursing Research	3
Advisor-approved courses.....	7

Note

Successful completion of a written comprehensive exam is required to complete the Master of Arts program. 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.

Master of Arts in Gerontology

Emphasis in Management/Administration

Program Requirements

Complete the required credits specified here.....49

The master of arts program 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.

Admission

In addition to meeting the admission requirements of the Graduate School, the student must send DIRECTLY TO THE DEPARTMENT: a) 2 letters of recommendation, b) Miller Analogies Test scores, and c) a Statement of Interest covering the following topics (maximum 10 pages double-spaced):

- 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.
- What are your career and educational goals? Why have you chosen the Management Administration emphasis area? In what role and in what organizational setting would you ultimately like to be employed?
- 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.
- 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.

Required Credits — 49 semester hours

GERO 560 Community Resources for the Elderly	4
GERO 565 Management Concepts in 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 650 Personnel Management in Aging Programs	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
GERO 692 Graduate Internship in Gerontology.....	12
HRS 610 Interpretation and Evaluation of Behavioral Research.....	3
Advisor approved course.....	3

Note

Successful completion of a written comprehensive exam is required to complete the Master of Arts program.

Bachelor of Science in Health

Emphasis in Community Health

Program Requirements	
Required program/major credits	49
Required elective credits	18
General Education:	
Specified credits	18
Remaining credits	22
Elective credits	13
Total credits required for this degree	120

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.

Students must complete a full-time internship (320 contact hours) following the completion of all other required courses, with the approval of their major advisors.

Required Credits — 49 semester hours

BA 101 Business Computing.....	3
CH 205 Issues in Health.....	3
CH 209 Foundations of Health Promotion/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 Strategies.....	4
CH 342 Modern Concepts of Health and Disease.....	3
CH 350 Introduction to Environmental Health.....	3
CH 405 Media and Materials for Health Education.....	3
CH 410 Introduction to Program Planning and Evaluation.....	3
CH 440 Foundations of Health Program Management.....	3
CH 492 Internship in Health.....	12

Required Elective Credits — 18 semester hours

Note that electives must be approved by the student's major advisor.

General Education, Specified Credits — 18 semester hours

<i>Category 5 — Social Sciences</i>	
PSY 120 Principles of Psychology	4
SOC 100 Principles of Sociology	3
<i>Category 6 — Science and Mathematics</i>	
CHEM 108 Fundamentals of Chemistry I.....	5
ZOO 115 Human Biology.....	3
<i>Category 7 — Interdisciplinary, Multicultural and International Studies</i>	
CH 236 Health and Lifestyle Among the Elderly	3
or	
GERO 205 Introduction to Gerontology	3

Master of Public Health

Emphasis in Community Health Education

Program Requirements

Complete the required credits specified here.....37
 Complete program electives specified here8

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 and industrial settings.

The graduate program is designed to accommodate students who wish to earn the Master of Public Health 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 (320 contact hours) and successfully pass a written comprehensive examination in order to complete the Master of Public Health program.

Admission

In addition to meeting the admission requirements of the Graduate School, students must submit with their application at least two letters of recommendation, Graduate Record Examination or Miller Analogy Test scores and a typed, one-page statement of career goals.

Students applying with less than a 3.0 GPA for the last 66 semester hours must complete GRE or MAT requirements before the completion of the first semester of attendance.

Required Credits — 37 semester 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	4
CH 620 Epidemiology	3
CH 625 Public Health Administration and Policy	3
CH 692 Graduate Internship in Health Education	6
EPRE 602 Elements of Statistics	3
HRS 610 Interpretation and Evaluation of Behavioral Research	3
or	
EPRE 600 Introduction to Graduate Research	3

Required Elective Credits — 8 semester hours

Note that elective units are selected with consent of advisor.

Note

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.

Bachelor of Science in Human Rehabilitative Services

Program Requirements

Required core credits.....	39
Required minor or area of concentration.....	18
Elective credits	23
General Education	40
Total credits required for this degree	120

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 Core Credits — 39 semester hours

HRS 290 Introduction to Human Rehabilitative Services	3
HRS 482 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 and Psychological Aspects of Disability for Human Services Workers	3
HRS 490 Career Planning and Placement.....	3
HRS 492 Clinical Internship	12
STAT 150 Introduction to Statistical Analysis	3
or	
STAT 250 Statistics for Health Sciences.....	3

Minor or Area of Concentration — 18 semester 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. Students are encouraged to confer with their advisor in establishing an area that will meet the student's need.

General Education

Category 2

STAT 150 Introduction to Statistical Analysis.....3

or

STAT 250 Statistics for Health Sciences.....3

Category 7

GERO 205 Introduction to Gerontology

Note

Students must make application for practicum and clinical internship five (5) weeks before the semester in which the field experience is planned.

Master of Arts in Rehabilitation Counseling

Program Requirements

Complete the required core credits specified here.....48

Complete advisor approved program electives specified here12

Admission

In addition to meeting the Admission requirements of the Graduate School, the student must send DIRECTLY TO THE DEPARTMENT: a) two letters of recommendation, b) Miller Analogies Test scores, and c) a Statement of Interest covering the following topics (maximum of ten pages double-spaced).

- 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.
- 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?
- 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.
- 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.

Required Core Credits — 48 semester 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 605 Medical Aspects of Disability	3
HRS 606 Psycho-Social 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 635 Cultural and Family Concerns in Rehabilitation.....	3
HRS 692 Supervised Clinical Practice in Rehabilitation Counseling	15
HRS 694 Practicum in Human Services Counseling.....	6

Note that required courses may be waived only by the department chair on written recommendation of the student's advisor.

Elective Credits — 12 semester hours

GERO 665 Grant Development and Administration	3
HRS 586 Community Integrated Employment.....	3
HRS 590 Rehabilitation Services in Facilities and Private Sector	3
HRS 591 Independent Living in Rehabilitation	3
HRS 597 Counseling and Treatment of the Substance Abuser.....	3
HRS 611 Vocational Evaluation Planning and Report Writing	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, 12 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.

Successful completion of a written comprehensive exam is required 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.

Laboratory materials fee is required for each enrollment in HRS 693 and HRS 694.

Master of Arts in Rehabilitation Counseling

Emphasis in Vocational Evaluation

Program Requirements

Complete the required credits specified here.....60

Admission

In addition to meeting the Admission requirements of the Graduate School, the student must send DIRECTLY TO THE DEPARTMENT: a) two letters of recommendation, b) Miller Analogies Test scores, and c) a Statement of Interest covering the following topics (maximum of ten pages double-spaced).

- What factors and events motivated your interest in rehabilitation? Discuss your attitude and philosophy toward research, community change and advocacy.
- What are your career and educational goals? Why have you chosen vocational evaluation as your emphasis area? In what role and in what organizational setting would you ultimately like to be employed?
- 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.
- 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.

Required Credits — 60 semester 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 605 Medical Aspects of Disability	3
HRS 606 Psycho-Social Aspects of Disability	3
HRS 610 Interpretation and Evaluation of Behavioral Research.....	3

HRS 611 Vocational Evaluation Planning and Reporting.....	3
HRS 612 Seminar in Vocational Evaluation Systems.....	3
HRS 630 Human Services Counseling Theories and Techniques	3
HRS 635 Cultural and Family Concerns in Rehabilitation.....	3
HRS 660 Advanced Seminar in Client Assessment	3
HRS 692 Supervised Clinical Practice in Rehabilitation Counseling	15
HRS 693 Practicum in Vocational Evaluation	6
HRS 694 Practicum in Human Services Counseling.....	6

Notes

Required courses may be waived only by the department chair on written recommendation of the student's advisor.

HRS 692, Supervised Clinical Practice in Rehabilitation Counseling, must be completed in an approved evaluation setting.

Successful completion of a written comprehensive exam is required 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.

Laboratory materials fee is required for each enrollment in HRS 693 and HRS 694.

Doctor of Philosophy in Human Rehabilitation

Program Requirements

Complete the required credits specified here.....64

Admission

Admission into the doctoral program in Human Rehabilitation is determined by the graduate faculty of the department, with final approval of the graduate dean. All doctoral applicants must meet the following criteria for preliminary consideration:

- Hold a master's degree from an accredited college or university approved by the University of Northern Colorado, 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.
 - 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.
 - Meet all University of Northern Colorado Graduate School requirements.
 - Submit all requested materials to the Department of Human Services for review by its faculty.
 - Participate in a personal interview on request.
- Admission decisions are based on multiple criteria, without fixed weights for any criterion.

Required Credits — 41 semester hours

EPRE 700 Introduction to Research	
or	
STAT 715 Planning and Methodology of Research	3
HRS 755 Supervised Practicum in College Teaching.....	3
HRS 757 Advanced Practicum in Rehabilitation Administration	3
HRS 758 Advanced Practicum in Rehabilitation Research.....	3
HRS 759 Advanced Practicum in Counseling Supervision.....	3
HRS 760 Professional Development Seminar in Rehabilitation.....	4
HRS 794 Advanced Clinical Internship.....	6
HRS 797 Doctoral Proposal Research.....	4
HRS 799 Doctoral Dissertation.....	12

Research and Statistics Requirements — 12 semester hours

All doctoral students are required to take a minimum of 12 graduate level credits in Statistics and Research and satisfactorily complete the Statistics and Research portion of the doctoral examination. This satisfies one of the two required University research tools and these 12 credits may count toward the 64 credits required for doctoral coursework.

All doctoral students must demonstrate competence in a second research tool by satisfactorily completing the criteria for one of the following University approved research tools.

Computer Applications — 9 semester hours

Satisfactorily complete with a grade of "B" or better a minimum of 9 credit hours of advisor approved computer application courses. These credits, if graduate level, may count toward the required total hours 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.

Elective Credits

The remainder of the student's credits will be selected by the student and the program committee on the basis of the student's background and interests.

Bachelor of Arts in Kinesiology

Emphasis in Athletic Training

Program Requirements	
Required program/major credits	34
Required supporting credits	32-33
General Education	40
Elective credits	10-11
Total credits required for this degree	120

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.

Required Credits — 34 semester hours	
KINE 220 Anatomical Kinesiology	3
KINE 221 Mechanical Kinesiology	3
KINE 222 Physiological Kinesiology	3
KINE 223 Neuromotor Kinesiology	3
KINE 380 Prevention and Care of Sports Injuries.....	2
KINE 381 Practical Experiences in the Care of Athletic Injuries.....	12
Note that this course is divided into four modules for three semester hours each. One will be offered each semester. The modules are:	
• Anatomy Applied to Injury	
• Emergency Care and Referral	
• Modality Application	
• Program Administration	
KINE 485 Mechanism and Evaluation of Sports Injuries	3
KINE 486 Clinical Methods in Sports Injury Rehabilitation	3
KINE 487 Therapeutic Modalities	2

Required Supporting Credits — 32-33 semester hours	
CH 205 Issues in Health.....	3
CHEM 108 Fundamentals of Chemistry I.....	5
CHEM 109 Fundamentals of Chemistry II.....	5
KINE 390 Cardiopulmonary Resuscitation Certification	1

Bachelor of Arts in Kinesiology

Emphasis in Fitness and Exercise Kinesiology

Program Requirements	
Required program/major credits	44
Required supporting credits	16
General Education:	40
6 credits already included in requirements above	
Remaining credits	34
Elective credits	20
Total credits required for this degree	120

This program is designed to prepare individuals to work in one or more of the following areas: 1) Cardiac Rehabilitation, 2) Gerontological Fitness, 3) Fitness and Exercise Program Management and 4) Strength and Endurance Conditioning of Athletes.

Required Credits — 44 semester hours	
KINE 220 Anatomical Kinesiology	3
KINE 221 Mechanical Kinesiology	3
KINE 222 Physiological Kinesiology	3
KINE 223 Neuromotor Kinesiology	3
KINE 380 Prevention and Care of Sports Injuries.....	2
KINE 400 Fitness Management.....	3
KINE 402 Human Performance Assessment	3
KINE 404 Exercise Nutrition and Body Composition.....	3
KINE 406 Exercise Programming	3
KINE 410 Principles of Electrocardiography	3
KINE 436 Social Influences on Sport and Exercise Behavior.....	3
KINE 492 Internship in Fitness and Exercise Kinesiology	12

KINE 404 Exercise Nutrition and Body Composition.....	3
KINE 436 Social Influences on Sport and Exercise Behavior.....	3
PE 233 Advanced First Aid and CPR.....	2
ZOO 115 Human Biology	3
ZOO 341 Human Anatomy	3
ZOO 350 Human Physiology	4
<i>Students must take one of the following two courses:</i>	
EPRE 345 Educational Psychology	3
PSY 120 Principles of Psychology	4

Notes

Clinical experience of 1500 clock-hours (minimum 5 semesters) under supervision of Certified Athletic Trainer at UNC is required. CH 205 can be used for the General Education requirement in Category 5.

CHEM 108 or ZOO 115 can be used for the General Education requirement in Category 6.

Any student receiving a grade of "D" or lower in a course in the major must retake the course until a grade of "C" or higher is achieved.

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 admitted to the clinical program is limited. Students must make a separate application to the Clinical Athletic Training Program. Admission is based on available openings, grades in related courses (minimum 2.8 GPA), experience and interview. Additional information is available from the program coordinator.

Required Supporting Credits — 16 semester hours	
CHEM 108 Fundamentals of Chemistry I.....	5
CHEM 109 Fundamentals of Chemistry II.....	5
ZOO 245 Introduction to Human Anatomy Physiology	4
<i>Students are required to take two of the following courses</i>	
PE 145 Activity for Stress Management	1
PE 146 Aerobics.....	1
PE 150 Jogging and Walking	1
or	
PE 152 Swimming Conditioning	1

Notes

KINE 492 can be taken in 6-semester hour blocks.

One of the following classes: PE 145, PE 146, PE 150 or PE 152 can be used for the General Education requirement in Category 3.

CHEM 108 can be used for the General Education requirement in Category 6.

Any student receiving a grade of "D" or lower in a KINE prefix course must retake the course until a grade of "C" or higher is achieved.

Bachelor of Arts in Kinesiology Emphasis in Mechanical Kinesiology

Program Requirements

Required core credits.....	23
Required supporting credits	27
Recommended elective credits	16
General Education	40
Elective credits	14
Total credits required for this degree	120

The coursework and experiences in this major are designed to provide the student with a broad background in kinesiology along with an opportunity for an in-depth emphasis in the mechanical components of human movement.

Required Core Credits — 23 semester hours

KINE 220 Anatomical Kinesiology	3
KINE 221 Mechanical Kinesiology	3
KINE 222 Physiological Kinesiology	3
KINE 223 Neuromotor Kinesiology	3
KINE 380 Prevention and Care of Sports Injuries.....	2
KINE 402 Human Performance Assessment	3
KINE 404 Exercise Nutrition and Body Composition.....	3
KINE 436 Social Influences on Sport and Exercise Behavior.....	3

Required Supporting Credits — 27 semester hours

CG 110 BASIC Programming.....	3
KINE 333 Psychological Analysis of Sports, Exercise and Physical Activity.....	3
MATH 124 College Algebra	4
MATH 125 Plane Trigonometry	3
MATH 127 Elementary Functions.....	4
<i>Choose one of the following two physics series:</i>	
PHYS 220 Introductory Physics I and	5
PHYS 221 Introductory Physics II	5
<i>or</i>	
PHYS 240 General Physics I and	5
PHYS 241 General Physics II	5

Recommended Elective Credits —16 semester hours

ANT 230 Anthropometrics	3
MATH 131 Calculus and Analytical Geometry I	4
MATH 132 Calculus and Analytical Geometry II	4
PHYS 340 Mechanics I.....	3
PHYS 440 Mechanics II.....	2

Note

Any student receiving a grade of "D" or lower in a KINE prefix course must retake the course until a grade of "C" or higher is achieved.

Bachelor of Arts in Kinesiology Emphasis in Outdoor Physical Education (K-12, K-6, 7-12)

Program Requirements

Required program/major credits	61
General Education	40
PTE program	35
Total credits required for this degree	136

Students who plan to use this emphasis as a licensure program for teaching outdoor physical education must complete the program of Professional Teacher Education described elsewhere in this Bulletin. Students who wish to be licensed to teach in the State of Colorado must make application upon completion of their program. See Professional Teacher Education (PTE) in this Bulletin for necessary information.

Students who plan to apply for K-12 Teacher Licensure in the State of Colorado must student teach at both the elementary and secondary school levels. Students who plan to apply for licensure at only K-6 or only 7-12 are required to student teach at the appropriate educational level. Before student teaching, students must have completed all required Analysis and Teaching/Approaches and Methods courses and the Methods Block and the Philosophy and Pedagogy of Outdoor Physical Education. All required competencies must also be completed before student teaching.

Students choosing this emphasis must have a 3.0 GPA in their last 30 hours. Any student receiving a grade of "D" or lower in a course in the major must retake the course until a grade of "C" or higher is achieved.

Required Credits — 61 semester hours

CH 205 Issues in Health.....	3
KINE 380 Prevention and Care of Sports Injuries.....	2
PE 116 Water Safety Instructor	2
PE 210 Movement Fundamentals and Motor Development.....	3
<i>Take one of the following two courses:</i>	
PE 211 Weight Training and Anatomy	3
PE 213 Sports and Mechanics.....	3
PE 215 Analysis and Teaching of Basketball	2
PE 217 Analysis and Teaching of Soccer.....	2
PE 218 Analysis and Teaching of Softball	2
PE 219 Analysis and Teaching of Volleyball	2
PE 229 Adventure Activities and Motor Learning	3
PE 233 Advanced First Aid and CPR.....	2
PE 266 Seminar In Management and Instruction for Physical Education	1
<i>(Take concurrently with EDPE 270, 2 hours PTE)</i>	
PE 336 Pedagogy of Outdoor Physical Education	3
PE 432 Adapted Physical Education	3
PE 436 Social-Cultural Foundations in Physical Education	2
PE 461 Administration and Law	2
PE 466 Seminar In Student Teaching for Physical Educators	3

Block:

PE 344 Clinical Experience in Teaching Physical Education.....	3
PE 345 Methods of Teaching Elementary Physical Education	2
PE 346 Methods of Teaching Secondary Physical Education.....	2
PE 347 Tests and Measurements.....	2
<i>(Take concurrently with the block, PE 344, 3 hours PTE)</i>	

Students must complete one of the following coaching and officiating courses:

PE 312 Coaching and Officiating Baseball	2
PE 313 Coaching and Officiating Basketball	2
PE 314 Coaching and Officiating Football	2
PE 315 Coaching and Officiating Gymnastics.....	2
PE 316 Coaching and Officiating Tennis.....	2
PE 317 Coaching and Officiating Track and Field	2
PE 318 Coaching and Officiating Soccer	2
PE 319 Coaching and Officiating Softball.....	2
PE 320 Coaching and Officiating Swimming	2
PE 321 Coaching and Officiating Volleyball	2
PE 322 Coaching and Officiating Wrestling	2

Take five of the following courses, passing basic competency in three of the following courses:

PE 234 A and M of Bike Touring and Cycling.....	2
PE 235 A and M of Cross Country and Adventure Skiing	2
PE 236 A and M of Technical Rock Climbing and Basic Mountaineering	2
PE 237 A and M of Whitewater and Wilderness Canoeing.....	2
PE 238 A and M of Winter Wilderness Living Skills and Travel	2
Wilderness Ski Expedition.....	2
PE 239 A and M of Outdoor Adventure and Wilderness Living Skills and	2
Travel Backpacking.....	2

Notes

Outdoor physical education majors must achieve basic competency in the following: two of the four team sport A&T classes (PE 215, PE 217, PE 218, PE 219), and three of the five A&M Outdoor classes (PE 234, PE 235, PE 236, PE 237, PE 238, PE 239).

Clinical Experience of 90 clock-hours under the supervision of UNC Adventure Programming staff is required. The number of students admitted to the program is limited due to resources. Students must submit a separate application to the Outdoor Physical Education Program Coordinator. Admission is based on available openings, grades in related courses (minimum 3.0 GPA), experience and personal interview. Additional information on the Outdoor Physical Education Program is available from the program coordinator.

Bachelor of Arts in Kinesiology Emphasis in Physical Education (K-12, K-6, 7-12)

Program Requirements

Required program/major credits57
General Education40
PTE program35
Total credits required for this degree132

Students who plan to use this emphasis as a licensure program for teaching physical education must complete the program of Professional Teacher Education described elsewhere in this Bulletin. Students who wish to be licensed to teach in the State of Colorado must make application upon completion of their program. See Professional Teacher Education (PTE) in this Bulletin for necessary information.

Students who plan to apply for K-12 Teacher Licensure in the State of Colorado must student teach at both the elementary and secondary school levels. Students who plan to apply for licensure at only K-6 or only 7-12 are required to student teach at the appropriate educational level. Before student teaching, students must have completed all required Analysis and Teaching (A and T) courses and the Methods Block. All required competencies must also be completed before student teaching. Students choosing this emphasis must have a 2.7 GPA in their major and a 2.5 in all coursework before student teaching. Any student receiving a grade of "D" or lower in a course in the major must retake the course until a grade of "C" or higher is achieved.

Required Credits — 57 semester hours

KINE 380 Prevention and Care of Sports Injuries.....2
 PE 209 Analysis and Teaching of Dance2
 PE 210 Movement Fundamentals and Motor Development.....3
 PE 211 Weight Training and Anatomy.....3
 PE 212 Fitness and Conditioning and Physiology3
 PE 213 Sports and Mechanics3
 PE 214 History and Philosophy2
 PE 215 Analysis and Teaching of Basketball.....2
 PE 217 Analysis and Teaching of Soccer.....2
 PE 218 Analysis and Teaching of Softball2

Bachelor of Arts in Kinesiology Emphasis in Social Psychological Kinesiology

Program Requirements

Required core credits.....31
Required elective credits8
General Education:40
 7 credits already included in requirements above
Remaining credits33
Elective credits42
Prerequisites not listed above6
Total credits required for this degree120

The coursework and experience in this major are designed to provide the student with a broad background in kinesiology along with an opportunity for an in-depth emphasis in the social psychological components of human movement.

Required Core Credits — 31 semester hours

KINE 220 Anatomical Kinesiology3
 KINE 221 Mechanical Kinesiology3
 KINE 222 Physiological Kinesiology3
 KINE 223 Neuromotor Kinesiology3
 KINE 333 Psychological Analysis of Sports, Exercise and Physical Activity.....3
 KINE 404 Exercise Nutrition and Body Composition.....3
 KINE 436 Social Influences on Sport and Exercise Behavior.....3
 PSY 120 Principles of Psychology4
 SOC 100 Principles of Sociology3
 PSY 265 Social Psychology3
 or
 SOC 332 Social Psychology3

PE 219 Analysis and Teaching of Volleyball2
 PE 226 Analysis and Teaching of Racquet Sports2
 PE 229 Adventure Activities and Motor Learning3
 PE 233 Advanced First Aid and CPR.....2
 PE 266 Seminar in Mahagement and Instruction for Physical Education1
 (Take concurrently with EDFE 270, 2 hours PTE)
 PE 432 Adapted Physical Education3
 PE 436 Social-Cultural Foundations2
 PE 461 Administration and Law2
 PE 466 Seminar in Student Teaching for Physical Educators3
Block:
 PE 344 Clinical Experience in Teaching Physical Education.....3
 PE 345 Methods of Teaching Elementary Physical Education2
 PE 346 Methods of Teaching Secondary Physical Education.....2
 PE 347 Tests and Measurements.....2
Take one of the following analysis and teaching courses:
 PE 207 Analysis and Teaching of Individual Sports.....2
 PE 208 Analysis and Teaching of Tumbling and Gymnastics.....2
 PE 227 Analysis and Teaching of Track and Field2
 PE 228 Analysis and Teaching of Wrestling2
 PE 230 Analysis and Teaching of Self Defense2
Students must complete one of the following coaching and officiating courses:
 PE 312 Coaching and Officiating Baseball2
 PE 313 Coaching and Officiating Basketball2
 PE 314 Coaching and Officiating Football2
 PE 315 Coaching and Officiating Gymnastics.....2
 PE 316 Coaching and Officiating Tennis.....2
 PE 317 Coaching and Officiating Track and Field2
 PE 318 Coaching and Officiating Soccer2
 PE 319 Coaching and Officiating Softball.....2
 PE 320 Coaching and Officiating Swimming2
 PE 321 Coaching and Officiating Volleyball2
 PE 322 Coaching and Officiating Wrestling2

Required Elective Credits — 8 semester hours

PSY 244 Group Processes and Roles3
 PSY 323 Health Psychology3
 PSY 330 Child and Adolescent Psychology3
 PSY 366 Industrial Psychology.....3
 PSY 389 Research in Human Development5
 PSY 400 Research Design and Analysis5
 PSY 443 Motivation3
 SOC 221 Sociology of Sex Roles3
 SOC 326 Sociology of Childhood and Adolescence3
 SOC 351 Classical Social Theory.....3
 SOC 352 Contemporary Social Theory.....3
 SOC 361 Social Research.....3
 SOC 362 Social Statistics3

Note

Any student receiving a grade of "D" or lower in the required core or required elective courses must retake the course until a grade of "C" or higher is achieved.

Nursing Major Requirements

Admission Policy

Preclinical Major. Students interested in nursing are accepted as nursing majors if they meet the general admission requirements of the University. Formal application is made to and obtained from the University of Northern Colorado 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 preclinical major will receive academic advisement from members of the School of Nursing faculty.

Clinical Major. The designation of 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 summer before the junior year. Forms for applying to the clinical program and information about application procedures are obtained at the School of Nursing 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. No GPA of less than 2.50 will be considered. 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: CHEM 108, ZOO 115, ZOO 341, ZOO 350 and BIO 351 will be considered.
- Other selection variables may include: Letter of recommendation, personal essay, ethnic background, rural residency.
- Results of the health assessment required for admission to the clinical nursing program (see Health Policies for Nursing Majors).

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. CPR courses are available outside the School of Nursing.

Registered Nurses Pursuing B.S. Degree. Graduates of state-approved diploma or associate degree programs in nursing are eligible to apply for admission to the 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 length of the program for the registered nurse student depends upon the amount of transfer credit, successful completion of advanced standing credit examinations, if needed, and fit into the Colorado Nursing Articulation Model.

Individuals seeking admission must be admitted to the University of Northern Colorado following the procedures outlined in this Bulletin. Students should contact the School of Nursing at the same time for information about RN criteria for admission to the nursing major and the specifics of the RN program.

The Nursing Program

The School of Nursing subscribes to a philosophy of nursing that views the patient holistically. Congruent with the belief in the dignity and worth of people is the belief that the individual has a right to be an active participant in the decisions concerning his or her well-being.

Nursing students have a variety of clinical experiences in hospitals, nursing homes, industry, schools and public health agencies, primarily in northern and southeastern Colorado communities with a particular emphasis on rural Colorado. Clinical practice courses are taken concurrently with nursing theory courses and are guided by Nursing faculty.

Progression. Nursing majors must earn a minimum grade of "C" in all required nursing courses for progression to the next level 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 who in their professional judgement 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.

LPN Progression. As an LPN, challenge options are available in certain required prerequisite courses. LPNs may also be eligible to challenge an area of nursing practice if they meet specified criteria. 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 Assistant Director will not be considered a nursing major.

Graduation. The degree of Bachelor of Science 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 Rubella/Mumps) and have on record a completed physical examination. Hepatitis B vaccination is required.

School Nurse Licensure. Students seeking initial Colorado endorsement for a Type E Certificate in school nursing should contact the Teacher Education Center in McKee Hall for state proficiency examination requirements.

Additional Expenses. Clinical nursing majors are charged a program fee for every semester they are enrolled in the clinical Nursing Program. This fee is subject to change. Also, clinical nursing majors may anticipate the following expenses in the spring semester before the junior year.

Uniforms.....	\$75
Lab coat.....	25
Chest x-ray.....	20
White shoes.....	30
Name pin.....	2
Penlight.....	3
Scissors.....	4
Rubella Titer.....	8
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 moving from the Greeley area. Students are responsible for their own transportation to all clinical practicums.

Bachelor of Science in Nursing

Program Requirements

Required program/major credits	65.5
Required supporting credits	36
Required elective credits	1-3
General Education:	
Specified credits	18
Remaining credits	22
Total credits required for this degree	124.5 - 126.5

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 and groups to attain and maintain health.

Qualified students are prepared as professional nurses and receive a foundation for graduate study in nursing.

The nursing program is accredited by the National League for Nursing and by the Colorado State Board of Nursing. Graduates may be eligible to write the National Council Licensure Examination for Licensure as registered nurses.

Required Credits — 65.5 semester hours

NURS 300 Conceptual Foundations	3
NURS 301 Physical Assessment Theory	2
NURS 302 Physical Assessment Laboratory	0.5
NURS 303 Basic Nursing Practice	4
NURS 304 Childbearing Families	3
NURS 306 Nursing Care of Children	3
NURS 309 Nursing Care of the Adult I.....	3
NURS 315 Clinical Research and Theory.....	3
NURS 329 Nursing Care of the Adult II.....	3
NURS 340 Childbearing Families Practicum.....	5

NURS 360 Practicum in Care of Children	4
NURS 390 Adult Nursing Practicum	6
NURS 402 Community Nursing Theory.....	3
NURS 407 Mental Health Nursing	3
NURS 415 Professional Perspectives	3
NURS 420 Community Nursing Practicum	4
NURS 430 Nursing Management	2
NURS 440 Complex Nursing	2
NURS 450 Professional Nursing Roles	5
NURS 470 Mental Health Practicum	4

Required Supporting Credits — 36 semester hours

BIO 351 Microbiology	4
CHEM 108 Fundamentals of Chemistry	5
ENG 123 College Research Paper.....	3
FND 357 Nutrition in Health and Illness	4
PSY 230 Human Growth and Development	4
STAT 250 Statistics for Health Sciences.....	3
ZOO 115 Human Biology	3
ZOO 341 Human Anatomy	3
ZOO 350 Human Physiology	4
ZOO 355 Medical Pharmacology	3

Required Nursing Electives — 1-3

Required Credits for Registered Nurses only — 8 semester hours

NURS 305 Conceptual Foundations for RNs	4
<i>(replaces NURS 300)</i>	
NURS 328 Physical Assessment for RNs	4
<i>(replaces NURS 301 and 302)</i>	

Master of Science in Nursing Emphasis in Education

Program Requirements

Complete the required credits specified here.....38-40

The Master of Science in Nursing prepares post baccalaureate nursing students as nurse educators for either academic or inservice settings with clinical emphasis in care of the chronically ill child or adult. The program is consistent with the characteristics of graduate education accepted by the National League for Nursing. Nursing majors in the Master's program (Emphasis in Education) are charged a program fee for every semester they are enrolled.

Prerequisites: Research, Graduate statistics course

The master's program provides expertise valuable for positions in education, in community college settings, institutions of higher education, community health settings and institutions that provide inpatient care for the chronically ill child or adult.

Required Credits — 38-40 semester hours

Core — 9 semester hours

NURS 600 Nursing Theory.....	3
NURS 505 Nursing Research.....	3
NURS 507 Leadership and Nursing Issues.....	3

Master of Science in Nursing Emphasis in Family Nurse Practitioner (FNP)

Program Requirements

Complete the required courses specified here43-47

The Master of Science 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. Nursing majors in the Master's program (FNP) will be charged (if approved) a program fee for every semester they are enrolled.

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, Graduate Statistics Course, Undergraduate Physical Assessment Course

Required Courses — 43-47

Core — 9 semester hours

NURS 600 Theory.....	3
NURS 505 Research.....	3
NURS 507 Leadership and Issues.....	3

Clinical — 11 semester hours

NURS 602 Concepts in Chronic Illness.....	4
NURS 503 Care of Chronically Ill Child.....	4

or

NURS 604 Care of Chronically Ill Adult.....	4
NURS 690 Advanced Clinical Roles.....	3

Education — 13 semester hours

EPRE 540 Principles of Learning.....	3
or EPRE 682	

EPRE 674 Measurement I: Basic Principles.....	3
or EPRE 670 or PPSY 670 or CH 610	

NURS 630 Teaching Strategies.....	3
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NURS 660 Nursing Education Seminar.....	4
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Research — 5-7 semester hours

NURS 699 Thesis.....	6
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or

NURS 691 Applied Research.....	2-4
and Electives.....	3

Note

Successful completion of a comprehensive exam is required to complete the Master of Science program.

FNP Emphasis — 32 semester hours

NURS 610 Health Assessment.....	3
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NURS 612 Advanced Pharmacology.....	3
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NURS 614 Advanced Pathophysiology.....	3
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NURS 640 Health Care of Families I.....	4
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NURS 645 Health Care of Families II.....	4
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NURS 650 Health Care of Families III.....	4
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NURS 680 FNP Role Practicum.....	9
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NURS 690 Advanced Clinical Roles.....	2
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Research — 2-6 semester hours

NURS 699 Thesis.....	6
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NURS 691 Applied Research.....	2-4
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Note

Successful completion of a comprehensive exam is required to complete the Master of Science program.

Master of Arts in Physical Education Emphasis in Adapted Physical Education

Program Requirements

Complete the required credits specified here.....26-32
Complete the program electives4

Required Credits — 26-32 semester hours

PE 538 PE for Mentally Impaired	2
PE 539 PE for Physically Handicapped.....	2
PE 541 Motor Assessment and Prescription.....	2
PE 602 Introduction to Research in Physical Education and Kinesiology	3
PE 612 Measurement of Human Performance	3
PE 641 Instructional Strategies for Elementary School Physical Education.....	3
PE 680 Perspectives in Physical Education	3
PE 692 Graduate Internship in Physical Education	2-8
<i>Students must select one of the following courses:</i>	
PE 614 Analysis of Teaching Physical Education.....	3
PE 640 Curriculum in Physical Education.....	3
PE 688 Legal Aspects	3

Students must select one of the following courses:

KINE 620 Advanced Anatomical Kinesiology	3
KINE 621 Advanced Mechanical Kinesiology	3
KINE 623 Advanced Neuromotor Kinesiology.....	3
KINE 624 Advanced Developmental Kinesiology	3
KINE 626 Advanced Physiological Kinesiology	3

Required Elective Credits — 4 semester hours

Electives based upon program and career goals and must be related to the study of adapted physical education or special education. Must have approval of advisor.

Thesis Option — 6 semester hours

The research and writing of a thesis precludes the taking of comprehensive examinations. This is decided between the student and advisor early in the program and depends upon the availability of a research advisor. See School's Graduate Coordinator for additional information.

Master of Arts in Physical Education Emphasis in Coaching

Program Requirements

Complete the required credits specified here.....20
Complete program electives11

The Master of Arts Program in the School of Kinesiology and Physical Education has been designed to provide a graduate experience for individuals in physical education or related fields with emphases in teaching, coaching or administration. Candidates who complete this degree will enhance their professional careers in teaching and non-teaching settings. Students will be able to focus their immediate and future graduate education goals by electing to emphasize the study of teaching, coaching or administration. Career opportunities might include teaching, coaching or administration in the school setting (K-12) or in institutions of higher education.

Required Credits — 20 semester hours

KINE 580 Advanced Prevention, Care and Rehabilitation of Athletic Injuries.....	2
KINE 670 Advanced Sociological Kinesiology	3
PE 550 Program Management.....	3
PE 602 Introduction to Research in Physical Education and Kinesiology	3
PE 612 Measurement of Human Performance	3
PE 680 Perspectives in Physical Education and Sport	3
PE 688 Legal Aspects.....	3

Supporting Area Credits — 11 semester hours

Choose electives related to emphasis area and career goals. Must have approval of advisor.

Teaching

PE 622 Directed Studies	3
PE 630 Adventure Ropes Course Certification	3
PE 631 Outdoor Physical Education and Adventure Education	3
PE 685 Critical Pedagogy	3
PE 692 Graduate Internship in Physical Education	3
PE 695 Seminar in Physical Education	3
PE 696 College Teaching in Kinesiology and Physical Education.....	3
Note that PE 692 may be taken with approved faculty only.	

Administration

PE 576 Sport Promotion and Marketing.....	3
PE 660 Sport Personnel Management.....	3
PE 675 Management of Sports Facilities and Equipment	3

Kinesiology

KINE 620 Advanced Anatomical Kinesiology	3
KINE 621 Advanced Mechanical Kinesiology	3
KINE 623 Advanced Neuromotor Kinesiology.....	3
KINE 624 Advanced Developmental Kinesiology	3
KINE 626 Advanced Physiological Kinesiology	3
KINE 635 Exercise and Sports Psychology.....	3

Research

EPRE 602 Elements of Statistics	3
EPRE 603 Analysis of Variance	3
PE 615 Qualitative Research in Physical Education, Recreation and Kinesiology	3
PE 699 Thesis (Optional)	6

Master of Arts in Physical Education Emphasis in Kinesiology

Program Requirements

Complete the required credits specified here.....21-24
Complete program electives9-12

Kinesiology is the integrated study of human movement. Within this discipline concentrations are available in Mechanical, Physiological and Social Psychological Kinesiology.

Concentration in Mechanical Kinesiology – 24 semester hours

Required Credits

PE 602 Introduction to Research in Physical Education and Kinesiology3
PE 612 Measurement of Human Performance3
KINE 625 Laboratory Techniques in Kinesiological Research3

Concentration area requirements

KINE 620 Advanced Anatomical Kinesiology3
KINE 621 Advanced Mechanical Kinesiology3
KINE 623 Advanced Neuromotor Kinesiology3
KINE 629 Concepts in Kinesiology3

Students are required to take one of the following courses:

KINE 624 Advanced Developmental Kinesiology3
KINE 626 Advanced Physiological Kinesiology3
KINE 670 Advanced Sociological Kinesiology3

Elective Credits – 9 semester hours

Elective credits must be selected with the approval of the program advisor.

Concentration in Physiological Kinesiology (Exercise Physiology) – 21 semester hours

Required Credits

PE 602 Introduction to Research in Physical Education and Kinesiology3
PE 612 Measurement of Human Performance3
KINE 625 Laboratory Techniques in Kinesiological Research3

Concentration area requirements

KINE 620 Advanced Anatomical Kinesiology3
KINE 626 Advanced Physiological Kinesiology3
KINE 629 Concepts in Kinesiology3

Students are required to take one of the following courses:

KINE 621 Advanced Mechanical Kinesiology3
KINE 623 Advanced Neuromotor Kinesiology3
KINE 624 Advanced Developmental Kinesiology3
KINE 670 Advanced Sociological Kinesiology3

Elective Credits – 12 semester hours

Elective credits in a concentration area must have the approval of the program advisor.

Research or Pre Med

BIO 550 Cell Physiology4
CHEM 581 General Biochemistry I4
CHEM 582 General Biochemistry II4
CHEM 586 Biochemistry Techniques3
ZOO 551 Mammalian Physiology I4
ZOO 552 Mammalian Physiology II4

Preventative and Rehabilitative Exercise

KINE 500 Fitness Management3
KINE 502 Human Performance Assessment3
KINE 504 Exercise Nutrition and Body Composition3
KINE 506 Exercise Programming3
KINE 510 Principles of Electrocardiography3
KINE 692 Graduate Internship in Kinesiology3

Nutrition in Sport and Exercise

CHEM 581 General Biochemistry I4
CHEM 582 General Biochemistry II4
FND 555 Nutrition and Physical Fitness2-3

Concentration in Social Psychological Kinesiology

(Social Psychology of Sport and Physical Activity) — 21 semester hours

Required Credits

PE 602 Introduction to Research in Physical Education and Kinesiology3
PE 612 Measurement of Human Performance3
KINE 625 Laboratory Techniques in Kinesiological Research3

Concentration area requirements

KINE 635 Sport and Exercise Psychology3
KINE 629 Concepts in Kinesiology3
KINE 670 Advanced Sociological Kinesiology3

Students are required to take one of the following courses:

KINE 620 Advanced Anatomical Kinesiology3
KINE 621 Advanced Mechanical Kinesiology3
KINE 623 Advanced Neuromotor Kinesiology3
KINE 624 Advanced Developmental Kinesiology3
KINE 626 Advanced Physiological Kinesiology3

Elective Credits – 12 semester hours

Elective courses in a concentration area must have the approval of the program advisor.

PE 615 Qualitative Research in Physical Education, Recreation and Kinesiology3
PE 680 Perspectives in Physical Education and Sport3
PSY 550 Cognitive Development3
PSY 627 Psychometrics3
PSY 643 Theories of Motivation3
PSY 664 Advanced Social Psychology3
SOC 551 Classical Social Theory3
SOC 561 Social Research3
SOC 563 Qualitative Research3
SOC 632 Seminar in Social Psychology3
SOC 650 Sociological Theory3
SOC 660 Advanced Social Research3
STAT 605 Multivariate Statistics I3
STAT 609 Sampling Methods3

Thesis Option – 6 semester hours

The research and writing of a thesis precludes the taking of comprehensive examinations. This is decided between the student and advisor early in the program and depends on the availability of a research advisor. See the Coordinator of the Kinesiology area for additional information.

Master of Arts in Physical Education Emphasis in Outdoor/Adventure Physical Education

Program Requirements

Complete the required credits specified here.....27
Complete the program electives3

The Master of Arts Program in Outdoor/Adventure Physical Education prepares individuals for professional responsibilities in public school teaching-related or administrative positions and also in similar endeavors within the outdoor/adventure network. Supervised clinical practica are provided at both on- and off-campus sites.

Required Credits — 27 semester hours

KINE 580 Advanced Prevention, Care and Rehabilitation of Athletic Injuries.....3
PE 602 Introduction to Research in Physical Education and Kinesiology3
PE 614 Analysis of Teaching in Physical Education3
PE 630 Adventure Ropes Course Certification3
PE 631 Outdoor Physical Education and Adventure Education3
PE 640 Curriculum in Physical Education3
PE 692 Graduate Internship in Physical Education3
PE 675 Management of Sport Facilities and Equipment3

Master of Arts in Physical Education Emphasis in Pedagogy

Program Requirements

Complete the required credits specified here.....21
Complete supporting area credits.....9

The Master of Arts Program in the School of Kinesiology and Physical Education has been designed to provide a graduate experience for individuals in physical education or related fields with emphases in teaching, coaching or administration. Candidates who complete this degree will enhance their professional careers in teaching and non-teaching settings. Students will be able to focus their immediate and future graduate education goals by electing to emphasize the study of teaching, coaching or administration. Career opportunities might include teaching, coaching or administration in the school setting (K-12) or in institutions of higher education.

Required Credits — 21 semester hours

PE 602 Introduction to Research in Physical Education and Kinesiology3
PE 612 Measurement of Human Performance3
PE 614 Analysis of Teaching in Physical Education3
PE 640 Curriculum in Physical Education3
PE 641 Instructional Strategies for Elementary School Physical Education.....3
PE 642 Instructional Strategies for Secondary School Physical Education3
PE 680 Perspectives in Physical Education3

Supporting Area Credits — 9 semester hours

Choose electives based on emphasis area and career goals. Must have approval of advisor.

Teaching

PE 622 Directed Studies3
PE 630 Adventure Ropes Course Certification3
PE 631 Outdoor Physical Education and Adventure Education3
PE 685 Critical Pedagogy3
PE 692 Graduate Internship in Physical Education3
PE 695 Seminar in Physical Education3
PE 696 College Teaching in Kinesiology and Physical Education.....3

Note that PE 692 may be taken with approved faculty only.

Students must select one of the following two courses:

PE 641 Instructional Strategies for Elementary School Physical Education.....3
PE 642 Instructional Strategies for Secondary School Physical Education.....3

Elective Credits — 3 semester hours

Electives based upon program and career goals. Must have approval of advisor and program faculty.

Thesis Option — 6 semester hours

The research and writing of a thesis does not preclude the taking of comprehensive examinations. This option is decided between the student and advisor early in the program and depends upon the availability of a research advisor. See school's Graduate Coordinator for additional information.

Note

PE 692 is recommended to be taken at programs such as National Outdoor Leadership School (NOLS), Colorado Outward Bound School (COBS) and Kent Mountain Adventure Center. Special consideration will be given to applicants who possess a teaching certificate in physical education, advanced first aid and CPR, and WSI.

Administration

PE 550 Program Management3
PE 576 Sport Promotion and Marketing3
PE 660 Sport Personnel Management3
PE 675 Management of Sports Facilities and Equipment3
PE 688 Legal Aspects3

Kinesiology

KINE 620 Advanced Anatomical Kinesiology3
KINE 621 Advanced Mechanical Kinesiology3
KINE 623 Advanced Neuromotor Kinesiology3
KINE 624 Advanced Developmental Kinesiology3
KINE 626 Advanced Physiological Kinesiology3
KINE 635 Exercise and Sports Psychology3
KINE 670 Advanced Sociological Kinesiology.....3

Research

EPRE 602 Elements of Statistics3
EPRE 603 Analysis of Variance3
PE 615 Qualitative Research in Physical Education, Recreation and Kinesiology3
PE 699 Thesis (Optional)6

Note

The research and writing of a thesis precludes the taking of comprehensive examinations. This is decided between the student and advisor early in the program and depends on the availability of a research advisor. See Schools' Graduate Coordinator for additional information.

Master of Arts in Physical Education Emphasis in Sport Administration

Program Requirements

Complete the required credits specified here.....21
Complete program electives9

The curriculum is designed to follow the guidelines set forth 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 physical education, athletic and commercial sport programs. The MA program requires a minimum of 30 hours.

Required Credits — 21 semester hours

PE 550 Program Management.....	3
PE 560 Issues and Ethics in Sport Management.....	3
PE 576 Sport Promotion and Marketing.....	3
PE 602 Introduction to Research in Physical Education and Kinesiology.....	3
PE 675 Management of Sport Facilities and Equipment.....	3
PE 680 Perspectives in Physical Education and Sport.....	3
PE 688 Legal Aspects.....	3

Elective Credits — 9 semester hours

Students are allowed 9 hours of electives in the master's program. These courses are selected to meet the unique needs of each student in consultation with his or her advisor. The following areas may serve as a guide to the possible cognate areas, which students may elect to pursue.

ECON 502 Advanced Contemporary Economic Problems.....	3
ELPS 610 School Finance and Budgeting.....	3
ELPS 656 Decision Theory.....	3
ELPS 661 Law and Higher Education.....	3

ELPS 652 Personnel Management in Higher Education.....	3
ELPS 659 Collective Bargaining and Conflict Management.....	3
KINE 670 Advanced Sociological Kinesiology.....	3
PE 612 Measurement of Human Performance.....	3
PE 614 Analysis of Teaching in Physical Education.....	3
PE 640 Curriculum in Physical Education.....	3
REC 568 Programs in Recreation.....	3
REC 678 Organization and Operation of Park and Recreation Services.....	3

Note that PE 692 Graduate Internship in Physical Education may be used for up to 6 hours of electives and is designed to assist students who wish to make career changes or who need to bridge the gap between theory and experience.

Thesis Option — 6 semester hours

The research and writing of a thesis precludes the taking of comprehensive examinations. This is decided between the student and advisor early in the program and depends upon the availability of a research advisor. See School's Graduate Coordinator for additional information.

Deficiencies

Students may be required to have graduate coursework as a part of their program of study in the following kinesiology areas.

KINE 620 Advanced Anatomical Kinesiology
KINE 621 Advanced Mechanical Kinesiology
KINE 623 Advanced Neuromotor Kinesiology
KINE 624 Advanced Developmental Kinesiology
KINE 626 Advanced Physiological Kinesiology

Doctor of Education in Physical Education

Emphasis in Kinesiology

Program Requirements

Complete the required credits specified here.....28
 Complete concentration area credits.....36

The Doctor of Education in Physical Education is offered through the School of Kinesiology and Physical Education. The following concentration areas are offered by Kinesiology to students pursuing this degree Mechanical Kinesiology, Physiological Kinesiology and Social Psychological Kinesiology.

Four of the following six advanced kinesiology courses or their equivalents are prerequisites to KINE 690: Problems of Human Movement. "Equivalent" indicates a student possesses the necessary knowledge and competencies acquired through previous coursework, independent study or experience. The competencies will be determined by the program advisor in consultation with the course instructors of the advanced class at the time of entry into the program. The advanced kinesiology classes may be used to count credit in the concentration area if approved by the program advisor.

Kinesiology Competencies

KINE 620 Advanced Anatomical Kinesiology3
 KINE 621 Advanced Mechanical Kinesiology.....3
 KINE 623 Advanced Neuromotor Kinesiology3
 KINE 624 Advanced Developmental Kinesiology3

KINE 626 Advanced Physiological Kinesiology.....3
 KINE 670 Advanced Sociological Kinesiology.....3

Research Competencies

EPRE 600 Introduction to Graduate Research3
 PE 602 Introduction to Research in Physical Education and Kinesiology3
 or equivalent*

Required Credits — 28 semester hours

EPRE 602 Elements of Statistics.....3
 EPRE 603 Analysis of Variance (or other*)3
 KINE 625 Laboratory Techniques in Kinesiological Research3
 KINE 690 Problems of Human Movement.....3
 KINE 797 Doctoral Proposal Research.....4
 KINE 799 Doctoral Dissertation.....12

*These decisions are to be made in consultation with the program advisor.

Concentration Area Credits — 36 semester hours

Courses are selected in a highly focused concentration area with the consent of the program advisor.

Note

Specific requirements for each concentration area may be obtained from the Coordinator of Kinesiology Programs.

Doctor of Education in Physical Education

Emphasis in Pedagogy

Program Requirements

Complete the required credits specified here.....50
 Complete program electives15

Students who successfully complete this degree 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 Department. The Department 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:

- KINE 620 Advanced Anatomical Kinesiology
- KINE 621 Advanced Mechanical Kinesiology
- KINE 623 Advanced Neuromotor Kinesiology
- KINE 624 Advanced Developmental Kinesiology
- KINE 626 Advanced Physiological Kinesiology

Required Credits — 50 semester hours

EPRE 602 Elements of Statistics.....3
 EPRE 603 Analysis of Variance.....3
 PE 614 Analysis of Teaching in Physical Education3
 PE 615 Qualitative Research in Physical Education, Recreation
 and Kinesiology3
 PE 640 Curriculum in Physical Education3
 PE 641 Instructional Strategies for Elementary School Physical Education3
 PE 642 Instructional Strategies for Secondary School Physical Education3
 PE 685 Critical Pedagogy3
 PE 695 Seminar in Physical Education4
 PE 696 College Teaching in Kinesiology and Physical Education3
 PE 703 Research Seminar in Physical Education3
 PE 797 Doctoral Research Proposal4
 PE 799 Doctoral Dissertation12
 Note that PE 695 is a two-hour class that must be taken twice.

Required Elective Credits — 15 semester hours

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.

Doctor of Education in Physical Education

Emphasis in Sport Administration

Program Requirements

Complete the required credits specified here.....51
 Complete program electives13

This curriculum is designed to follow the guidelines set forth 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 physical education, athletic and commercial sport programs.

Required Credits — 51 semester hours

PE 576 Sport Promotion and Marketing	3
PE 635 Seminar in Sport Administration	2
PE 650 Financial Management for Sport Organizations	3
PE 660 Sport Personnel Management	3
PE 675 Management of Sport Facilities and Equipment	3
PE 676 Sport Public Relations and Information Systems	3
PE 678 Event Development and Management.....	3
PE 688 Legal Aspects.....	3
PE 703 Research Seminar in Physical Education	3
PE 797 Doctoral Research Proposal	4
PE 799 Doctoral Dissertation	12
KINE 670 Advanced Sociological Kinesiology	3
EPRE 602 Elements of Statistics.....	3
EPRE 603 Analysis of Variance.....	3

Required Elective Credits — 13 semester hours

Students are allowed 13 hours of electives in the doctoral program (64 credits beyond the Master's is required for graduation). These courses are selected to meet the unique needs of each student in consultation with his or her advisor. The following areas may serve as a guide to the possible cognate areas, which students may elect to pursue.

ELPS 650 School Finance and Budgeting.....	3
ELPS 652 Personnel Management in Higher Education	3
ELPS 659 Collective Bargaining and Conflict Management in Education	3
ELPS 661 Law and Higher Education	3
PE 640 Curriculum in Physical Education	3
PE 612 Measurement of Human Performance	3
ECON 502 Advanced Contemporary Economic Problems.....	3
REC 568 Programs in Recreation	3
REC 678 Organization and Operation of Park and Recreation Services	3

Note

PE 692 Graduate Internship in Physical Education may be used for up to 6 hours of electives and is designed to assist students who wish to make career changes or who need to bridge the gap between theory and experience. Graduate Workshops are also offered and students are limited to 9 hours in use toward graduation.

Deficiencies

Students may be required to have graduate coursework as a part of their program of study in the following kinesiology areas.

KINE 620 Advanced Anatomical Kinesiology	3
KINE 621 Advanced Mechanical Kinesiology.....	3
KINE 623 Advanced Neuromotor Kinesiology.....	3
KINE 624 Advanced Developmental Kinesiology	3
KINE 626 Advanced Physiological Kinesiology.....	3

Bachelor of Science in Recreation

Program Requirements	
Required program/major credits	40
Elective credits	40
General Education	40
Specified credits	13
Remaining credits	27
Total credits required for this degree	120

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, industrial, military and therapeutic settings.

The Recreation curriculum is designed to provide the student with leadership and mid-management skills as well as philosophies and knowledge of a variety of recreation settings. A 12-hour internship is required of all senior recreation majors at the end of their academic program and includes a variety of locations and experiences from which to choose. The purpose of the internship program is to provide for an effective transition for students from the classroom to the practical situation. Students must have completed REC 451, REC 468, REC 472 and REC 495 and have a minimum GPA of 2.5 in major courses before beginning their 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 must have a current First Aid and CPR certificate before internship.

Required Credits — 40 semester hours	
REC 203 Introduction to Recreation and Leisure	3
REC 204 Introduction to Therapeutic Recreation	3
REC 264 Social and Cultural Recreation Skills	3
REC 269 Recreation Management Skills	4
REC 394 Practicum in Recreation and Leisure Services	3
REC 451 Administration of Leisure Delivery Systems	3
REC 468 Programs in Recreation	3
REC 472 Recreation Leadership	3
REC 492 Internship in Recreation	12
REC 495 Senior Seminar	3
Note that this is a NRPA/AALR Accredited Program.	

General Education, Specified Credits — 13 semester hours

Category 2 — Mathematics	
STAT 150 Introduction to Statistical Analysis	3
or	
STAT 250 Statistics for Health Sciences	3
Category 5 — Social Sciences	
PSY 230 Human Growth and Development	4
ECON 105 Introduction to Economics: Macroeconomics	3
or	
ECON 105 Introduction to Economics: Microeconomics	3
Category 4 — Arts and Letters	
HIST 100 Survey of American History from its Beginning to 1877	3
or	
HIST 101 Survey of American History from 1877 to the present	3

Therapeutic Recreation Option — 19-21 semester hours

Students who elect to complete the Therapeutic Recreation Option 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). In order to sit for the certification exam, NCTRC requires that the following coursework be completed in addition to those in the Recreation major:

REC 415 Clinical Aspects of Therapeutic Recreation	3
REC 416 Procedures and Techniques of Therapeutic Recreation	3
REC 421 Contemporary Problems in Therapeutic Recreation Service	3
REC 426 Seminar in Recreation Program Development in Therapeutic Recreation	3
PSY 355 Abnormal Psychology	3
ZOO 245 Introduction to Human Anatomy and Physiology	4
or	
KINE 220 Anatomical Kinesiology	3
and	
KINE 222 Physiological Kinesiology	3

Master of Arts in Recreation

Program Requirements

Complete the required credits specified here.....18
 Complete program electives12

The master's degree program in recreation is the only advanced degree program of this type in the State of Colorado. The curriculum in this degree program is designed to prepare the student for careers in recreation as an administrator, supervisor, educator or researcher. The program is structured such that students holding undergraduate degrees in allied fields can successfully complete the degree in their chosen area of recreation. Career opportunities are varied and may include mid-management positions in community, medical, industrial, clinical, governmental, commercial or educational settings.

Admission

In addition to meeting the admission requirements of the Graduate School, the student must send DIRECTLY TO THE DEPARTMENT: a) two letters of recommendation, b) Miller Analogies Test Scores, and c) a Statement of Interest covering the following topics (maximum of ten pages double-spaced).

- What factors and events motivated your interest in recreation? Discuss your attitude and philosophy toward the field of leisure services in general and your personal leisure in particular. Also describe your attitude or philosophy towards research and its importance to the field of recreation.
- What are your educational and career goals? In what role and in what type of organizational setting would you ultimately like to be employed?
- What past exposure have you had to recreation/leisure services? Include any coursework or work experience (paid or volunteer) you have had related to recreation or leisure services. If you have had none, provide a justification of your current interest in the field.
- 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.

Required Credits — 18 semester hours

HRS 610 Interpretation and Evaluation of Behavioral Research.....	3
REC 610 Evaluation of Recreation and Leisure Services.....	3
REC 675 Areas and Facilities in Physical Education and Recreation.....	3
REC 676 Seminar in Contemporary Problems in Recreation	3
REC 677 Parks and Recreation Management.....	3
REC 678 Organization and Operation of Park and Recreation Services	3

Elective Credits — 12 semester hours

Appropriate with student career goals. Approval by advisor required.

Note that for students without an undergraduate degree in recreation, additional courses (corequisites) may be required.

Therapeutic Recreation Option — 19-21 semester hours

Graduate students who elect to complete the Therapeutic Recreation Certification Option 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). In order to sit for the certification exam, NCTRC requires that the following coursework be completed in addition to those in the Master's Program in Recreation:

REC 415 Clinical Aspects of Therapeutic Recreation	3
REC 416 Procedures and Techniques of Therapeutic Recreation.....	3
REC 421 Contemporary Problems in Therapeutic Recreation Service	3
REC 426 Seminar in Recreation Program Development in Therapeutic Recreation	3
PSY 355 Abnormal Psychology.....	3
Zoo 245 Introduction to Human Anatomy and Physiology.....	4
or	
KINE 220 Anatomical Kinesiology.....	3
and	
KINE 222 Physiological Kinesiology	3

Gerontology Graduate Certificate Program (Non-Degree)

Program Requirements

Complete the required credits specified here.....22

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.

Required Credits — 22 semester 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

Minor in Communication Disorders

Total credits required for this minor.....19

Required Credits — 19 semester hours

CMDS 160 Introduction to Human Communication and Its Disorders	3
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 365 Language Disorders in Children I	3
CMDS 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.

Laboratory material fees are assessed for the following course: CMDS 370.

Minor in Community Health Education

Required credits

Required elective credits

Total credits required for this minor.....25

Required Credits — 19 semester hours

CH 205 Issues in Health.....	3
CH 209 Foundations of Health Promotion/Education.....	3
CH 299 Community Health Systems.....	3
CH 350 Health Promotion/Health Education Strategies	4
CH 342 Modern Concepts of Health and Disease	3
CH 410 Introduction to Program Planning and Evaluation	3

Required Elective Credits — 6 semester hours

Elective units selected with consent of advisor.

Minor in Nutrition

Required credits

Required elective credits

Total credits required for this minor.....20

Required Credits — 14 semester hours

CHEM 108 Fundamentals of Chemistry I	5
or	
CHEM 111 Principles of Chemistry	5
FND 251 Introductory Nutrition	3
FND 252 Nutrition in the Life Cycle.....	3
FND 455 Nutrition for Fitness and Athletic Performance	3

Elective Credits — 6 hours

FND 210 Medical Terminology.....	2
FND 430 Clinical Nutrition I.....	3
FND 431 Clinical Nutrition II.....	3
FND 451 Advanced Nutrition	3
FND 357 Nutrition in Health and Illness	4
FND 420 Maternal and Child Nutrition	3
FND 452 Community Nutrition	3
KINE 404 Exercise Nutrition and Body Composition.....	3

Minor in Gerontology

Required credits.....18

Required elective credits.....6

Total credits required for this minor.....24

Required Credits — 18 semester hours

QERO 205 Introduction to Gerontology.....	3
QERO 460 Community Resources for the Elderly	4
QERO 465 Management Concepts in Aging Services.....	3
HRS 394 Practicum in Human Services	2
PSY 331 Maturity and Aging	3
SOC 371 Sociology of Aging	3

Required Elective Credits — 6 semester hours (minimum)

CH 256 Health and Lifestyles Among the Elderly.....	3
CMDS 470 Communication Disorders of the Aging	2
QERO 235 Issues in Adulthood	3
QERO 395 Special Topics	3
REC 251 Leisure, Recreation and the Older Adult	3

Note

The minor in Gerontology is designed to provide students who are majoring in other areas a broad overview of the aging process.

Minor in Physical Education — Coaching

Total credits required for this minor.....18

Required Credits — 18 semester hours

KINE 380 Prevention and Care of Sports Injuries.....	2
PE 211 Weight Training and Anatomy.....	3
PE 212 Fitness and Conditioning and Physiology	3
PE 233 Advanced First Aid/CPR.....	2
PE 335 Sports Pedagogy	2
PE 461 Administration and Law	2

Take two of the following coaching and officiating courses — 4 semester hours

PE 312 Coaching and Officiating Baseball	2
PE 313 Coaching and Officiating Basketball	2
PE 314 Coaching and Officiating Football	2
PE 315 Coaching and Officiating Gymnastics.....	2
PE 316 Coaching and Officiating Tennis.....	2
PE 317 Coaching and Officiating Track and Field	2
PE 318 Coaching and Officiating Soccer	2
PE 319 Coaching and Officiating Softball.....	2
PE 320 Coaching and Officiating Swimming	2
PE 321 Coaching and Officiating Volleyball	2
PE 322 Coaching and Officiating Wrestling	2

Notes

The coaching minor has been designed to prepare students to assume coaching roles in school and non-school settings.

The coaching minor candidate must have been a high school varsity athlete in at least one of the Coaching and Officiating areas in which the candidate is enrolled. If the student has not been a varsity athlete, the student must also complete two courses in the Analysis and Teaching Sports series before enrolling in the Coaching and Officiating courses in the same sports.

Minor in Physical Education (K-12) Teaching

Total credits required for this minor.....21-22

Required Credits — 21-22 semester hours

PE 210 Movement Fundamentals and Motor Development.....	3
PE 211 Weight Training and Anatomy	3

or

PE 212 Fitness and Conditioning and Physiology	3
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Students are required to take two of the following individual sport activity courses — 4 or 5 semester hours

PE 116 Water Safety Instructor.....	2
PE 208 Analysis and Teaching of Tumbling and Gymnastics.....	2
PE 226 Analysis and Teaching of Racquet Sports	2
PE 227 Analysis and Teaching of Track and Field	2
PE 228 Analysis and Teaching of Wrestling	2
PE 229 Adventure Activities and Motor Learning	3
PE 230 Analysis and Teaching of Self Defense	2

Students are required to take two of the following team sport activity courses — 4 semester hours

PE 215 Analysis and Teaching of Basketball.....	2
PE 216 Analysis and Teaching of Football	2
PE 217 Analysis and Teaching of Soccer	2
PE 218 Analysis and Teaching of Softball	2
PE 219 Analysis and Teaching of Volleyball	2

Block

Students must take the following four courses that make up the Professional Methods Block, concurrently and at UNC. Students must be accepted into PTE before taking Methods Block courses.

PE 344 Clinical Experiences in Teaching Physical Education	3
PE 345 Methods of Teaching Elementary Physical Education	2
PE 346 Methods of Teaching Secondary Physical Education.....	2
PE 347 Tests and Measurements in Physical Education.....	2

Note that PE 344 is a PTE course and is not included in the 21-22 hour minor.

Notes

The minor in physical education has been designed primarily for students who would like a second teaching area in physical education or who would like to become qualified to coach athletic teams in school and non-school settings.

The strength of this minor is based on the unique integration of courses in skill analysis, movement sciences and teaching methodology.

Students must pass basic skills competency examinations in Movement Fundamentals and must pass knowledge and analysis competencies in each of the other required activity classes. Specific requirements relative to these competency tests are available from advisors and the school director's office.

Minor in Recreation**Total credits required for this minor.....22****Required Credits — 22 semester hours**

REC 203 Introduction to Recreation and Leisure Studies	3
REC 204 Introduction to Therapeutic Recreation.....	3
REC 264 Social and Cultural Recreation Skills.....	3
REC 269 Recreation Management Skills.....	4
REC 394 Practicum in Recreation and Leisure.....	3
REC 468 Programs in Recreation	3
REC 472 Recreation Leadership.....	3

Note

The minor in recreation prepares students for secondary careers in community or commercial 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.

Minor in Rehabilitative Services**Total credits required for this minor.....18****Required Credits — 18 semester hours**

HRS 290 Introduction to Human 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

Note that the three-hour practicum (HRS 394) should reflect the theme of the student's interest area in the minor.

Minor in School Health Education**Required credits19****Required elective credits6****Total credits required for this minor.....25****Required Credits — 19 semester hours**

CH 205 Issues in Health.....	3
CH 209 Foundations of Health Promotion/Education.....	3
CH 238 Contemporary Issues in Drug Abuse	3
CH 303 Health in the Elementary School	1
CH 336 Human Sexuality	3
CH 342 Modern Concepts of Health and Disease	3
CH 343 Methods and Observations of Health Education	3

Required Elective Credits — 6 semester hours

Elective credits selected with consent of advisor.

Programs of Study

College of Performing and Visual Arts

Music and Music Education	214
Musical Theatre	227
Theatre Arts and Dance	228

Visual Arts	233
Minors	237

Location: Frasier 101; Telephone: 970-351-2194
Howard Skinner, Dean

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, dance and theatrical performances.

The college maintains Helen Langworthy Theatre, a 612-seat fully rigged theatre with production areas; Gray Theatre, an experimental space seating up to 125; and Foundation Hall, which seats 550 and is used primarily by the School of Music.

School of Music

Location: Frasier Hall 105; Telephone: 970-351-2678

Shirley Howell, Director; Gene Aitken, Associate Director; Robert Ehle, Graduate Coordinator

Professors — A. Eugene Aitken, PhD; Edwin D. Baker, MM; R. Evan Copley, PhD; Elza L. Daugherty, EdD; Robert Ehle, PhD; James Fittz, DMA; Richard C. Fuchs, MM; Carl Gerbrandt, DMA; Roger Greenberg, MM; Jack Herrick, MM; David MacKenzie, DMA; William A. Pfund, MM; Kenneth Singleton, DMA; Howard M. Skinner, DM; James S. Upton, PhD

Associate professors — H. Gray Barrier, MM; Charmaine Coppom, MA; Rob Hallquist, DMA; Errol Haun, DMA; Shirley E. Howell, DA; Kathy B. Moore, PhD; Thomas Poole, MAE; Laura Rhoades, DA; Jack C. Robinson, MM

Assistant professors — Vergie Amendola, MM; Jonathan Bellman, DMA; Diane Bolden-Taylor, MM; Calen F. Darrough, DMA; Charles Hansen, MM; C. Gregory Hurley, PhD; Lesley Manring, MM; Richard Mayne, PhD; Charlotte Mills, DME; Juliet White-Smith, MM

Approximately 450 music majors annually have made UNC 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. The School maintains more than 50 performing ensembles, a number of which are nationally recognized.

The UNC School of Music, with 34 full-time and six 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 one of the most active summer performance programs in the Rocky Mountain region. 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.

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 Admission's 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 970-351-2678.

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.

English Essay Exam

Every student must pass the English Essay Examination at the University of Northern Colorado to graduate. The requirement may not be challenged or waived. This examination must be passed at least one semester before the semester the student graduates. The scheduled examination may be taken at any point, but students are expected to take it before the end of the first semester of their junior year. The examination is evaluated on a satisfactory/unsatisfactory basis and may be retaken any number of times. There is a fee to retake the examination. Additional information can be obtained from the English Department, Michener L50, phone 970-351-1576.

Individual Performance

Students with education emphasis should enroll for a half-hour lesson each week for two hours credit. Students with performance emphasis should enroll for a one hour lesson each week for four hours credit.

Performance Organizations

The music major must participate each semester in a major musical organization, in which his or her instrument normally belongs — band, orchestra or choir.

Major Musical Organizations

267/467/667 University Symphony Orchestra
 268/468/668 Chamber Orchestra
 280/480/680 Mixed Concert Choir
 281/481/681 Women's Glee Club
 284/484/684 Men's Glee Club
 287/487/687 Summer Symphonic Band
 288/488/688 Concert Band
 289/489/689 University Brass Choir
 290/490/690 Symphonic Band
 291/491/691 Wind Ensemble
 297/497/697 Summer Festival Orchestra

Graduate Admission

Admission to the Graduate School does not guarantee admission to the School of Music. 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.

Theatre Arts and Dance

Location: Frasier Hall 108; Telephone: Theatre Arts — 970-351-2454;
 Dance — 970-351-2597
 Thomas P. McNally, Chair

Professors — Sandra Minton, Ph.D.

Associate professors — Karen Genoff-Campbell, MA; Raymond V. Fulkerson, MA; Ronald B. Gloekler, MA; Daniel G. Guyette, MFA; Thomas McNally, MFA

Assistant professors — Mary Martin, MA; Jeffrey Marc Rockland, MFA; Sheldon R. Wilhelm, MFA

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 Concerts Under the Stars 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.

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 970-351-2454.

Transfer students planning to major in Musical Theatre are required to submit a separate application to the Musical Theatre Program. The College of Performing and Visual Arts provides a Musical Theatre application and instructions when receiving an inquiry or an Application for Admission that specifies a Musical Theatre major. 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 970-351-2454.

English Essay Exam

Every student must pass the English Essay Examination at the University of Northern Colorado to graduate. The requirement may not be challenged or waived. This examination must be passed at least one semester before the semester the student graduates. The scheduled examination may be taken at any point, but students are expected to take it before the end of the first semester of their junior year. The examination is evaluated on a satisfactory/unsatisfactory basis and may be retaken any number of times. There is a fee to retake the examination. Additional information can be obtained from the English Department, Michener L50, phone 970-351-1576.

Visual Arts

Location: Guggenheim Hall; Telephone: 970-351-2143, 2477
 Richard S. Munson, Chair; Richard C. Luster, Coordinator of Graduate Studies

Professors — Betty E. Carlisle, EdD; Michael A. Coronel, MA; Dennis Morimoto, EdD; Richard S. Munson, PhD; Robert B. Turner, EdD

Associate professors — Eugene Hoffman; Virginia Jenkins, MFA; Richard C. Luster, MFA

Assistant professors — Margaret Sunday, MFA; Anna Ursyn, MFA

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.

English Essay Exam

Every student must pass the English Essay Examination at the University of Northern Colorado to graduate. The requirement may not be challenged or waived. This examination must be passed at least one semester before the semester the student graduates. The scheduled examination may be taken at any point, but students are expected to take it before the end of the first semester of their junior year. The examination is evaluated on a satisfactory/unsatisfactory basis and may be retaken any number of times. There is a fee to retake the examination. Additional information can be obtained from the English Department, Michener L50, phone 970-351-1576.

Bachelor of Music

Emphasis in Instrumental Performance

Program Requirements

Required credits	78
Required elective credits in Music	8
General Education (40 credits):	
6 credits already included in requirements above	
Remaining General Education credits needed	34
Total credits required for this degree	120

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.

The degree prepares performers at a professional level. It also prepares them for advanced work in graduate school.

Required Credits — 78 semester 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
Select four credits, in consultation with advisor, from the following:	4
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)	
MUS 201 Advanced Sight-Singing and Theory I	3
MUS 202 Advanced Sight-Singing and Theory II	3
MUS 243 History of Music I	3
MUS 244 History of Music II	3

Bachelor of Arts in Music

Emphasis in Liberal Arts

Program Requirements

Required credits	52
Required elective credits in Music	6
Required Foreign Language credits	10
General Education (40 credits):	
6 credits already included in requirements above	
Remaining General Education credits needed	34
Required minor outside Music with minimum credits	18
Total credits required for this degree	120

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.

Required Credits — 52 semester 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 301 18th Century Counterpoint	2
MUS 302 Form and Analysis	2
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
Select two credits from the following:	2
MUS 426 Orchestral Excerpts: Percussion (1)	
MUS 427 Orchestral Excerpts: Strings (1)	
MUS 428 Orchestral Excerpts: Brass (1)	
MUS 429 Orchestral Excerpts: Woodwinds (1)	
Major Musical Organization (Minimum)	8
Individual Performance (Minimum)	28

Required Elective Credits in Music — 8 semester hours

A minimum of two credits must be in the major area.

Notes

Students must take Individual Performance and Major Musical Organization during each semester in residence.

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.

MUS 100 Recitals, Concerts and Productions must be taken each semester in residence.

MUS 243, 244 may count toward General Education requirements; one for the Fine Arts category, the other as an elective in the content area.

MUS 201 Advanced Sight-Singing and Theory I	3
MUS 202 Advanced Sight-Singing and Theory II	3
MUS 243 History of Music I	3
MUS 244 History of Music II	3
MUS 301 18th Century Counterpoint	2
MUS 302 Form and Analysis	2
Individual Performance	16
Major Musical Organizations	8

Required Elective Credits in Music — 6 semester hours

Required Foreign Language Credits — 10 semester hours

Notes

MUS 100 Recitals, Concerts and Productions must be taken each semester in residence.

Two foreign language courses may count toward General Education requirements and electives in the content area.

MUS 243, 244 may count toward General Education requirements; one for the Fine Arts category, the other as an elective in the content area.

Students must take Individual Performance and Major Musical Organizations during each semester in residence.

Bachelor of Music

Emphasis in Piano

Program Requirements

Required credits in Music	84
Required elective credits in Music	3
General Education (40 credits):	
6 credits already included in requirements above	
Remaining General Education credits needed	34
Total credits required for this degree	121

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.

The program prepares performers at a professional level or to enter graduate school in the same area of emphasis.

Required Credits — 84 semester 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 243 History of Music I	3
MUS 244 History of Music II	3

Bachelor of Music

Emphasis in Theory and Composition

Program Requirements

Required credits	76-80
Required elective credits in Music	10
General Education (40 credits):	
6 credits already included in requirements above	
Remaining General Education credits needed	34
Total credits required for this degree	120-124

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.

The program prepares theorists and composers at a professional level. It also prepares them for advanced work in graduate school.

Required Credits — 76-80 semester 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
Select 8-12 credits, in consultation with advisor, from the following:	8-12
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)	
MUS 201 Advanced Sight-Singing and Theory I	3
MUS 202 Advanced Sight-Singing and Theory II	3
MUS 243 History of Music I	3
MUS 244 History of Music II	3
MUS 277 Individual Instruction in Composition	8
MUS 477 Individual Instruction in Composition	8
MUS 301 18th Century Counterpoint	2
MUS 302 Form and Analysis	2
MUS 303 Instrumentation	2
MUS 319 Instrumental Techniques and Conducting	1

MUS 301 18th Century Counterpoint	2
MUS 302 Form and Analysis	2
MUS 323 Choral Techniques and Conducting	2
MUS 348 Accompanying and Coaching I	2
MUS 349 Accompanying and Coaching II	2
MUS 352 353 Principles of Piano Teaching I, II	4
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 Organizations	8

Required Elective Credits in Music — 3 semester hours

Notes

Students must take Individual Performance and Major Musical Organization during each semester in residence.

MUS 100 Recitals, Concerts and Productions must be taken each semester in residence.

MUS 243, 244 may count toward General Education requirements; one for the Fine Arts category, the other as an elective in the content area.

MUS 323 Choral Techniques and Conducting	2
MUS 403 Acoustics of Music	2
MUS 422 Directed Studies (Form and Analysis)	3
MUS 422 Directed Studies (Electronic Music)	3
MUS 422 Directed Studies (Pedagogy of Theory)	3
Major Musical Organizations	8

Required Electives in Music — 10 semester hours

Notes

Students must take individual instruction in composition each semester after being admitted to the program.

Students must take major ensemble during each semester in residence.

MUS 100 Recitals, Concerts and Productions must be taken 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.

MUS 243, 244 may count toward General Education requirements; one for the Fine Arts category, the other as an elective in the content area.

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.

Bachelor of Music

Emphasis in Voice Performance

Program Requirements

Required credits	80-84
Required Foreign Language credits	18
General Education (40 credits):	
6 credits already included in requirements above	
Remaining General Education credits needed	34
Total credits required for this degree	132-136

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.

The degree prepares performers at a professional level. It also prepares them for advanced work in graduate school.

Required Credits — 80-84 semester 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 243 History of Music I	3
MUS 244 History of Music II	3
MUS 301 18th Century Counterpoint	2
MUS 302 Form and Analysis	2

Select four credits, in consultation with advisor, from the following:4-8

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)

Select four credits, in consultation with advisor, from the following:4

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)

Note that placement in the above courses is by audition.

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

Required Foreign Language Credits — 18 semester hours

Two foreign language courses may count toward General Education requirements and electives in the content area.

Notes

Placement in MUS 285, MUS 485 or MUS 286, MUS 486 is by audition and advisement. Four semesters required.

Students must take Individual Performance and Major Musical Organization during each semester in residence.

MUS 100 Recitals, Concerts and Productions must be taken each semester in residence.

MUS 243, 244 may count toward General Education requirements; one for the Fine Arts category, the other as an elective in the content area.

Bachelor of Music Education

Emphasis in Instrumental Music Education

Program Requirements

Required credits	73
Required elective credits in Music	6
General Education (40 credits):	
6 credits already included in requirements above	
Remaining	34
PTE program	40
Total credits required for this degree	153

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 at the elementary or secondary levels in instrumental music.

Required Credits — 73 semester 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 Style II	2
MUS 163 Beginning String Instruction I	1
MUS 164 Beginning String Instruction II	1
MUS 201 Advanced Sight-Singing and Theory I	3
MUS 202 Advanced Sight-Singing and Theory II	3
MUS 210 Introduction to Music Education	1
MUS 243 History of Music I	3
MUS 244 History of Music II	3
Select four credits from the following:	4
MUS 301 18th Century Counterpoint (2)	
MUS 302 Form and Analysis (2)	
MUS 303 Instrumentation (2)	
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	1
MUS 319 Instrumental Techniques and Conducting	1
MUS 320 Wind Literature, Pedagogy and Conducting	2
MUS 321 Orchestral/String Literature, Pedagogy and Conducting	2
MUS 325 Choral Methods and Literature for Elementary and Secondary Schools	1
MUS 356 Marching Band 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
MUS 414 Music for Students with Special Needs	2
Individual Performance	14
Major Musical Organizations	7

Required Elective Credits in Music — 6 semester hours

MUS 241 Perceiving the Arts (3)	
MUS 307 History of Instruments and Instrumental Practice (3)	
MUS 314 Guitar in the Classroom (1)	
MUS 316 Choral Arranging (2)	
MUS 318 Music in Early Childhood (2)	
MUS 340 Survey of History and Literature of Jazz (3)	
MUS 410 Vocal Pedagogy (2)	
MUS 417 Band Arranging (2)	
MUS 452 Orff Schulwerk and Kodaly Choral Method in American Schools (2)	
MUS 457 Multicultural Music Education (2)	

Notes

Students must take private performance and major ensemble during each semester in residence.

MUS 100 Recitals, Concerts and Productions must be taken each semester in residence.

"Residency," when stated in the Music section of this Bulletin, is interpreted to mean 10 credit hours or more per semester.

Meet requirements for admission to the Professional Teacher Education Program. Students pursuing the BME degree who have completed 30 semester hours should apply for admission to the PTE program by the end of the sophomore year.

Junior or senior transfer students must enroll in MUS 210 during their first academic semester.

In addition to meeting the requirements for admission to PTE, Music Education majors must:

- Demonstrate an acceptable level of performance on their major instrument. Evaluation will be through jury examinations conducted by music faculty and scheduled performances in the weekly recital series.
- Demonstrate proficiency in functional piano to the satisfaction of piano faculty. A conference/audition concerning previous study will be scheduled for each entering student to determine placement in the piano curriculum.
- Attain a minimum grade of C in the following required music theory courses: MUS 101, 102, 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, 102, or 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.
- Meet all music performance and recital attendance requirements listed in the respective departmental handbooks.
- Continue to show professional growth in becoming a music educator.

Failure to do so will result in PTE probation of not less than one semester. Continued deficiencies may result in the student being dropped from the PTE Music Education curriculum.

MUS 243, 244 may count toward General Education requirements; one for the Fine Arts category, the other as an elective in the content area. MUS 292, 492 Marching Band is required for two semesters for BME wind and percussion majors.

BME students will be required to write an exit examination in music education at the completion of the required coursework in music education.

Bachelor of Music Education

Emphasis in Vocal, Piano and General Music Education

Program Requirements

Required credits	71-75
Required elective credits in Music	11
General Education (40 credits):	
12 credits already included in requirements above and the PTE program	
Remaining General Education credits needed	28
PTE program	40
Total credits required for this degree	150-154

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 at the elementary and secondary levels in vocal and general music.

Required Credits — 71-75 semester 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
Select four credits, in consultation with advisor, from the following:	4
MUS 160 Beginning Class Piano I (Vocal Majors) (1)	
MUS 161 Beginning Class Piano II (Vocal Majors) (1)	
MUS 260 Intermediate Class Piano I (Vocal Majors) (1)	
MUS 261 Intermediate Class Piano I (Vocal Majors) (1)	
MUS 271 Individual Performance in Piano (Vocal Majors) (2-4)	
MUS 471 Individual Performance in Piano (Vocal Majors) (2-4)	
MUS 163 Beginning String Instruction	1
MUS 201 Advanced Sight-Singing and Theory I	3
MUS 202 Advanced Sight-Singing and Theory II	3
MUS 210 Introduction to Music Education	1
MUS 243 History of Music I	3
MUS 244 History of Music II	3
Select six credit hours of the following:	6
MUS 269 Individual Performance in Voice (Piano Majors) (2-4)	
MUS 469 Individual Performance in Voice (Piano Majors) (2-4)	
Select four credits from the following:	4
MUS 301 18th Century Counterpoint (2)	
MUS 302 Form and Analysis (2)	
MUS 303 Instrumentation (2)	
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 314 Ouitar in the Classroom	1
MUS 323 Choral Techniques and Conducting	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 359 Woodwind Class	1
MUS 367 Materials and Techniques for Brass and Percussion	1
MUS 410 Vocal Pedagogy (Piano Majors only)	2
MUS 414 Music for Students with Special Needs	2
Individual Performance	14
Major Musical Organizations	7
Required Elective Credits in Music — 11 semester hours	
MUS 241 Perceiving the Arts	3
Select two-six credits from the following:	2-6
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)	
MUS 313 Teaching Instrumental Music in Secondary Schools	1
MUS 316 Choral Arranging	2
MUS 318 Music in Early Childhood	2
MUS 340 Survey of History and Literature of Jazz	3

Select four credits from the following:	2
MUS 348 Accompanying and Coaching I (2)	
MUS 349 Accompanying and Coaching II (2)	
MUS 352 Principles of Piano Teaching (2)	
MUS 353 Principles of Piano Teaching (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
MUS 452 Orff Schulwerk and Kodaly Choral Method in American Schools	2
MUS 457 Multicultural Music Education	2

Notes

Students must take Individual Performance and Major Musical Organization during each semester in residence.

MUS 100 Recitals, Concerts and Productions must be taken each semester in residence.

"Residency," when stated in the Music section of this Bulletin, is interpreted to mean 10 credit hours or more per semester.

MUS 243, 244 may count toward General Education requirements; one for the Fine Arts category, the other as an elective in the content area.

Attain upper-level proficiency in voice before enrolling in MUS 444, 445, 446 and 447.

Meet requirements for admission to the Professional Teacher Education Program. Students pursuing the BME degree who have completed 30 semester hours should apply for admission to the PTE program by the end of the sophomore year.

Junior or senior transfer students must enroll in MUS 210 during their first academic semester.

In addition to meeting the requirements for admission to PTE, music education majors must:

- Demonstrate an acceptable level of performance on their major instrument. Evaluation will be through jury examinations conducted by Music faculty and scheduled performances in the weekly recital series.
- Demonstrate proficiency in functional piano to the satisfaction of Piano faculty. A conference/audition concerning previous piano study will be scheduled for each entering student to determine placement in the piano curriculum. Voice majors must complete four semesters of piano study regardless of the proficiency examination.
- Attain a minimum grade of C in the following music theory courses: MUS 101, 102, 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, 102, or 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.
- Meet all music performance and recital attendance requirements listed in the respective departmental handbooks.
- Continue to show professional growth in becoming a music educator.

Failure to do so will result in PTE probation of not less than one semester. Continued deficiencies may result in the student being dropped from the PTE Music Education curriculum.

BME students will be required to write an exit examination in music education at the completion of the required coursework in music education.

Bachelor of Music Education and Bachelor of Music Combined

Emphasis in Instrumental Music Education and Performance

Program Requirements

Required credits for the Bachelor of Music degree (listed previously) 79

Required credits29

General Education (40 credits):

12 credits already included in requirements above and the PTE program

Remaining General Education credits needed:28

PTE program40

Total credits required for this degree176

The Bachelor of Music Education and Bachelor of Music Combined degree program is designed for the student with outstanding musical talent and the desire to teach. The combined degree emphasizes excellence 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 at the elementary or secondary levels in instrumental music and/or a career in performance.

Required Credits — 29 semester hours

MUS 100 Recitals, Concerts and Productions0

MUS 307 History of Instruments and Instrumental Practice3

MUS 403 Acoustics of Music2

Individual Performance (additional)14

Major Musical Organizations (additional)7

Notes

Complete the requirements for the Bachelor of Music Education degree emphasis in Instrumental Music.

Complete performance and organization/ensemble requirements for the Bachelor of Music degree.

Present a complete graduation recital.

Meet all music performance and recital attendance requirements of the specific department of emphasis.

MUS 243, 244 may count toward General Education requirements; one for the Fine Arts category, the other as an elective in the content area.

Master of Music

Emphasis in Choral Conducting

Program Requirements

Complete the required credits specified here.....32
 Complete the program electives specified here.....4

The Master of Music degree program is designed to assist the graduate candidate in developing advanced professional competencies in choral conducting.

The degree program seeks to broaden and deepen scholarly abilities and research and pedagogical techniques for use in the profession or for instruction in higher education.

Admission

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.

Required Credits — 32 semester 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
<i>Studies in Music History and Theory</i>	
Music History	6
Music Theory	6

Note that studies in Music History and Theory will be selected by advisement based upon candidate's needs identified through advisory examination.

Recommended Electives — 4 semester hours

MUS 559 Opera and Oratorio Literature.....	2
MUS 650 Seminar: Choral Music	2

Note that the courses above are recommended. Elective courses should be selected by advisement based upon the candidate's 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.

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 Bulletin, 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.

Master of Music

Emphasis in Instrumental Performance

Program Requirements

Complete the required credits specified here.....22-23
 Complete program electives specified here.....7-8

The Master of Music degree program is designed to assist the graduate student in developing advanced professional competencies in instrumental performance.

The degree program seeks to broaden and deepen scholarly abilities and research and pedagogical techniques for use in the profession or for instruction in higher education.

Admission

In addition to meeting the admission requirements of the Graduate School, the student must take the Advisory Examinations in Music History and Literature, Music Theory and writing skills. Brass, woodwind, string and percussion majors will take a written examination on instrumental techniques in their instrument area. Students with deficiencies identified by advisors and their audition will meet with their major advisor and other appropriate faculty to determine the best way to address the deficiencies. An entrance audition is required.

Required Credits — 22-23 semester hours

<i>Studies in the Major Area</i>	
MUS 600 Introduction to Musical Scholarship	2
MUS 693 Practicum in Music (Recital and Correlative Paper)	2
Individual Performance	8
Major Performing Organization	2

Note that string performers will participate in a major ensemble each semester in residence.

Other Studies in Music

Music History, Music Theory.....	6
Pedagogy.....	2-3

Note that Other Studies in Music will be selected by advisement based upon candidate's needs identified through advisory examination.

Elective Credits — 7-8 semester 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.

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 the course program.

"Residency," when stated in the music section of this Bulletin, is interpreted to mean 10 credit hours or more per semester.

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.

Master of Music candidates will take a written comprehensive examination at a time approved by the major advisor.

Master of Music

Emphasis in Music History and Literature

Program Requirements

Complete the required credits specified here.....30
 Complete the program electives specified here.....1-4

The Master of Music degree program is designed to assist the graduate student in developing advanced professional competencies in music history and literature.

The degree program seeks to broaden and deepen scholarly abilities and research and pedagogical techniques for use in the profession or for instruction in higher education.

Admission

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.

Prerequisites

Students entering this area of emphasis must have the equivalent of an undergraduate music major as outlined in this Bulletin.

Students will be expected to demonstrate translational competency in German, French, or Latin as a prerequisite to candidacy.

Required Credits — 30 semester 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

Master of Music

Emphasis in Theory and Composition

Program Requirements

Complete the required credits specified here.....33

The Master of Music degree program is designed to assist the graduate student in developing advanced professional competencies in theory and composition.

The degree program seeks to broaden and deepen scholarly abilities and research and pedagogical techniques for use in the profession or for instruction in higher education.

Admission

In addition to meeting the admission requirements of the Graduate School, the student must take the Advisory Examinations in Music History and Literature, Music Theory and writing skills. Students with deficiencies will meet with their major advisor and other appropriate faculty to determine the best way to address the deficiencies. Theory and Composition candidates must submit examples of works composed, supported if possible by recordings.

Prerequisites

Students entering this area of emphasis must have completed a Bachelor of Music, Bachelor of Music Education, or a Bachelor of Arts in Music degree.

Required Credits — 33 semester 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 20th Century	3
MUS 677 Individual Instruction in Composition.....	8
MUS 699 Thesis (or Original Composition).....	6
Music Performing Organization and/or Individual Performance	2

Elective Credits — 1-4 semester hours

Notes

Electives will be selected by advisement, based upon candidate's needs identified through examination.

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.

Master of Music candidates will take a written comprehensive examination at a time approved by the major advisor.

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 Bulletin, is interpreted to mean 10 credit hours or more per semester.

Studies in Music History

Music History.....6
 Note that 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.

"Residency," when stated in the music section of this Bulletin, is interpreted to mean 10 credit hours or more per semester.

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 the course program.

Master of Music candidates will take a written comprehensive examination at a time approved by the major advisor.

Master of Music candidates will present a recital of their compositions written as part of their degree program.

Master of Music

Emphasis in Vocal Performance

Program Requirements

Complete the required credits specified here.....28-30
Complete program electives specified here3

The Master of Music degree program is designed to assist the graduate student in developing advanced professional competencies in vocal performance.

The degree program seeks to broaden and deepen scholarly abilities and research and pedagogical techniques for use in the profession or for instruction in higher education.

Admission

In addition to meeting the admission requirements of the Graduate School, the student must take the Advisory Examinations in Music History and Literature, Music Theory and writing skills. 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 — 28-30 semester hours

Studies in the Major Area

MUS 510 Vocal Pedagogy	2
or MUS 564 Problems in Teaching Voice	2
<i>Select two of the following courses — 4 semester hours</i>	
MUS 536 German Art Song (3)	
MUS 538 French/Italian Art Song (2)	
MUS 539 British/American Art Song (2)	
MUS 559 Opera and Oratorio Literature	2
MUS 600 Introduction to Musical Scholarship	2
MUS 685 Performance in Opera Theatre	2
and/or MUS 686 Scene Studies in Opera.....	2

Master of Music

Emphasis in Wind/Orchestra Conducting

Program Requirements

Complete the required credits specified here.....30-31

The Master of Music degree program is designed to assist the graduate candidate in developing advanced professional competencies in wind/orchestra conducting.

The degree program will broaden and deepen scholarly abilities and research and pedagogical techniques for use in the profession or for instruction in higher education.

Admission

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.

Prerequisites

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 semester hours

Select one of the following: 2

MUS 511 History and Literature of the Wind Band (winds) (2)	
MUS 512 Symphonic Repertoire (orchestral) (2)	
MUS 530 Score Reading and Analysis.....	1
<i>Select one of the following:2-3</i>	
MUS 580 String Techniques for the Conductor (2)	
MUS 658 Brass Pedagogy (3)	
MUS 661 Percussion Pedagogy (2)	
MUS 662 Woodwind Pedagogy (2)	
MUS 600 Introduction to Musical Scholarship	2
MUS 693 Practicum in Music	3

MUS 693 Practicum in Music (Recital and Correlative Paper)	0
Individual Performance	8
Major Performing Organization	2
<i>Other Studies in Music</i>	
Music History or Music Theory	6

Note that Other Studies in Music will be selected by advisement based upon candidate's needs identified through advisory examination.

Elective Credits — 3 semester hours

Notes

Master of Music students in voice must have an entrance audition.

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.

"Residency," when stated in the music section of this Bulletin, is interpreted to mean 10 credit hours or more per semester.

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 the course program.

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.

Master of Music candidates will take a written comprehensive examination at a time approved by the major advisor.

Individual Performance in Conducting.....	4
Individual Performance (major instrument)	2
Major Performing Organization	2
Note that 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.	
<i>Studies in Music History and Theory</i>	
Music History	6
Music Theory	6

Note that Studies in Music History and Theory will be selected by advisement based upon candidate's needs identified through advisory examination.

Notes

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.

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.

"Residency," when stated in the music section of this Bulletin, 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.

Master of Music Education

Program Requirements

Complete the required core components specified	12
Complete credits in music studies	10
Complete program electives specified here	8

The Master of Music Education 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 semester 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 semester hours

To be selected in consultation with program advisor	10
Elective Credits in Music and other areas	8

Note that courses should be based upon the candidate's specialized teaching area and professional goals.

Notes

Incoming Master of Music Education 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 Education candidates will write a comprehensive examination at a time approved by the major advisor.

Doctor of Arts in Music

Emphases in: Conducting, History and Literature, Music Performance, Music Theory and Composition, Performance and Pedagogy

Program Requirements

Complete the required credits specified here.....55-59
Complete program electives11

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.

This degree program is designed to prepare professional, academically well-qualified teaching scholars at the college and university level.

Admission

In addition to meeting the admission requirements of the Graduate School, the student must take the Advisory Examinations in Music History and Music Theory, administered by the School of Music faculty upon the student's arrival on campus. Students with an emphasis in brass, woodwind, string or percussion will be required to take written examinations on technique in their performance areas. An audition in the major applied area is also required. Additional coursework may be required depending on the results of the advisory examinations.

Required Credits — 55-59 semester hours

ID 702 Teacher in the College Community	3
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

Note that 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.

Primary Emphasis — 18 semester hours

The primary area develops a major scholarly and/or performing function for the college and university level in Music History and Literature, Theory and Composition, Music Performance, Conducting, or 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 semester 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 — 11 semester hours

Notes

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.M.E. in Music Education or the D.A. in Music History and Literature or Theory and Composition will complete a 12-hour dissertation.

Doctor of Arts Majors in Theory and Composition and Secondary Emphasis students in Theory and Composition 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.

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.

Doctor of Music Education

Program Requirements

Complete the required credits specified here.....53
 Complete program electives specified here13

The Doctor of Music Education degree 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 degree program 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 semester 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 Education3
 MUS 610 Research in Music Education.....3
 MUS 622 Directed Study in Music Education3
 EPRE 602 Elements of Statistics3
 EPRE 603 Analysis of Variance (ANOVA).....3
 EDF 640 Psychological Foundations of Education3
 EDF 685 Philosophical Foundations of Education3

Secondary Emphasis10

Elective Credits — 13 semester 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.

Notes

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. An audition in the major applied area and three letters of recommendation are also required. A minimum of two years public school teaching experience is required.

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.

Doctor of Music Education candidates will take written and oral comprehensive examinations at a time approved by the major advisor.

Bachelor of Arts in Musical Theatre

Emphasis in Acting

Program Requirements

Required credits85

General Education (40 credits):

3 credits already included in requirements above

Remaining General Education credits needed37

Total credits required for this degree122

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/singer/dancer through study of theatrical skills, musical skills and dance and movement skills.

The Bachelor of Arts in Musical Theatre, with an emphasis in acting, prepares students to perform professionally in a variety of musical theatre styles.

Required Credits — 85 semester hours

DNCE 166 Ballet	2
or DNCE 180 Intermediate Ballet	2
DNCE 170 Jazz Dance	2
or DNCE 181 Intermediate Jazz	2
DNCE 175 Tap Dance	1
or DNCE 183 Intermediate Tap	1
MT 260 Acting in Musical Theatre.....	3
MT 285 Performance in Musical Theatre.....	2
MT 485 Performance in Musical Theatre.....	2
MT 330 History of Musical Theatre	3
MT 342 Workshop in Directing/Choreography of Musical Theatre.....	3
MT 360 Scene Study in Musical Theatre.....	3
MT 370 Musical Theatre Dance	2
MT 465 Musical Theatre Workshop.....	3
MT 470 Senior Project in Musical Theatre.....	3
Music Performance/Vocal Ensemble	4
MUS 101 Sight-Singing and Theory I	4

MUS 160 Beginning Class Piano I.....	1
MUS 160 Beginning Class Piano II.....	1
MUS 269 Individual Performance/Voice.....	4
MUS 469 Individual Performance/Voice.....	4
MUS 360 Voice Class	4
MUS 407 Individual Coaching in Musical Theatre	2
(MT 465 and MUS 407 must be taken concurrently)	
THEA 100 Individual Performance in Theatre	4
(One semester must be crew work, one semester must be performance in a non-musical.)	
THEA 135 Playscript Analysis.....	3
THEA 149 Survey of Technical Theatre	3
THEA 160 Beginning Acting	3
THEA 190 Stage Speech I	1
THEA 191 Stage Speech II	1
THEA 240 Beginning Stage Directing.....	3
THEA 250 Stage Make-up I	1
THEA 260 Scene Study.....	2
THEA 275 Stage Movement I.....	1
THEA 276 Stage Movement II.....	1
THEA 360 Advanced Acting Styles I.....	2
THEA 361 Advanced Acting Styles II.....	2
THEA 370 Stage Combat.....	2
THEA 464 Auditioning Techniques	2

Notes

Admission to the Bachelor of Arts with a major in the Musical Theatre Program is by audition. Students pursuing the degree must meet the following requirements:

- Complete 40 hours of General Education.
- MT 330 may be used as part of the 40 hours of General Education
- Meet all recital and production attendance requirements.
- Complete the required courses as listed above
- Meet annual juried audition (assessment) requirements.

Bachelor of Arts in Musical Theatre

Emphasis in Dance

Program Requirements

Required credits86

General Education (40 credits):

3 credits already included in requirements above

Remaining General Education credits needed37

Total credits required for this degree123

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 dancer/singer/actor through study of dance and movement skills, musical skills and theatrical skills.

The Bachelor of Arts in Musical Theatre, with an emphasis in dance prepares students to perform professionally in a variety of musical theatre styles.

Required Credits — 86 semester hours

DNCE 167 Intermediate Ballroom	1
or PE 169 Gymnastics	1
DNCE 180 Intermediate Ballet	2
DNCE 181 Intermediate Jazz	2
DNCE 175 Tap Dance	1
DNCE 183 Intermediate Tap.....	1
DNCE 292 Advanced Ballet	3
DNCE 293 Advanced Jazz Dance.....	4
DNCE 296 Beginning Choreography and Improvisation	2
DNCE 354 Dance Performance.....	4
DNCE 454 Dance History and Philosophy.....	2
KINE 220 Anatomical Kinesiology	3
MT 260 Acting in Musical Theatre.....	3
MT 285 Performance in Musical Theatre.....	2
MT 485 Performance in Musical Theatre.....	2
MT 330 History of Musical Theatre	3

MT 342 Workshop in Directing/Choreography in Musical Theatre.....	3
MT 360 Scene Study in Musical Theatre	3
MT 370 Musical Theatre Dance	2
MT 465 Musical Theatre Workshop.....	3
MT 470 Senior Project in Musical Theatre.....	3
Music Performance/Vocal Ensemble	4
MUS 101 Sight-Singing and Theory I	4
MUS 160 Beginning Class Piano I.....	1
MUS 160 Beginning Class Piano II.....	1
MUS 269 Individual Performance in Voice.....	4
MUS 469 Individual Performance in Voice.....	4
MUS 360 Voice Class	4
MUS 407 Individual Coaching in Musical Theatre	2
(MT 465 and MUS 407 must be taken concurrently)	
THEA 100 Individual Performance in Theatre	2
(Must be crew)	
THEA 160 Beginning Acting	3
THEA 240 Beginning Stage Directing.....	3
THEA 250 Stage Make-up I	1
THEA 275 Stage Movement I.....	1
THEA 276 Stage Movement II.....	1
THEA 370 Stage Combat.....	2

Note

Admission to the Bachelor of Arts with a major in the Musical Theatre Program is by audition. Students pursuing the degree must meet the following requirements:

- Complete 40 hours of General Education.
- MT 330 may be used as part of the 40 hours of General Education
- Meet all recital and production attendance requirements.
- Complete the required courses as listed above
- Meet annual juried audition (assessment) requirements.

Bachelor of Arts in Musical Theatre

Emphasis in Voice

Program Requirements	
Required credits	83
Required elective credits	2
General Education (40 credits)	
3 credits already included in requirements above	
Remaining General Education credits needed:	37
Total credits required for this degree	122

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 singer/actor/dancer through study of musical skills, theatrical skills and dance and movement skills.

The Bachelor of Arts in Musical Theatre prepares the student to perform professionally in musical theatre.

Required Credits — 83 semester hours

MT 260 Acting in Musical Theatre.....	3
MT 285 Performance in Musical Theatre.....	2
MT 485 Performance in Musical Theatre.....	2
MT 330 History of Musical Theatre	3
MT 360 Scene Study in Musical Theatre	3
MT 370 Musical Theatre Dance	2
MT 465 Musical Theatre Workshop.....	3
MT 407 Individual Coaching in Musical Theatre	2
<i>(MT 465 and MUS 407 must be taken concurrently)</i>	
MT 470 Senior Project in Musical Theatre.....	3
Music Performance (Vocal Ensemble)	8
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 160 Beginning Class Piano.....	1
MUS 161 Beginning Class Piano.....	1
MUS 260 Intermediate Class Piano.....	1

MUS 261 Intermediate Class Piano.....	1
MUS 270 Individual Performance in Voice.....	8
MUS 470 Individual Performance in Voice.....	8
Select four credits from the following:	4
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)	
DNCE 166 Ballet	2
or DNCE 180 Intermediate Ballet	2
DNCE 170 Jazz Dance.....	2
or DNCE 181 Intermediate Jazz	2
DNCE 175 Tap Dance	1
or DNCE 183 Intermediate Tap	1
THEA 100 Individual Performance in Theatre (must be crew work).....	2
THEA 160 Beginning Acting.....	3
THEA 250 Stage Make-up I	1
THEA 275 Stage Movement I.....	1
THEA 276 Stage Movement II.....	1
THEA 370 Stage Combat.....	2

Required Elective Credits — 2 semester hours

Courses taken in Music, Theatre, or Dance with the approval of the coordinator	2
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Notes

Admission to the Bachelor of Arts with a major in Musical Theatre program is by audition. Students pursuing the degree must meet the following requirements:

- Complete 40 hours of General Education.
- MT 330 may be used as part of the 40 hours of General Education.
- Meet all recital and production attendance requirements.
- Complete the required courses as listed above.
- Meet annual juried audition (assessment) requirements.

Bachelor of Arts in Theatre Arts

Emphasis in Acting

Program Requirements

Required credits	52
Required elective credits	2
General Education	40
Elective credits	26
Total credits required for this degree	120

A major in Theatre Arts with an emphasis in Acting 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 and as an amateur avocation for the enrichment of life.

A major in Theatre Arts with an emphasis in Acting prepares actors to perform professionally in regional theatre, national touring companies and in major productions throughout the United States and provides preparation for graduate studies in theatre.

Required Credits — 52 semester hours

THEA 100 Individual Performance in Theatre	14
THEA 135 Playscript Analysis	3
THEA 149 Survey of Technical Theatre	3
THEA 160 Beginning Acting	3
THEA 190 Stage Speech I	1
THEA 191 Stage Speech II	1
THEA 240 Beginning Stage Directing	3
THEA 250 Stage Make-up I	1
THEA 251 Advanced Make-up II	1
THEA 260 Scene Study	2
THEA 275 Stage Movement I	1
THEA 276 Stage Movement II	1
THEA 330 History of the Theatre I	3
THEA 331 History of the Theatre II	3
THEA 360 Advanced Acting Styles I	2

THEA 361 Advanced Acting Styles II	2
THEA 370 Stage Combat	2
THEA 371 Mime/Pantomime and Mask	1
THEA 372 Period Movement	1
THEA 464 Audition Techniques	2
MT 261 Singing for Actors	2

Required Elective Credits in Theatre — 2 semester hours

Notes

First semester (non-technical emphasis) freshman do not take THEA 100/Individual Performance in Theatre, but are required to take THEA 100 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.

General Auditions are required every year during residency. The acting and directing faculty assess the progress of students in acting at this time. This provides the student with the opportunity to demonstrate growth and progress in the field. Each audition consists of two short monologues that are memorized and performed. Students then make appointments with the faculty to receive evaluation.

The Department of Theatre Arts requires student majors to consult with and be advised by a faculty member teaching in the department.

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.

Auditions are required for entrance into this emphasis area.

Bachelor of Arts in Theatre Arts

Dance Performance/Choreography Emphasis

Program Requirements

Required credits	71
Required elective credits	9
General Education	40
Total credits required for this degree	120

This emphasis in dance has been designed for the student who wants to prepare for a dance performing career. Students who complete this emphasis will have an integrated program in dance and theatre arts/music. Students may choose to work in dance studios or with a professional dance company upon completion of this emphasis. A dance apprenticeship is required at the conclusion of this program.

Required Credits — 71 semester hours

DNCE 169 Partnering	1
Total required credits in Ballet:	12
DNCE 180 Intermediate Ballet (2)	
DNCE 292 Advanced Ballet (3)	
Total required credits in Jazz Dance:	6
DNCE 181 Intermediate Jazz Dance: (2)	
DNCE 293 Advanced Jazz Dance (2)	
Total required credits in Modern Dance:	6
DNCE 182 Intermediate Modern Dance (2)	
DNCE 294 Advanced Modern Dance (2)	
DNCE 295 Beginning Dance Theory and Technique	1
DNCE 296 Beginning Choreography and Improvisation	2
DNCE 354 Dance Performance I, Tour Troupe	2
DNCE 355 Dance Performance II, Spring Concert	2
DNCE 356 Dance Performance III, Choreographic Project	2
DNCE 357 Dance Performance IV, Company	4
DNCE 397 Intermediate Technique, Improvisation and Composition	2
DNCE 440 Labanotation/Movement Analysis	2
DNCE 453 Teaching Methods, Rhythmic Analysis and Accompaniment	3
DNCE 454 Dance History	2
DNCE 455 Dance Philosophy/Trends	2

DNCE 456 Advanced Technique, Improvisation and Composition	2
DNCE 459 Dance Production	2
DNCE 460 Dance Kinesiology	3
DNCE 480 Junior/Senior Seminar	1
DNCE 490 Dance Apprenticeship	3
KINE 220 Anatomical Kinesiology	3
MUS 140 Introduction to Music	3
THEA 100 Individual Performance in Theatre	2
THEA 149 Survey of Technical Theatre	3

Required Elective Credits — 9 semester hours

Electives in the arts to be chosen under advisement. Additional dance technique classes, i.e. ballet, jazz, modern, tap, ballroom, partnering and dance performance classes are recommended.

THEA 275 Stage Movement I	1
THEA 371 Mime, Pantomime and Mask	1
MT 370 Musical Theatre Dance	2
MUS 159 Class Piano for Non-Music Majors	1

Notes

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 apprentice 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. This is with exception of technique classes. A grade of "B" or better must be achieved in technique class in order to progress to the next level.

Students must obtain 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.

Bachelor of Arts in Theatre Arts

Emphasis in Dance Sciences

Program Requirements

Required credits	76
Required elective credits	4
General Education	40
Total credits required for this degree	120

This emphasis in dance has been designed for the student who wants to study dance as both an art and a science. Students who complete this emphasis will have an integrated program in dance, kinesiology and theatre arts. Students may wish to follow this degree with further study in some form of therapeutic or rehabilitative work. An internship in some form of rehabilitative work is required at the conclusion of this program.

Required Credits — 76 semester hours

Total required credits in Ballet:	12
DNCE 180 Intermediate Ballet (2)	
DNCE 292 Advanced Ballet (3)	
Total required credits in Jazz Dance:	4
DNCE 181 Intermediate Jazz Dance (2)	
DNCE 293 Advanced Jazz Dance (2)	
Total required credits in Modern Dance:	6
DNCE 182 Intermediate Modern Dance (2)	
DNCE 294 Advanced Modern Dance (2)	
DNCE 295 Beginning Dance Theory	1
DNCE 296 Beginning Choreography and Improvisation	2
Total required credits in Dance Performance:	4
DNCE 354 Dance Performance I, Tour Troupe (2)	
DNCE 355 Dance Performance II, Spring Concert (2)	
DNCE 397 Intermediate Technique, Improvisation and Composition	2
DNCE 440 Labanotation/Movement Analysis	2
DNCE 453 Teaching Methods, Rhythmic Analysis and Accompaniment	3
DNCE 454 Dance History and Philosophy	2
DNCE 455 Dance Philosophy/Trends	2
DNCE 456 Advanced Technique, Improvisation and Composition	2

DNCE 459 Dance Production in High School and College	2
DNCE 460 Dance Kinesiology	3
DNCE 480 Junior/Senior Seminar	1
DNCE 492 Internship in Dance Leadership	3
KINE 221 Mechanical Kinesiology	3
KINE 222 Physiological Kinesiology	3
KINE 223 Psychological Kinesiology	3
KINE 380 Prevention and Care of Sports Injuries	2
KINE 402 Human Performance Assessment	3
KINE 404 Exercise, Nutrition and Body Composition	3
PE 211 Weight Training and Anatomy	3
THEA 100 Individual Performance in Theatre	2
THEA 149 Survey of Technical Theatre	3

Required Elective Credits — 4 semester hours

Electives in the Arts to be chosen under advisement. Additional dance technique classes, i.e. ballet, jazz, modern, tap, ballroom and partnering and dance performance classes.	
MT 370 Musical Theatre Dance	2

Notes

Admission to this emphasis is by audition and interview. All new students must take a placement technique class as a part of their audition. Students choosing this emphasis must have a 2.7 GPA before enrolling in the internship 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. This is 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 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.

Bachelor of Arts in Theatre Arts

Dance Teaching/Movement Analysis Emphasis (Non-Licensure)

Program Requirements

Required credits	73
Required elective credits	7
General Education	40
Total credits required for this degree	120

This emphasis in dance has been designed for the student who wants to prepare for a dance teaching career in non-public school settings. Students who complete this emphasis will have an integrated program in dance, kinesiology and theatre arts/music. Students may choose to work in dance studios, health spas, recreational settings, or with a professional dance company upon completion of this emphasis. A practicum in dance teaching is required at the conclusion of this program.

Those individuals who want to teach dance in a school setting must obtain a teaching major, such as physical education or theatre arts and must complete the Professional Teacher Education program (PTE) as outlined in this Bulletin.

Required Credits — 73 semester hours

DNCE 167 Intermediate Ballroom Dance	1
DNCE 169 Partnering	1
DNCE 175 Intermediate Tap Dance	1
Total required credits in Ballet:	12
DNCE 180 Intermediate Ballet (2)	
DNCE 292 Advanced Ballet (3)	
Total required credits in Jazz Dance:	6
DNCE 181 Intermediate Jazz Dance (2)	
DNCE 293 Advanced Jazz Dance (2)	
Total required credits in Modern Dance:	6
DNCE 182 Intermediate Modern Dance (2)	
DNCE 294 Advanced Modern Dance (2)	
DNCE 295 Beginning Dance Theory and Technique	1
DNCE 296 Beginning Choreography and Improvisation	2
Total required credits in Dance Performance:	4
DNCE 354 Dance Performance I, Tour Troupe (2)	
DNCE 355 Dance Performance II, Spring Concert (2)	
DNCE 397 Intermediate Technique, Improvisation and Composition	2
DNCE 440 Labanotation	2

DNCE 453 Teaching Methods, Rhythmic Analysis and Accompaniment	3
DNCE 454 Dance History and Philosophy	2
DNCE 455 Dance Philosophy/Trends	2
DNCE 456 Advanced Technique, Improvisation and Composition	2
DNCE 459 Dance Production	2
DNCE 460 Dance Kinesiology	3
DNCE 480 Junior/Senior Seminar	1
DNCE 493 Practicum in Dance Teaching	3
KINE 220 Anatomical Kinesiology	3
KINE 221 Mechanical Kinesiology	3
MUS 140 Introduction to Music	3
MT 370 Musical Theatre Dance	2
THEA 100 Individual Performance in Theatre	2
THEA 149 Survey of Technical Theatre	3
THEA 275 Stage Movement I	1

Required Elective Credits — 7 semester hours

Electives in the Arts to be chosen under advisement. Additional dance technique classes, i.e. ballet, jazz, modern, tap, ballroom and partnering and dance performance classes.	
MUS 159 Class Piano for Non-Music Majors	1
THEA 371 Mime, Pantomime and Mask	1

Notes

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. This is with 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 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.

Bachelor of Arts in Theatre Arts

Emphasis in Design Technology

Program Requirements

Required credits	50
Required elective credits	3
General Education	40
Elective credits	27
Total credits required for this degree	120

A major in Theatre Arts with an emphasis in Design Technology 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 and as an amateur avocation for the enrichment of life.

A major in Theatre Arts with an emphasis in Design Technology prepares designers and technicians to work professionally in regional theatre, national touring companies and in major productions throughout the United States and provides preparation for graduate studies in theatre.

Required Credits — 50 semester hours

THEA 100 Individual Performance in Theatre	16
THEA 135 Playscript Analysis.....	3
THEA 149 Survey of Technical Theatre.....	3
THEA 160 Beginning Acting	3
THEA 210 Graphics and Management.....	3
THEA 240 Beginning Stage Directing.....	3

Bachelor of Arts in Theatre Arts

Emphasis in Directing

Program Requirements

Required credits	51
Required elective credits	2
General Education	40
Elective credits	27
Total credits required for this degree	120

A major in Theatre Arts with an emphasis in Directing 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 and as an amateur avocation for the enrichment of life.

A major in Theatre Arts with an emphasis in Directing prepares students to direct plays professionally or in a community or academic environment and provides preparation for graduate studies in theatre.

Required Credits — 51 semester hours

THEA 100 Individual Performance in Theatre	14
THEA 135 Playscript Analysis.....	3
THEA 149 Survey of Technical Theatre.....	3
THEA 160 Beginning Acting	3
THEA 190 Stage Speech I	1
THEA 191 Stage Speech II	1
THEA 210 Graphics and Management.....	3
THEA 240 Beginning Stage Directing.....	3
THEA 250 Stage Make-up I	1
THEA 260 Scene Study.....	2
THEA 275 Stage Movement I.....	1

THEA 250 Stage Make-up I	1
THEA 310 Beginning Scene Design.....	3
THEA 320 Stage Costume Design	3
THEA 330 History of Theatre I.....	3
THEA 331 History of Theatre II.....	3
THEA 411 Stage Lighting	3
THEA 410 Advanced Design and Technology	3
or THEA 420 Advanced Costume Technical Design	3

Required Elective Credits in Theatre — 3 semester hours

THEA 251 Advanced Stage Make-Up (recommended)	1
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Notes

The Department of Theatre Arts requires student majors to consult with and be advised by a faculty member teaching in the department.

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 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.

THEA 330 History of the Theatre I.....	3
THEA 331 History of the Theatre II.....	3
THEA 370 Stage Combat.....	2
THEA 372 Period Movement.....	1
THEA 440 Directing the One-Act Play.....	1
<i>Select two of the following:</i>	
MT 342 Workshop in Directing/Choreography for Musical Theatre	3
THEA 340 Workshop in Directing I.....	3
THEA 341 Workshop in Directing II.....	3

Required Elective Credits in Theatre — 2 semester hours

Notes

First semester (non-technical emphasis) freshman do not take THEA 100 Individual Performance in Theatre, but are required to take THEA 100 all other academic year semesters in residence.

The Department of Theatre Arts requires student majors to consult with and be advised by a faculty member teaching in the department.

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 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.

Bachelor of Arts in Theatre Arts

Emphasis in General Theatre

Program Requirements

Required core credits.....	32
Required elective credits	19
General Education	40
Elective credits	29
Total credits required for this degree	120

A major in Theatre Arts with a General emphasis 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 and as an amateur avocation for the enrichment of life.

A major in Theatre Arts with an emphasis in General Theatre provides a general preparation for careers in the performing arts and provides preparation for graduate studies in theatre.

Required Core Credits — 32 semester hours

THEA 100 Individual Performance in Theatre	14
THEA 135 Playscript Analysis.....	3
THEA 149 Survey of Technical Theatre.....	3
THEA 160 Beginning Acting.....	3
THEA 190 Stage Speech I	1
THEA 191 Stage Speech II	1
THEA 250 Stage Make-up I	1
THEA 330 History of the Theatre I.....	3
THEA 331 History of the Theatre II.....	3

Required Elective Credits — 19 semester hours

MT 342 Workshop in Directing/Choreography in Musical Theatre.....	3
MT 360 Scene Study in Musical Theatre	3
MT 475 Music Dance Workshop.....	1
THEA 210 Graphics and Management.....	3
THEA 240 Beginning Stage Directing.....	2

THEA 251 Advanced Stage Make-up II	1
THEA 275 Stage Movement I.....	1
THEA 276 Stage Movement II.....	1
THEA 281 Improvisation and Creative Dramatics	3
THEA 310 Beginning Scene Design.....	3
THEA 320 Beginning Costume Design	3
THEA 340 Workshop in Directing I	3
THEA 341 Workshop in Directing II	3
THEA 353 Theatre Production.....	2
THEA 370 Stage Combat.....	2
THEA 371 Mime, Pantomime and Mask.....	1
THEA 372 Period Movement.....	1
THEA 401 Practicum in Theatre	1-4
THEA 410 Advanced Design and Technology	3
THEA 411 Stage Lighting	3
THEA 420 Advanced Costume Technical Design.....	3
THEA 440 Directing the One-Act Play.....	1

Notes

First semester (non-technical emphasis) freshman do not take THEA 100, Individual Performance in Theatre, but are required to take THEA 100 all other academic year semesters in residence.

The Department of Theatre Arts requires student majors to consult with and be advised by a faculty member teaching in the department.

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 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.

Bachelor of Arts in Theatre Arts

Emphasis in Teaching

Program Requirements

Required credits	58
General Education:	
6 credits already included in the PTE program	
Remaining General Education credits needed	34
PTE program	43
Total credits required for this degree	135

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 and as an amateur avocation for the enrichment of life.

A major in Theatre Arts with an emphasis in Teaching prepares students to teach drama in grades 7-12.

Required Credits — 58 semester hours

THEA 100 Individual Performance In Theatre	14
MT 342 Workshop In Directing/Choreography in Musical Theatre	3
THEA 135 Playscript Analysis.....	3
THEA 149 Survey of Technical Theatre.....	3
THEA 160 Beginning Acting	3
THEA 210 Graphics and Management.....	3
THEA 240 Beginning Stage Directing.....	3
THEA 250 Stage Make-up I	1
THEA 281 Improvisation and Creative Dramatics	3
THEA 310 Beginning Scene Design.....	3
THEA 330 History of the Theatre I.....	3
THEA 331 History of the Theatre II.....	3
THEA 370 Stage Combat.....	2
THEA 371 Mime/Pantomime and Mask.....	1
THEA 385 Methods of Teaching Drama	3
THEA 411 Stage Lighting.....	3
THEA 440 Directing the One-Act Play	1
Note that THEA 385 is a PTE requirement taken concurrently with EDLS 363.	
THEA 340 Workshop in Directing I	3
or THEA 341 Workshop in Directing II.....	3

Notes

Students who are in theatre education must apply for admission to the Professional Teacher Education program (PTE). Students are responsible for familiarizing themselves with the requirements in the PTE section of the catalog. It is recommended that application for PTE 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.

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.

Students must complete the College of Education PTE requirements (see Theatre Education advisor).

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.

Bachelor of Arts in Visual Arts

Emphasis in Art

Program Requirements	
Required credits	26
Area of concentration credits.....	9
Required elective credits in Art.....	13
General Education:	
Specified credits	3
Remaining credits	37
Elective credits	32
Total credits required for this degree	120

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 craftsperson. It is an ideal preparatory program for students planning to do advanced or graduate study in art and art history.

Required Credits — 26 semester hours

<i>Freshman Foundations</i>	
ART 181 History of Art I	4
ART 182 History of Art II	4
ART 183 Art I	3
ART 184 Art II	3
<i>Art Core I — Select two of the following:</i>	
ART 231 Introduction to Painting	3
ART 234 Basic Drawing	3
ART 252 Printmaking I	3
ART 271 Basic Photography	3
<i>Art Core II — Select two of the following:</i>	
ART 211 Ceramic Design	3
ART 212 Wheel Throwing	3
ART 221 Introduction to Fiber Arts	3
ART 261 Sculpture I	3
ART 265 Jewelry	3
At least one advanced art history course must be taken.....	4

Area of Concentration Credits — 9 semester hours

Required Elective Credits in Art — 13 semester hours

General Education, Specified:

<i>Category 4 — Arts and Letters</i>	
MIND 181 Great Traditions of Asia	3

Notes

A portfolio review is required of all art majors at the completion of the Freshman year and/or the Art I and Art II courses. This includes Graphic Arts, Art Education and the Art emphases. The portfolio Review is designed to serve as an assessment and advising tool for the Department. Art I and Art II, or their equivalent, must be completed before enrollment in any upper level course.

A minimum of nine semester hours must be completed in one of the following areas of concentration (300 level or above courses): art history, ceramics, drawing, fiber arts, painting, photography, printmaking or sculpture.

Art students should consult with their advisor for help in selecting General Education and general elective courses to augment their studies, strengthen conceptual development and address specific areas of need.

Senior Portfolio

A portfolio review is required of all senior visual arts majors with an emphasis in art and graphic arts before graduation. The review will consist of work completed by the student in his/her area(s) of specialization and is designed to assess the attainment of department objectives.

Senior art history students will submit a portfolio of previously written and graded papers, as well as do an original paper or project.

The portfolio must meet the criteria and guidelines for senior portfolio review as established by each of the areas of specialization in art.

Consult with your advisor concerning the portfolio and thesis/project.

Bachelor of Arts in Visual Arts

Emphasis in Art Education

Program Requirements

Required credits	44
Required Art Education credits	13
Area of concentration credits	9
General Education:	
Specified credits	9
Remaining credits	31
Required Art Education credits for licensure	13
PTE program	40
Total credits required for this degree	159

The art education emphasis is a K-12 teacher education program preparing students to teach visual arts in the elementary, middle and secondary schools.

It is a program leading to K-12 licensure if all the requirements are satisfactorily completed.

Required Credits — 44 semester hours

Freshman Foundation

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 Core

ART 211 Ceramic Design	3
ART 212 Wheel Throwing	3
ART 221 Introduction to Fiber Arts	3
ART 231 Introduction to Painting	3
ART 241 Basic Crafts Design	3
ART 252 Printmaking I	3
ART 261 Sculpture I	3
ART 265 Jewelry	3
ART 271 Basic Photography	3
ART 333 Life Drawing	3

Area of Concentration Credits — 9 semester hours

General Education, Specified — 9 semester hours

THEA 130 Introduction to the Theatre	3
MUS 140 Introduction to Music	3

Select one of the following:

MIND 181 The Great Traditions of Asia	3
MIND 289 Coming of Age in the 20th Century	3
MIND 292 Ideas in Conflict	3
MIND 293 Play as a Route to Insight and Creation	3
MIND 294 Revolutions in Science	3

Required Art Education Credits for Licensure — 13 semester hours

ART 248 Art for the Exceptional Child	2
ART 340 Clinical Experience: K-12 Art	2
ART 440 Readings in Art Education	3
ART 441 Cultural Studies in the K-12 Curriculum	3
ART 442 Curriculum and Instruction in Art	3

Required PTE Program Credits

EDF 364 Foundations of Education	4
EDF 385 Law and the Classroom Teacher	2
EDFE 270 Teacher Aide:	2
One semester hour-Elementary Art	
One semester hour-Secondary Art	
EDFE 444 K-12 Student Teaching	15
EDRD 423 Reading and Writing in the Content Areas	2
EDSE 410 Handicapped Students in Regular Classrooms	2
EPRE 345 Educational Psychology	3
ET 401 Instructional Technology	2

Notes

A portfolio review is required of all art majors at the completion of the Freshman year and/or the Art I and Art II courses. This includes Graphic Arts, Art Education and the Art emphases. The Portfolio Review is designed to serve as an assessment and advising tool for the Department. Art I and Art II, or their equivalent, must be completed before enrollment in any upper level course.

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, drawing, fiber arts, graphic design, painting, photography, photographic communications, printmaking, or sculpture.

Students who are in art education must apply for admission to the Professional Teacher Education program (PTE). Students are responsible for familiarizing themselves with the requirements in the PTE section of the catalog. At the time application is made to PTE, the student must also apply for the Art Education/PTE program.

Application to the Art Education/PTE program requires the completion of EDFE 270 for a minimum of two semester hours of credit. Art education students must complete this requirement by taking one semester hour in an elementary school and one semester hour in a secondary school or in an equivalent situation with elementary or secondary age students.

It is recommended that application for PTE 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 the PTE program must be made at the beginning of the semester. Application to PTE requires the student to have declared a major in art. A copy of the requirements for departmental admission to PTE should be obtained from the art education advisor before making application for the PTE program.

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.

Students must complete the College of Education PTE requirements (see art education advisor).

Before receiving approval to student teach, an art education student must complete the Comprehensive Art Education PTE Review. The review is scheduled each semester. Students are advised to complete the review at least two semesters 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.

Students being reviewed make a presentation to the committee in accordance with the requirements specified in the art education guidelines. All students preparing for the review should work closely with their advisor. At the time of the review, the student is evaluated on the basis of the following: oral presentation, visual presentation, use of media and techniques, design qualities, artistic excellence, knowledge of art and art history, ability to talk about art, intentions of his/her art, knowledge of teaching art, attitude and poise and self-confidence.

The 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 PTE review, required and elective art courses, required art education courses, PTE courses, C.A.T. 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.

Bachelor of Arts in Visual Arts

Emphasis in Graphic Arts

Program Requirements

Required credits	33
Area of concentration credits.....	15
Required elective credits	40
General Education	40
Total credits required for this degree	128

The graphic arts emphasis prepares students for careers in the commercial fields of art such as graphic design, illustration, advertising, photography, publications and other areas of visual communications.

Students work toward the completion of a required professional quality placement portfolio.

Required Credits — 33 semester hours

Freshman Foundations

ART 181 History of Art I	4
ART 182 History of Art II	4
ART 183 Art I	3
ART 184 Art II	3

Core Courses

ART 231 Introduction to Painting	3
ART 240 Lettering	3
ART 261 Sculpture I	3
ART 270 Graphic Arts I	3
ART 333 Life Drawing	3
One advanced art history course.....	4

Select One Area of Concentration Credits — 55 semester hours

Graphic Design Concentration

ART 271 Basic Photography	3
ART 370 Graphic Arts II	3
ART 374 Illustration	3
ART 376 Typography	3
ART 473 Advertising Design	3

Graphic Design Required Elective Credits — 40 semester hours (including the following)

ART 234 Basic Drawing	3
ART 375 Publications Production	3
ART 434 Drawing II	3
ART 474 Graphics Studio	1-3

Photographic Communications Concentration

ART 271 Basic Photography	3
ART 370 Graphic Arts II	3
ART 371 Photographic Design	3
ART 475 Color Photography — Transparencies	3
ART 477 Photographic Illustration and Lighting Techniques	3

Photographic Communications Required Elective Credits — 40 semester hours (including the following)

ART 434 Drawing II	3
ART 472 Photography Studio	3
or ART 479 Color Photography — The Print	3

Notes

A portfolio review is required of all art majors at the completion of the Freshman year and/or the Art I and Art II courses. This includes Graphic Arts, Art Education and the Art emphases. The Portfolio Review is designed to serve as an assessment and advising tool for the Department. Art I and Art II, or their equivalent, must be completed before enrollment in any upper level course.

Since graphic arts is a professional program, graphics students should consult with their advisor for help in selecting General Education and general elective courses to augment their studies, strengthen conceptual development and address specific areas of need.

An internship of at least 3 semester hours (ART 492) is strongly recommended for graphic arts students. To be eligible to apply for an internship in graphic arts a student must have a minimum grade point average of 3.0 in Art and a 2.8 GPA for overall University coursework.

Senior Portfolio

A portfolio review is required of all senior visual arts majors with an emphasis in art and graphic arts before graduation. The review will consist of work completed by the student in his/her area(s) of specialization and is designed to assess the attainment of departmental objectives.

The portfolio must meet the criteria and guidelines for senior portfolio review as established by each of the areas of specialization in art. Consult with your advisor concerning the portfolio.

Bachelor of Arts in Interdisciplinary Studies

Emphasis in Fine Arts

Program Requirements

Required credits	39-40
General Education	40
Elective credits	40-41
Total credits required for this degree	120

The Bachelor of Arts in Interdisciplinary Studies Emphasis in Fine Arts is designed to provide the student with a coordinated study of the various disciplines of the fine arts.

The degree is an appropriate plan of study for those wishing to teach in elementary school and for those wishing a broad liberal arts education with a specialization in the fine arts.

Required Credits — 39-40 semester hours

ART 190 Art Appreciation	3
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Select one of the following:

ENG 260 Masterpieces of English Literature	3
ENG 261 Masterpieces of American Literature	3
ENG 262 Masterpieces of World Literature	3

MUS 140 Introduction to Music	3
MUS 204 Music Fundamentals and Experiences	3
MUS 241 Perceiving the Arts	3
THEA 130 Introduction to Theatre	3
THEA 281 Improvisation and Creative Dramatics	3

Select two of the following:

MIND 288 Contemporary Arts Connection	3
MIND 293 Play as a Route to Insight and Creation	3
MIND 297 Creativity in the Arts	3
MIND 299 Great Ideas in the History of the Arts	3

ENG — Select a 300 level course in English or American Literature

Participation in Music ensembles, Theatre or Music Theatre Productions or creative activities in Visual Arts	3
Select one of the following:	
ART 290 Visual Thinking and Visual Images	3
ART 388 19th Century Art	4
ART 389 20th Century Art	4
MT 330 History of Musical Theatre	3
or MUS 340 Survey of History and Literature of Jazz	3

Master of Arts in Visual Arts

Program Requirements

Complete the required core credits specified here.....16
 Complete an area of emphasis.....12
 Complete program electives8

The 36-semester hour graduate program in the Department of Visual Arts leads to the Master of Arts degree. It offers a concentrated, in-depth and individualized course of study. The graduate student in art may choose an area of emphasis in art education, ceramics, drawing, fiber arts, painting, photography, printmaking or sculpture.

The program provides specialized learning opportunities allowing students to gain expertise in an area of their choice. Graduate programs in the art department are ideally suited to the student who wants to develop extensive expertise in a studio area or in a particular aspect of art education. Any of the areas of emphasis offered are suitable for the elementary or secondary school art teacher seeking a master's degree. It is the goal of the Department of Visual Arts to encourage, foster and provide artistic and academic excellence through the pursuit of the Master of Arts degree.

Admission

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 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; a resume; and if possible, make an appointment for a personal interview with the graduate coordinator and faculty representatives of the designated area of emphasis.

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 67 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.

Required Credits — 16 semester hours

ART 500 Contemporary Issues in Art.....3
 ART 600 Graduate Research in Art3
 ART 680 Seminar in Art History4
 ART 699 Thesis6

Area of Emphasis — 12 semester hours

Art Emphasis.....12

Required Art Electives — 8 semester hours

Notes

The minimum residency requirement for the Master of Arts degree in Visual Arts is 9 semester hours, to be taken on campus at the University of Northern Colorado. ART 600 and thesis hours cannot be used to fulfill the residency requirement.

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. For those who select an emphasis in one of the studio areas, an exhibition of art work completed for the degree is also required. Works for exhibition must be approved by the academic advisor and committee. One of the works from the graduate thesis exhibit may be retained by the department and will be selected by the student's graduate committee. Students with an emphasis 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 emphasis in accordance with approved departmental standards. The student's committee must approve the candidate for graduation.

Minor in Dance

Total credits required for this minor.....23

Required Credits — 23 semester hours

DNCE 180 Intermediate Ballet Dance.....2
 DNCE 181 Intermediate Jazz Dance.....2
 DNCE 182 Intermediate Modern Dance.....2
 DNCE 295 Beginning Dance Theory.....1
 DNCE 296 Beginning Choreography and Improvisation2
 DNCE 397 Intermediate Technique, Improvisation and Composition2
 DNCE 453 Teaching Methods, Rhythmic Analysis and Accompaniment3
 DNCE 454 Dance History and Philosophy.....2
 DNCE 456 Advanced Technique, Improvisation and Composition2
 DNCE 459 Dance Production in High School and College2
 KINE 220 Anatomical Kinesiology3

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.

Minor in Music/Liberal Arts

Required credits12
 Required elective credits9
 Total credits required for this minor.....21

Required Credits — 12 semester hours

MUS 101 Sight-Singing and Theory I8
 MUS 102 Sight-Singing and Theory II8
 MUS 141 Music Literature and Styles I.....4
 MUS 142 Music Literature and Styles II.....4

Required Elective Credits — 9 semester 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.

Minor in Theatre Arts

Required credits16
 Required elective credits in Theatre Arts.....9
 Total credits required for this minor.....24

Required Credits — 16 semester hours

THEA 100 Individual Performance in Theatre4
 THEA 149 Survey of Technical Theatre3
 THEA 135 Playscript Analysis.....3
 THEA 160 Beginning Acting3
 THEA 240 Beginning Stage Directing.....3

Required Elective Credits in Theatre Arts — 9 semester hours

Minor in Theatre Arts/Teaching

Total credits required for this minor.....23

Required Credits — 23 semester hours

THEA 100 Individual Performance in Theatre4
 THEA 149 Survey of Technical Theatre3
 THEA 160 Beginning Acting3
 THEA 210 Graphics and Management3
 THEA 240 Beginning Stage Directing3
 THEA 250 Stage Make-up I1
 THEA 281 Improvisation and Creative Dramatics3
 THEA 310 Beginning Scene Design.....3

Notes

THEA 385 (3 hours credit) and EDLS 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.

Minor in Visual Arts

Required credits13
 Required core credits.....6
 Required elective credits7
 Total credits required for this minor.....20

Required Credits — 13 semester hours

Foundation Studies

ART 181 History of Art I4
 or ART 182 History of Art II4
 ART 183 Art I3
 or ART 184 Art II3

Required Core Credits — 6 semester hours

ART 211 Ceramic Design3
 or ART 212 Wheel Throwing.....3
 ART 221 Introduction to Fiber Art.....3
 ART 252 Printmaking I3
 ART 261 Sculpture I3
 ART 231 Introduction to Painting3

Required Elective Credits — 7 semester hours

Take at least 2 courses, selected from the art department areas of concentration: ceramics, drawing, fiber arts, graphic design, painting, photography, photographic communications, printmaking or sculpture.

Note

An art minor advisor is required.

Course Descriptions

Course Prefixes

Accounting	BAAC	243	Elementary Education: Early Childhood	EDEC	257	Mathematics	MATH	285
Aerospace Studies	AS	243	Elementary Education: Middle School	EDMS	260	Mathematics Education	MED	287
Anthropology	ANT	239	Elementary Education: Reading English	EDRD	261	Medical Technology	MTEC	290
Astronomy	AST	243	English as a Second Language	ENG	267	Meteorology	MET	288
Biochemistry	BCHM	247	English Education	EED	266	Military Science	MS	289
Biology	BIO	248	Environmental Studies	ENST	269	Multicultural Studies	MCS	287
Biology Education	BIED	247	Finance	BAFN	245	Music	MUS	290
Black Studies	BLS	248	Food, Nutrition and Dietetics	FND	272	Musical Theatre	MT	289
Botany	BOT	249	Foreign Languages	FL	272	Nursing	NURS	296
Business Administration	BA	243	Foundations of Education	EDF	259	Oceanography	OCN	298
Chemistry	CHEM	251	French	FR	273	Philosophy	PHIL	302
Chemistry Education	CHED	251	General Education Pilot Program	GEP	276	Physical Education	PE	299
Chinese	CHIN	252	Geography	GEOG	274	Physics	PHYS	302
College Student Personnel Administration	CSPA	254	Geology	GEOL	275	Political Science	PSCI	305
Communication Disorders	CMDS	252	German	GER	276	Professional Psychology	PFSY	303
Community Health	CH	249	Gerontology	GERO	278	Psychology	PSY	306
Computer Education	CED	249	Hispanic Studies	HISP	278	Recreation	REC	308
Computer Information Systems	BACS	244	History	HIST	279	Russian	RUS	308
Computer Science	CS	254	Honors Program	HON	281	Science	SCI	309
Computing, General	CQ	249	Humanities	HUM	282	Science Education	SCED	308
Dance	DNCE	255	Human Rehabilitative Services	HRS	281	Social Science	SOSC	311
Earth Sciences	ESCI	271	Interdisciplinary Studies	ID	282	Sociology	SOC	309
Economics	ECON	256	Japanese	JAPN	283	Spanish	SPAN	311
Educational Field Experiences	EDFE	260	Journalism and Mass Communication	JMC	283	Special Education	EDSE	262
Educational Field Experience: Laboratory School	EDLS	260	Kinesiology	KINE	284	Speech Communication	SPCO	313
Educational Leadership and Policy Studies	ELPS	266	Life of the Mind Program	MIND	289	Statistics	STAT	314
Educational Psychology	EPRE	270	Management	BAMG	245	Teaching English as a Second Language	TESL	315
Educational Technology	ET	271	Marketing	BAMK	246	Theatre Arts	THEA	315
Elementary Education	EDEL	258				Visual Arts	ART	240
						Women's Studies Program	WS	317
						Zoology	ZOO	317

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.

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, 700 ranges. Qualified juniors and seniors may be admitted to 500 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 Bulletin, 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.

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.

Course Credit. As indicated elsewhere in this Bulletin, 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 Bulletin 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.

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.

ANT 110 World Cultures (3) Analyze selected studies of several cultures representing the diversity of human lifestyles around the world. Focus on the anthropological interpretation of cultural similarities and differences.

ANT 120 World Archaeology (3) Offers a broad background in prehistoric archaeology with a review of important sites around the world. Emphasis will be on anthropological interpretation of archaeological materials, the evolution of past cultures and cultural processes.

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. Focus is on the evolution of the human form and the impact of cultural practices on our evolutionary biology.

ANT 210 Field Methods in Cultural Anthropology (3) Prerequisite: ANT 100, ANT 110, GEOG 100, 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 Area Studies (3) Prerequisite: Choose one of the following: Choose one of the following: ANT 100, ANT 110, GEOG 100, SOC 100 or equivalent. The cultural anthropology of selected world regions (Africa, Asia, Europe, Oceania, North America). Repeatable, maximum nine credits under different subtitles.

ANT 311 Latin American Cultures (3) Prerequisite: ANT 100 or ANT 110 or equivalent. A survey of the various Latin American cultures of the New World with a special emphasis on the popular cultures of the region. Students will also have the opportunity to 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: Choose one of the following: ANT 100, ANT 110, GEOG 100, 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.

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.

ANT 316/516 Culture, Biology and Health (3) Prerequisites: ANT 100 or SOC 100 or equivalent. Analyze health and illness in different ethnic groups and cultural systems. Study alternatives to the modern bio-medical model of health and disease.

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

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 New World Archaeology (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 The Origins of State Societies (3) Prerequisites: 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 324 Southwest United States Archaeology (3) Prerequisite: ANT 100 or ANT 120 or equivalent. Southwest United States archaeology reviewed from Paleo-Indian to historic times. Emphasis on environment and culture adaption, particularly of Colorado's ancient Pueblo Anasazi peoples.

ANT 325/525 Fieldwork in Archaeology (4) Prerequisites: 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. Lab fees required for field maintenance.

ANT 330 Forensic Anthropology (3) Prerequisites: 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 331 Human Population Biology (3) The evolutionary genetics and demographics of modern human populations.

ANT 408/508 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 420/520 Scientific Research in Archaeology (3) Required laboratory arranged. An advanced methods and scientific research and writing course dealing with data collection, analysis and interpretive techniques used in Archaeology. The course employs an interdisciplinary, field and Laboratory-based, hands-on approach.

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 Musculoskeletal Systems (3) This course is a detailed study of the structure and functions of the human musculoskeletal system. A series of lecture demonstrations will guide students as they model the skeleton and the individual muscles in clay, creating an anatomical model of the human figure as they progress.

ANT 470/570 Seminar in Anthropology (3) Prerequisite: Choose one of the following: ANT 100, ANT 130, GEOG 100, SOC 100 or equivalent. A seminar exploring diverse topics surrounding the question of defining human nature. Repeatable, maximum nine credits under different subtitles.

ANT 480/580 Theory and Practice in Anthropology (3) Prerequisites: 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, up to 12 credits.

ANT 408/508 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 sub-titles.

ANT 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

ANT 316/516 Culture, Biology and Health (3) Prerequisite: ANT 100 or SOC 100 or equivalent. Analyze health and illness in different ethnic groups and cultural systems. Study alternatives to the modern bio-medical model of health and disease.

ANT 420/520 Scientific Research in Archaeology (3) Prerequisite: ANT 220. Required laboratory arranged. An advanced methods and scientific writing course dealing with analytical procedures and interpretive techniques used in modern archaeology. The course will stress interpretation utilizing comparative collections, reference resources and scientific instruments.

ANT 325/525 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. Fee required.

ANT 470/570 Seminar in Anthropology (3)
Prerequisite: Choose one of the following: ANT 100, ANT 130, GEOG 100, SOC 100 or equivalent. A seminar exploring diverse topics surrounding the question of defining human nature. Repeatable, up to nine credits, under different subtitles.

ANT 480/580 Theory and Practice in Anthropology (3) Prerequisites: 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 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.

Visual Arts

ART 181 History of Art I (4) Designed to give a general survey of Western art from Pre-Historic (35000 B.C.) through the Medieval Period (A.D. 1400). Emphasis is placed on major movements/civilizations, methods of analysis, historical and cultural context, changes and development of styles.

ART 182 History of Art II (4) Designed to give a general survey of Western art from the Proto-Renaissance (A.D. 1265) through Modern art of the 20th century. Emphasis is placed on major movements, methods of analysis, historical and cultural context, changes and development of styles.

ART 183 Art I (3) Corequisite: ART 181. Study the elements of line, shape and space as they relate to drawing, color theory, two-dimensional and three-dimensional design. The course will integrate the fundamentals of art and experiences in conceptualization and visual problem solving. Fee required.

ART 184 Art II (3) Corequisite: ART 182. Study the elements of texture, form and motion as they relate to drawing, color theory, two-dimensional and three-dimensional design. The course will integrate the fundamentals of art and experiences in conceptualization and visual problem solving. Fee required.

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.

ART 210 Ceramics for Non-Art Majors (3) Explore the historical development of pottery and the contemporary craftsman's attitude toward clay. In addition to receiving instruction in basic design, hand building of ceramic forms and methods of firing. Fee required.

ART 211 Ceramic Design (3) 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. Fee required.

ART 212 Wheel Throwing (3) Begin throwing on the potter's wheel. Learn techniques of centering, opening and raising clay into basic pottery forms. Fee required.

ART 221 Introduction to Fiber Arts (3) A studio course involving several fiber construction processes and fabric surface treatments in two or three dimensions. Fee required.

ART 223 Weaving (3) Introduction to the fundamentals of loom weaving as an art form, emphasizing applied design problems. Fee required.

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 Introduction to Painting (3)
Prerequisites: ART 183, ART 184. Fundamentals of painting. Materials and techniques with basic procedures of studio painting using both oil and watermedia.

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) 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) 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. Fee required.

ART 248 Art for the Exceptional Child (2) Overview characteristics, needs and instruction adaptations suitable for teaching Visual Arts to the exceptional learner. Fee required.

ART 252 Printmaking I (3) Prerequisite: ART 183. All the intaglio printmaking techniques including etching, aquatint, drypoint, engraving, embossing and combined media. Work will be done using both traditional and experimental techniques, in black and white prints. Fee required.

ART 256 Calligraphy and Far Eastern Culture (3) To provide a new experience in the manipulation of Chinese painting and Calligraphy through Oriental fine art brush techniques. Culture of the Orient, its history, art, aesthetics and philosophies.

ART 261 Sculpture I (3) Introduction to materials, processes and concepts fundamental to making sculpture. Fee required.

ART 265 Jewelry (3) Introduction to materials, processes and concepts basic to making jewelry. Fee required.

ART 270 Graphic Arts I (3) Prerequisites: ART 183 and ART 184. General survey and laboratory for beginning to intermediate students. Design, layout and conceptual thinking for the applied graphic arts. Fee required.

ART 271 Basic Photography (3) Instructor consent. Learn fundamentals of photography. Study principles of black and white photography, including exposing, processing, printing and finishing techniques. Fee required.

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 visual images and art objects for consideration of theme, subject matter, purpose and context. Learn and apply strategies for visual problem solving.

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, under different subtitles.

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. Fee required. Repeatable, can 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. Fee required.

ART 321 Fiber Design (3) Prerequisite: ART 221. Continue the study and exploration of fiber construction and fabric surface treatments with emphasis on their design applications. Fee required.

ART 332 Watermedia Painting (3) Prerequisite: ART 231. Exploration of and rendering skills in watercolor and/or acrylic, gouache. Repeatable, up to two times.

ART 333 Life Drawing (3) Prerequisite: ART 184. Fundamentals of life drawing emphasizing proportions, anatomy and aesthetic relationships. Fee required. Repeatable, up to one time.

ART 340 Clinical Experience: K-12 Art (2) For Art Education majors. Full admission to PTE 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.

ART 344 Methods of Teaching Art in the Elementary School (1) Prerequisite: ART 190, full admission to PTE or certification at the undergraduate level. Not for Art Education majors. Gain practical experience in a wide variety of media suitable for the elementary classroom. Study selected philosophies of art in education, teaching techniques, procedures, materials and evaluation. Fee required.

ART 353 Printmaking II (3) Prerequisite: ART 252. Continued study and experimentation in intaglio and relief process in both black and white and color. Gain individual development in creative printmaking, emphasizing advanced technical processes. Repeatable, up to two times. Fee required.

ART 354 Collagraphic Printmaking (3) Provide an initial experience in an expressive use of oils as graphic transfer relief techniques for collagraphic prints. Use collagraphic plate as collage of different materials such as masonite or mat board. Repeatable, up to two times. Fee required.

ART 355 Silkscreen Printmaking (3) Study the silkscreen stencil process of printmaking, including the use of photosensitized screens and color on all levels. Repeatable, up to two times. Fee required.

ART 361 Sculpture II (3) Prerequisite: ART 261. Basic instruction in specific sculptural processes including modeling, casting, welding, fabrication, carving, etc. Repeatable, up to two times. Fee required.

ART 370 Graphic Arts II (3) Prerequisite: ART 270. General survey and laboratory dealing with dynamics of design, applied and conceptual. For intermediate to advanced students. Fee required.

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. Fee required.

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. Fee required.

ART 375 Publication Production (3) Prerequisite: ART 370. 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. Fee required.

ART 376 Typography (3) Prerequisite: ART 370. Survey and exploration of type and letter-forms. Origins and applications of type and the aesthetics of type. For the intermediate. Fee required.

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 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 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 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 handbuilt ceramic forms. An exploration of stoneware, raku and sodium vapor firing processes. Repeatable, up to two times. Fee required.

ART 415 Ceramic Studio (1-3) Consent of instructor. Individualized or specialized study on specific topics in ceramics. Repeatable, up to two times. Fee required.

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, up to two times. Fee required.

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 225. Continue the study of loom weaving, particularly loom-controlled techniques. Repeatable, up to two times.

ART 425 Fibers Studio (1-3) Consent of instructor. Individualized or specialized study on specific topics in fibers. Repeatable, up to two times. Fee required.

ART 431 Oil Painting (3) Prerequisite: ART 231. Development of individual expression and mastery of the medium. Emphasis on appropriate use of medium toward creative ends. Repeatable, up to 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, up to two times.

ART 435 Drawing Studio (1-3) Consent of instructor required. Individualized or specialized study on specific topics in drawing. Repeatable, up to two times.

ART 436 Painting Studio (1-3) Consent of instructor required. Individualized or specialized study on specific topics in painting. Repeatable, up to two times.

ART 440 Readings in Art Education (3) Prerequisite: Full admission to PTE or certification at the undergraduate level. Survey selected literature in visual arts education and related areas such as philosophy, psychology, learning theory, aesthetics and the nonvisual arts.

ART 441 Cultural Studies in the K-12 Curriculum (3) Prerequisites: Full admission to PTE or certification at the undergraduate level, ART 181 and ART 182. Study methods for including art analysis, art criticism, art history and art theory in the elementary and secondary art curriculum.

ART 442 Curriculum and Instruction in Art (3) Prerequisite: Full admission to PTE or certification at the undergraduate level. Study curriculum development and art learning activities appropriate for instruction in elementary and secondary art education. Fee required.

ART 455 Printmaking Studio (1-3) Consent of instructor required. Individualized or specialized study on specific topic in printmaking. Repeatable, up to two times. Fee required.

ART 460 Sculpture Studio (1-3) Prerequisites: ART 261, ART 361. Self-directed studies in selected sculptural modes or processes. Repeatable, up to two times. Fee required.

ART 461 Sculpture III (3) Use of increasingly skilled or sophisticated techniques/processes with greater emphasis on idea, form and content. Repeatable, up to three times. Fee required.

ART 464 Jewelry Studio (1-3) Prerequisite: ART 265. Consent of instructor required. Individualized or specialized study on specific topic in jewelry. Fee required. Repeatable, up to three times.

ART 465 Advanced Jewelry (3) Prerequisite: ART 265. Extension of increasingly skilled and sophisticated techniques/processes in jewelry and metalwork. Repeatable, up to two times. Fee required.

ART 472 Photography Studio (1-3) Instructor consent. Individualized or specialized study in photography. Repeatable, up to two times. Fee required.

ART 473 Advertising Design (3) A studio and workshop approach to concept, layout and finished art/design for applied graphics in the advertising profession. Repeatable, up to three times. Fee required.

ART 474 Graphic Studio (1-3) Consent of instructor. Individualized or specialized study on specific topics in graphics. Repeatable, up to two times. Fee required.

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. Fee required.

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. Fee required.

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. Fee required.

ART 479 Color Photography — The Print (3) Prerequisites: ART 271, ART 475. Discover and apply current methods and techniques of color printing from negatives and transparencies. Fee required.

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 490 Art Theory and Criticism (3) Make critical studies of art theory and the art object. Analyze the interrelationships of theme, content, context, formal elements and process toward a basis for critical judgment.

ART 492 Internship in Art (1-5) Art majors only. Supervised professional activity in major fields or related career areas. Spend a minimum of 30 clock hours per credit hour on the internship. A written evaluation and a written report must be filed with the instructor of record. A maximum of five credits of internship can be taken in any semester. Repeatable, under different subtitles.

ART 500 Contemporary Issues in Art (3) In-depth inquiry into contemporary issues in the visual arts. Analytical and interpretive research on selected topics, including their antecedents and their implications. Unlimited repeatability.

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 sub-titles.

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, up to two times. Fee required.

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 graded, unless section is approved (by the Graduate School) as 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. Fee required.

ART 521 Fiber Design (3) Advanced design techniques in fibers. Repeatable, up to two times. Fee required.

ART 523 Weaving (3) Concentrate in a selected area of weaving on an advanced design concept. Repeatable, up to two times. Fee required.

ART 532 Watermedia Painting (3) Advanced work in specific watermedia. Development of thematic imagery and personal technical skills. Repeatable, up to two times.

ART 533 Life Drawing (3) Prerequisite: ART 353 or equivalent. Advanced life drawing emphasizing development of personal interpretations of the human form. Repeatable, up to two times. Fee required.

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, up to two times. Fee required.

ART 545 Photography in Education (3) Study the uses of photographic images in the classroom. Plan, produce and evaluate black and white and color photographs for instruction. Fee required.

ART 553 Intaglio Printmaking (3) Prerequisite: ART 353 or equivalent. Advanced intaglio printmaking techniques including use of color in relief and intaglio procedures for individual development in creative printmaking. Repeatable, up to two times. Fee required.

ART 554 Collagraphic Printmaking (3) Prerequisite: ART 353. Advanced collagraphic techniques including use of multi color plates and graphic transfer relief techniques for collagraphic prints. Repeatable, up to two times. Fee required.

ART 555 Silkscreen Printmaking (3) Intensive experience in selected techniques of screen printing with the emphasis on individual development including the textile screen print. Repeatable, up to two times. Fee required.

ART 561 Graduate Sculpture (3) Self directed or assigned work in specific areas of sculpture. Advanced technical skills emphasized. Repeatable, up to two times. Fee required.

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. Fee required.

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. Fee required.

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. Fee required.

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 handbuilt ceramic forms at an advanced level. An exploration of stoneware, raku and sodium vapor firing processes. Repeatable, up to two times. Fee required.

ART 615 Ceramic Studio (1-3) Consent of instructor required. Individualized or specialized study on specific topics in ceramics. Repeatable, up to two times. Fee required.

ART 621 Fiber Design (3) Prerequisite: ART 521. Continue advanced study of techniques and design concepts in fibers. Repeatable, up to two times. Fee required.

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, up to two times. Fee required.

ART 625 Fibers Studio (1-3) Consent of instructor. Individualized or specialized study on specific topic in fibers. Repeatable, up to two times.

ART 631 Oil Painting (3) Prerequisite: ART 431 or equivalent. Advanced problems in oil painting. Emphasis on development of personal imagery and working in series. Repeatable, up to two times.

ART 634 Drawing (3) Advanced work in development on thematic imagery, inventive media, unique and personal solutions to visual problems. Repeatable, up to two times.

ART 635 Drawing Studio (1-3) Consent of instructor required. Individualized or specialized study on specific topics in drawing. Repeatable, up to two times.

ART 636 Painting Studio (1-3) Consent of instructor required. Individualized or specialized study on specific topic in painting. Repeatable, up to 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 644 Learning Experiences in Elementary Art Education (3) Research selected readings in art education, instructional methods, child development in art, curriculum and evaluation and get practical experience with media suitable for use in the elementary school. Fee required.

ART 646 Seminar in Art Education (3) Inquiry into historical and current research related to art in education. An in-depth study of the issues raised by the implications of this research. Repeatable, under different subtitles.

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. Fee required.

ART 653 Advanced Intaglio Printmaking (3) Prerequisite: ART 553. Advanced intaglio printmaking, with emphasis on individual creative growth and improvement. Repeatable, up to two times. Fee required.

ART 654 Advanced Collagraphic Printmaking (3) Prerequisite: ART 554. Advanced collagraphic printmaking with emphasis on individual creative growth and improvement. Repeatable, up to two times. Fee required.

ART 655 Advanced Printmaking Studio (1-3) Prerequisites: ART 553, ART 554. This class provides a working environment for large scale printmaking by utilizing all facets of printmaking techniques, serious edition printing and special projects. Repeatable, up to two times. Fee required.

ART 660 Graduate Sculpture Studio (1-3) Self-directed studies in selected sculptural modes or processes. Repeatable, up to two times. Fee required.

ART 661 Advanced Graduate Sculpture (3) Select problems in the creation of sculpture with emphasis on critical and technical competencies. Repeatable, up to two times. Fee required.

ART 672 Photography Studio (1-3) Instructor consent required. Advanced individualized or specialized study in photography for graduate students. Repeatable, up to two times. Fee required.

ART 680 Seminar in Art History (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 690 Art Theory, Analysis and Criticism (3) Research into the theoretical and critical study of art. Analyze the interrelationships of theme, content, context, intentionality, the formal elements and processes for interpretation and critical judgment.

ART 692 Internship in Art (1-5) Graduate art majors only. Supervised professional activity in major fields or related career areas. Spend a minimum of 30 clock hours per credit hour on the internship. Two copies of a written evaluation and a written report are required (to be filed with the instructor of record and the graduate coordinator). A maximum of five credits of internship can be taken in any 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 final report must be approved by the supervising committee and submitted in appropriate style and format to the Graduate School. S/U graded. Repeatable, maximum of six credits.

Aerospace Studies

AS 101 The Air Force Today I (2) Study military customs and courtesies, officership, national power and the United States power structure; organization, mission and resources of the Air Force and its strategic, tactical, military airlift and overseas commands.

AS 102 The Air Force Today II (2) Organization, mission and resources of Air Force support commands; coordination between Air Force Reserves, Air National Guard, Air Force, Army and Navy as they are used to achieve national goals.

AS 201 The Development of Air Power I (2) History of development of airpower and doctrine from balloons to World War II with emphasis on the role of air power; learn weaknesses and strengths of communicative skills.

AS 202 The Development of Air Power II (2) Examine development and role of air power from World War II to present; Berlin Airlift, Korean War, Mideast, and Vietnam War; study current strategic policy, continue to examine communicative skills.

AS 301 Air Force Leadership and Management I (3) Study fundamentals of military leadership and management; develop decision-making, planning, leadership and management skills through examination of case studies and various approaches to leadership; develop written and oral communicative skills.

AS 302 Air Force Leadership and Management II (3) Examine Air Force management strategy and tactics, group dynamics, performance appraisals, human behavior factors in management; develop professional skills required of Air Force junior officers; further develop communicative skills.

AS 401 National Security Forces in Contemporary American Society I (3) Study national security policy and its issues, processes and development since World War II; role of professional military leaders in a democratic society; develop officership and professionalism; enhance communicative skills.

AS 402 National Security Forces in Contemporary American Society II (3) Impact of international and regional security issues on policy, approaches to national security and its priorities in the 80's; study international law and military justice system; further develop communicative skills.

AS 422 Directed Studies (2-3) 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.

Astronomy

AST 100 General Astronomy (4) (3 lecture, 2 laboratory) The universe and our place in it. No mathematics background required. Fee required.

AST 301 Classical Astronomy (3) (2 Lecture, 2 laboratory) Our picture of the universe based on optical observations from prehistory to 1950. Fee required.

AST 302 Modern Astronomy (3) (2 lecture, 2 laboratory) The complex and violent universe revealed by radio astronomy, planetary exploration and satellite observatories. Fee required.

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 500 Survey of Astronomy (3) (2 lecture, 2 laboratory) A non-mathematical survey of contemporary astronomy emphasizing areas of current research activity. Fee required.

AST 595 Special Topics in Astronomy (1-4) An opportunity to explore areas of astronomy beyond the scope of existing department offerings. Repeatable, under different subtitles.

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.

Business Administration

NOTE: Course description may contain a notation (F) for fall; (S) spring. This designates the semester the course is offered.

BA 100 American Business System (3) For nonbusiness 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. (F,S)

BA 205 Business Communications (3) (Laboratory arranged) Prerequisite: ENG 122. An activity course with a problem-solving approach to composition 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. (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 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.

Accounting

NOTE: Course descriptions may contain a notation (F) fall; (S) spring. This designates the semester the course is offered.

BAAC 220 Principles of Accounting I (3) Prerequisite: BA 101 or take concurrently. An introduction to basic principles of accounting. The accounting cycle is examined and basic accounting principles are applied to recording, classifying and reporting of financial information and using computers for service and merchandising types of business. (F,S)

BAAC 221 Principles of Accounting II (3) Prerequisite: BAAC 220. A continuation of the Principles of Accounting I course to study basic principles of accounting as they apply to partnerships, corporations, long-term debt, manufacturing businesses and managerial uses of financial information. (F,S)

BAAC 320 Intermediate Accounting I (3) Prerequisite: BAAC 221 with a minimum grade of "C." Juniors or above. An activity course stressing the conceptual framework of accounting, a review of the accounting process, statement presentation of current assets and property, plant and equipment. (F,S)

BAAC 321 Intermediate Accounting II (3) Prerequisite: BAAC 320 with a minimum grade of "C." An activity course with emphasis on intangible assets, current and long-term liabilities, investment, stockholders' equity, pensions, leases and income taxes. (F,S)

BAAC 323 Cost and Managerial Accounting I (3) Prerequisite: BAAC 221 with a minimum grade of "C." 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." 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.

BAAC 326 Governmental and Institutional Accounting (3) Prerequisite: BAAC 221 with a minimum grade of "C." 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,S)

BAAC 327 Managerial Accounting (3) Prerequisite: BAAC 221. For non-accounting majors 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,S)

BAAC 328 Accounting Systems (3) Prerequisites: BAAC 300 and BAAC 321 or take concurrently. An activity course designed to study the processes and procedures by which an organization's financial information is recorded, processed, reported and disposed of in an efficient and orderly manner. (F,S)

BAAC 329 Introduction to Income Tax (3) Prerequisites: BAAC 220. Juniors or above. For non-accounting majors only. No graduation credit for accounting majors. An activity course that introduces common tax rules, problem areas and record-keeping requirements related to individuals and business. (S)

BAAC 420 Advanced Accounting I (3) Prerequisite: BAAC 321 with a minimum grade of "C." Emphasis is on special topics including income recognition changes and correction cash flows, earnings per share, discontinued operations, partnerships, interim reporting, estates, trusts, insolvency and other selected topics. (F,S)

BAAC 421 Advanced Accounting II (3) Prerequisite: BAAC 321 with a minimum grade of "C." 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) 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." 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 EDP. (F,S)

BAAC 426 Auditing II (3) Prerequisite: BAAC 425 with a minimum grade of "C." A seminar course for the study of audit procedures for specific transaction cycles. Complete a simulated audit case.

BAAC 428 Income Tax I (3) Prerequisite: BAAC 320 with a minimum grade of "C." An activity course that emphasizes individuals' tax reporting requirements. Topics include a review of tax policy, definitions of gross income, exclusions, deductions and disposition of property. (F,S)

BAAC 429 Income Tax II (3) Prerequisite: BAAC 428 with a minimum grade of "C." An activity course that promotes additional understanding beyond a foundation course. Emphasis is on applying tax law to partnerships and corporations through use of basic research, tax returns and computers.

BAAC 492 Internship in Accounting (1-10) Faculty coordinator's consent. Practical work experience allowing the intern the opportunity to utilize the theory of academic accounting courses. Credit for the internship is determined by the coordinator based on the type of work experience and time involved. S/U graded. Repeatable, maximum of nine credits.

BAAC 495 Special Topics in Accounting (1-3) Consent of instructor. 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.

BAAC 622 Accounting 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.

BAAC 623 Seminar in Management Accounting (3) Prerequisite: BAAC 221 or equivalent. This is a seminar course designed to give students the background to understand the use of accounting for control and planning through the study of systems used to generate information for internal management.

Computer Information Systems

NOTE: Course descriptions may contain a notation (F) Fall; (S) Spring. This designates the semester the course is offered.

BACS 100 Introduction to Computing (3) Required laboratory arranged. This is an activity course introducing students to computers in the modern workplace. Topics include hardware, software, BASIC programming and usage of microcomputers. It is a computer literacy course.

BACS 285 Business COBOL Programming (3) Prerequisite: BA 101. Required laboratory arranged. An activity course exploring business programming applications using COBOL language. Topics include inputting, outputting, logic, tables, character processing, sequential processing and subroutines.

BACS 286 Structured Programming and Applications for Business (3) Prerequisite: BA 101. Required laboratory arranged. Study of programming languages as a systematic discipline based upon fundamental concepts of logic and procedural organization. Languages will focus upon those currently utilized in business and industry. Particular attention will be paid to software design in terms of reliability, maintenance and quality.

BACS 287 Graphical Interface Programming (3) Prerequisite: BA 101. Required laboratory arranged. This course studies modern programming languages that are geared primarily toward graphical user interfaces and interactive processing. An activity course that introduces students to the concepts of end-user computing, human factors in interface design, graphical programming environments and event-driven programming.

BACS 291 Business Statistics I (3) Prerequisites: BA 101 and MATH 175. Learn the use of statistics in business activities through techniques of descriptive statistics, sampling distributions, statistical estimation, tests of hypotheses and introduction to bi-variate linear regression. (F,S)

BACS 300 Information Systems (3) Prerequisite: BA 101. Juniors or above. Topics include information systems technology, systems analysis, design and development. Managerial informational needs to support decision making are emphasized. (F,S)

BACS 380 Networking and Data Communications Systems (3) Prerequisite: BACS 285 or BACS 286 or BACS 287 with a minimum grade of "C." Required laboratory arranged. 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 (3) Prerequisite: BACS 285 or BACS 286 or BACS 287 with a minimum grade of "C." Required laboratory arranged. Juniors or above. An activity course addressing object-oriented design and programming, systems development environments, emerging technologies and resulting business applications.

BACS 384 Business Computer Solutions (3) Prerequisite: BACS 300. Required laboratory arranged. Juniors or above. An activity course covering the application of computer technology to the solution of business problems. Topics include methods of implementing processors, memory communications, software interfaces, external storage devices, operating systems and the security and protection of information in a business environment.

BACS 390 Business Statistics II (3) Prerequisites: BA 101, BACS 291, MATH 131 or MATH 176. Required laboratory arranged. Juniors or above. A course designed to build on Statistics I foundations. Topics include hypotheses testing (using t-tests, ANOVA, Chi square and regression), exploratory data analyses and time series analyses. (F,S)

BACS 392 Systems Platforms (3) Prerequisite: BACS 285 or BACS 286 or BACS 287 with a minimum grade of "C." Juniors or above. Required laboratory arranged. An activity course covering the configuration, modification and development of applications in programming interfaces such as Windows, X-Windows, Windows NT and Motif. Netware and OS/2 platforms are explored.

BACS 395 Production Management (3) Prerequisites: BACS 291, BAMG 350, MATH 131 or MATH 176. Required laboratory arranged. Juniors or above. Emphasizes problems of managing resources, people, money and physical property in product and services production. Includes plant layout, inventory systems and control, scheduling and materials handling. (F,S)

BACS 422 Directed Studies (1-3) Consent of instructor required. Juniors or above. Individualized investigation under the direct supervision of a faculty member. This course does not substitute for required courses. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

BACS 482 Management Support Systems (3) Prerequisites: BACS 285 or BACS 286 or BACS 287 and BACS 291 with minimum grade of "C." Required laboratory arranged. Juniors or above. An activity course for designing and implementing decision support, knowledge-based support and executive support systems. Topics include mathematical and descriptive modeling, knowledge acquisition, knowledge representation and relevant computer-based tools.

BACS 485 Database Management Systems (3) Prerequisite: BACS 285 or BACS 286 or BACS 287 with a minimum grade of "C." Required laboratory arranged. Seniors or above. An activity course covering the 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. Seniors and 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 285 or BACS 286 or BACS 287 with a minimum grade of "C." Required laboratory arranged. 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 Advanced Systems Analysis and Design (3) Prerequisite: BACS 487 with a minimum grade of "C." Required laboratory arranged. 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 492 Internship in Computer Information Systems (1-3) Consent of faculty coordinator. 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 285 or BACS 286 or BACS 287 with a minimum grade of "C." 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.

BACS 580 Information Processing (3) Required laboratory arranged. This is an activity course introducing students to computers and data processing concepts. Topics include history, hardware, software, analysis and design and microcomputers.

BACS 590 Statistical Analysis for Business (3) A seminar course at the graduate level dealing with the use of statistics in business activities through techniques of descriptive statistics, sampling distributions, statistical estimation and tests of hypotheses.

BACS 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.

BACS 680 Seminar in Management Information Systems (3) Prerequisite: BACS 300. Review and analyze macro informational business systems including the technology and procedures associated with their development and implementation.

BACS 690 Seminar in Business Statistics (3) Prerequisite: BACS 291 or BACS 590. Required laboratory arranged. An activity course designed to examine advanced statistical topics including hypotheses testing (using t-tests, ANOVA, Chi square and regression), exploratory data analyses, statistical design, sampling issues and time series analyses.

Finance

NOTE: Course descriptions may contain a notation of (F) Fall; (S) Spring. This designates the semester the course is offered.

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. 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) Juniors or above. Theory of risk and risk bearing; arrangements for dealing with risks; 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) Prerequisite: BAAC 221, 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 105. Analyze characteristics and interrelations between money and capital markets, flow of funds and factors determining both supply and demand of funds. Stress financial institutions' role as intermediaries and effect on economic activity. (F,S)

BAFN 372 Introduction to Real Estate (3) 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 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.

BAFN 433 Seminar in Business Law (3) Prerequisites: BAFN 231. Junior and senior business majors only. This seminar examines business entities and choice of business entity, secured transactions, bankruptcy and other topics as well as current legal issues. The role and impact of law on business decisions is emphasized throughout the seminar. (S)

BAFN 441 Estate Planning and Life Insurance (3) Prerequisite: BAFN 340. 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) Prerequisite: BAAC 428, BAFN 340, BAFN 471. Provide a comprehensive examination of financial planning concepts and techniques through both class discussion and case analysis.

BAFN 445 Risk Management (3) Prerequisite: BAFN 340 or consent of instructor. Nonspeculative risks in business and selected management for dealing with them; avoidance, assumption, reduction and transfer of risk; risk management decisions; control of risk and reduction of losses; case studies in risk management.

BAFN 470 Financial Management (3) Prerequisite: BAFN 370. 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 471 Investments (3) Prerequisites: BAFN 370. To provide the necessary background to develop and implement investment policy including analysis of the economy, industry and the firm with a focus on characteristics of different types of investments, handling risks and timing investment decisions. (F,S)

BAFN 473 Commercial Bank Management (3) Prerequisite: BAFN 371. Investigate the management of commercial banks and other financial institutions. Evaluate decision strategies that may be used to enhance performance in a changing economic and regulatory environment. Review banking principles, current practices and problems. (S)

BAFN 474 Case Problems in Financial Management (3) Prerequisites: BAFN 470. 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. 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-Alumni Foundation Fund (3) Consent of instructor. 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 471. 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. 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. This seminar course explores advanced topics in finance. S/U or letter graded. Repeatable, maximum of six credits.

BAFN 530 Business Law (3) Not open to students with an undergraduate business law course. This seminar gives students an understanding of the principles of business law, contracts, personal property, sales, security devices, commercial paper, agencies, corporations, partnerships and real property and estates.

BAFN 570 Financial Management (3) This activity course covers the acquisition, allocation and management of funds within a business including financial goals, funds flows, capital budgeting, asset management and financing strategies. Not for previous finance majors and minors.

BAFN 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.

BAFN 670 Seminar in Financial Management (3) Prerequisites: BAFN 370, BAFN 570 or equivalent. A seminar in the advanced financial problems involved in the organization and conduct of the business enterprise including integration of financial operations with business unit operations, financial planning and control, capital budgeting and capital costs.

Management

NOTE: Course descriptions may contain a notation of (F) Fall; (S) Spring. This designates the semester the course is offered.

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. 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. A seminar course to investigate the human aspects of business and how they influence efficiency, morale and management in the organization. Learn the psychological and sociological approaches to human behavior.

BAMG 357 Managing New Business Ventures (3) Prerequisites: BAAC 220, BAAC 221; BAMG 350; BAMG 360; BAFN 370 or take concurrently. 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 faculty coordinator. A seminar applying theories learned in all business curriculum to actual small businesses through a cooperative program with the Small Business Administration. (F,S)

BAMG 422 Directed Studies (1-3) Prerequisite: BAMG 350 and consent of instructor. Individualized research 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. A seminar to study the role of corporations in society and the relationship between business and its environment. Studies 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. Provides an expanded examination of human resources management topics such as: performance appraisal, training, compensation and labor relations. Current topics are emphasized.

BAMG 455 Industrial Relations (3) Prerequisite: BAMG 350. Traces the labor movement, basic philosophies of labor unions, legislation, and decisions of courts and labor boards affecting management-employee relations. Covers current labor topics, contract negotiations and administration, grievances and disputes.

BAMG 456 Strategic Management and Business Policy (3) Prerequisites: BA 101; BAAC 220, BAAC 221; BACS 291; BACS 395 or take concurrently; BAFN 231; BAMG 370; BAMG 350; BAMK 360; and senior standing. 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. An activity course to concentrate on the development of effective organizations through the study of organizational theory.

BAMG 458 International Management (3) Prerequisite: BAMG 350. A seminar that examines the field of international management. Examine the implications of managing organizations involved in global operations.

BAMG 459 Seminar in Organizational Development (3) Prerequisites: BAMG 350 and BAMG 354. A seminar course designed to study the methods of intervention in organizations for the purpose of instituting change. Emphasizes applications of organizational behavior techniques, group change and/or organizational behavior.

BAMG 492 Internship in Management (1-3) Faculty coordinator's consent. Junior and 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 495 Special Topics in Management (1-3) Prerequisites: BAMG 350 or consent of instructor. 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.

BAMG 550 Concepts in Management (3) A seminar course that studies concepts, principles, theories, operational problems of organization and management. Examines functional areas of management.

BAMG 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.

BAMG 650 Organizational Theory (3) Prerequisite: BAMG 350 or equivalent. Review management techniques such as planning, organizing, controlling and basic behavioral concepts such as leadership. The course will examine environmental influences upon organizational structure and processes. These topics include organizational theories, technology, power, conflict, size, goals and effectiveness.

BAMG 652 Seminar in Organizational Behavior (3) Prerequisite: BAMG 350 or equivalent. A seminar course to examine concepts of individual, group and organizational behavior. Analyze individual differences, group dynamics and factors that affect motivation, productivity and satisfaction. Current problems and issues in organizational behavior are studied including cross-cultural differences.

BAMG 653 Seminar in Human Resources (3) Prerequisites: BAMG 350 or equivalent. A seminar course covering the basics of human resource management such as recruitment, selection, employment planning, compensation, indirect compensation, labor relations, equal employment, applicable laws and current topics.

BAMG 656 Seminar in Business Policy (3) Prerequisites: Undergraduate courses in functional areas of business or their equivalents. A seminar course in which a comprehensive case method is used to integrate functional areas of business at the policy making level.

Marketing

BAMK 360 Marketing (3) Prerequisite: ECON 105. Junior or above. This theory course provides an understanding of the basic concepts and terminologies in marketing, as well as an understanding of how these concepts are applied in both international and domestic business settings and their environments.

BAMK 361 Consumer Behavior (3) Prerequisite: BAMK 360. This theory course examines the 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.

BAMK 362 Marketing Strategy (3) Prerequisite: BAMK 360. A theory and application course designed to explore planning and strategies formulated by marketing managers in international and domestic settings, using computer simulation or case analysis.

BAMK 363 Promotional Strategy (3) Prerequisite: BAMK 360. 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. 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. 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. An introductory survey course of retail institutions; how they operate and their impact on the marketplace. This course covers both theory and practice.

BAMK 367 Pricing and Public Policy Issues in Marketing (3) Prerequisite: BAMK 360. An activity course where pricing decisions in the marketing mix are explored. An awareness of domestic and international legal and public policy constraints in the area of pricing is fostered.

BAMK 368 Market Analysis and Research I (3) Prerequisites: BACS 291, BAMK 360. 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.

BAMK 407 Small Business Counseling (3) Consent of instructor. A seminar applying theories learned in all business majors through this cooperative program with the Small Business Administration.

BAMK 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.

BAMK 461 Advertising Campaigns (3) Prerequisites: BAMK 365. 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. Fee required.

BAMK 462 Marketing Problems (3) Prerequisite: BAFN 370, BAMK 362. Seniors or above or consent of instructor. This capstone marketing seminar course deals with detailed analysis, planning and control of the various marketing mix variables, the target market and the marketing environment using cases.

BAMK 464 International Marketing (3) Prerequisite: BAMK 360. 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.

BAMK 466 Market Analysis and Research II (3) Prerequisite: BAMK 362, BAMK 368. A seminar course in Market Research including case analysis and/or conducting a marketing research project. Includes application of research procedures.

BAMK 468 Business-to-Business Marketing (3) Prerequisite: BAMK 360, BAMK 362. 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 Distribution Logistics (3) Prerequisite: BAMK 360, BAMK 362. 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. 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. This course gives the student practical experience and opportunities to apply theory from academic marketing courses. S/U graded. Repeatable, a maximum of three credits.

BAMK 495 Special Topics in Marketing (3)

Majors and minors only. This seminar course explores various advanced marketing topics. The course is offered as needed. S/U or letter graded. Repeatable, under different subtitles.

BAMK 560 Marketing Management (3)

Not open to undergraduate marketing majors or business minors. This theory course provides an understanding of the basic concepts of marketing, as well as an understanding of how these marketing concepts are applied by both business and nonbusiness organizations.

BAMK 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.

BAMK 665 Seminar in Marketing (3)

Prerequisite: BAMK 360 or BAMK 560. This seminar course analyzes the marketing decision making areas and techniques by using cases. This course brings together all areas of marketing management and relates these areas to other functional areas in business.

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.

Biology Education**BIED 682 Problems in Teaching College**

Biology (3) Acquaints students with problems encountered in teaching biology and strategies for increasing teaching effectiveness. Topics covered include learning theory and application, ways to present difficult material, curriculum development, research and the laboratory as teaching tools, management and maintenance of biological materials.

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.

BIO 110 Principles of Biology (4)

(3 lecture, 3 laboratory) Investigate principles that drive biological actions within the biosphere and within cells; especially structural and functional bases of life in genetics, evolution and ecology. Fee required.

BIO 111 Survey of Organismal Biology (5)

(3 lecture, 4 laboratory) Survey the five kingdoms of living organisms focusing on diversity, life cycles and systematics, principles of structure and function, ecology and evolutionary relationships. Fee required.

BIO 191 Biology as a Profession Seminar (0.5)

For freshmen majors and undeclared majors. Examine specific disciplines within biological sciences and learn how to prepare for a career in a particular area of biology. S/U graded.

BIO 192 Careers in the Health Professions

Seminar (0.5) For students interested in a career in the primary health field. Discuss program, GPA, cost, salary, future of health professions. S/U graded.

BIO 220 Genetics (3)

(2 lecture, 3 laboratory) Prerequisite: BIO 110. Discover how the fundamental laws of heredity apply to normal and abnormal development and maintenance of all life using microorganism, plant, animal and human models as appropriate. Fee required.

BIO 265 Biological Science Concepts for

Elementary Teachers (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. Fee required.

BIO 270 Biology and Behavior of Human

Sexuality (2) Study of the human reproductive process, with structure and function of organs, orgasmic response, genetics of sex, fertility, contraception and sexual behavior patterns.

BIO 351 Microbiology (4)

(3 lecture, 3 laboratory) Prerequisites: BIO 110 or BIO 111 or ZOO 115; CHEM 131 or CHEM 208 or CHEM 331. Examine microorganisms and their activities in the biological world. Study structures and functions of bacteria. Also some discussion of fungi and viruses. Fee required.

BIO 371/571 Teaching Strategies for Biology

Teachers (1) (2 laboratory) Full admission to PTE required or consent of instructor. Demonstrations and strategies appropriate for lecture and laboratory instruction, including computer usage and controversial issues, will be presented. Fee required.

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. Fee required.

BIO 408/508 Workshop (0.5-6)

Study topic of biological interest for up to four weeks.

BIO 415/515 Biology of Aging (2)

Prerequisites: ZOO 115 or ZOO 245. Study biological changes that take place during the normal aging process, including several major organ systems.

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.)

BIO 424/524 Behavioral Genetics (2)

Prerequisites: BIO 220, PSY 120. Explore the genetic/environmental basis of normal and pathological behavior in animals and humans and study such contemporary issues as evolution, intelligence and genetic counseling.

BIO 425/525 Molecular Genetics (3)

(2 lecture, 3 laboratory) Prerequisites: BIO 220, CHEM 481. Examination of macromolecules (DNA, RNA and proteins) and of biological organisms with particular emphasis on recombinant DNA techniques and aberrant biochemical pathways.

BIO 450/550 Cell Physiology (4)

(3 lecture, 3 laboratory) Prerequisites: BIO 110, BIO 111, CHEM 131 or CHEM 331, recommend CHEM 481. The study of vital life processes common to all cells, relating cell structure to function, basic cell chemistry, energy transformations within the cell and homeostatic regulations of the environment. Fee required.

BIO 458 Diagnostic Microbiology (4)

(2 lecture, 4 laboratory) Prerequisite: BIO 351. Learn about microorganisms of medical significance: isolation, identification, immunology and disease etiology. Fee required.

BIO 460 Ecology (4)

(3 lecture, 3 laboratory) Prerequisite: BIO 111. Plant and animal communities will be identified and measured. Ecosystem structure and energy flow will be determined. Topics including biochemical cycles, soils, population structure/distribution and succession will be examined. Field trip may be required. Fee required.

BIO 465 Evolution (3)

Prerequisite: BIO 220. Study of the processes of evolution including the history of evolutionary thought, nature and sources of biological variation, population genetics, natural selection and a survey of the evolutionary history of life.

BIO 475 Biological Photography (2)

(1 lecture, 3 laboratory) Learn the fundamentals of photography and more advanced techniques such as lighting, close-up, copying, slide duplication, computer graphics, photomicroscopy and wildlife photography for AV production and scientific publication. Fee required.

BIO 485/585 Topics in Field Biology (1-10)

After preparatory work, study biology in the field on a state, national or international basis. Fee required.

BIO 491 Senior Seminar (0.5)

Survey research, literature and career opportunities in selected biological areas. S/U graded.

BIO 492/592 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.

BIO 494 Practicum in College Biological

Science Instruction (1-2) Prerequisites: BIO 110, BIO 111. Consent of instructor and departmental PTE committee required. Gain experience teaching an introductory biological science laboratory.

BIO 495 Special Topics in Biology (2)

Prerequisites: BIO 110, BIO 111. Advanced study for qualified undergraduates in area of the biological sciences.

BIO 497 Special Laboratory Topics in Biology

(1) (3 laboratory) Prerequisites: BIO 110, BIO 111. Advanced study in the laboratory for qualified undergraduates in an area of the biological sciences.

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.

BIO 501 Current Issues in Biology (1)

Course varies in content, reviewing current issues of biology, botany or zoology. S/U graded.

BIO 408/508 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.

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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

BIO 415/515 Biology of Aging (2) Prerequisites: ZOO 115 or ZOO 245. Study biological changes that take place during the normal aging process, including several major organ systems.

BIO 424/524 Behavioral Genetics (2) Prerequisites: BIO 220, PSY 120. Explore the genetic/environmental basis of normal and pathological behavior in animals and humans and study such contemporary issues as evolution, intelligence and genetic counseling.

BIO 425/525 Molecular Genetics (3) (2 lecture, 3 laboratory) Prerequisites: BIO 220 and CHEM 481. Examination of macromolecules (DNA, RNA and proteins) and of biological organisms with particular emphasis on recombinant DNA techniques and aberrant biochemical pathways.

BIO 545 Cytology (3) Study the structure and function of the various components and organelles of both prokaryotic and eukaryotic cells.

BIO 450/550 Cell Physiology (4) (3 lecture, 3 laboratory) Prerequisites: BIO 110, BIO 111, CHEM 131 or CHEM 331, recommend CHEM 481. The study of vital life processes common to all cells, relating cell structure to function, basic cell chemistry, energy transformations within the cell and homeostatic regulations of the cell environment. Fee required.

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 371/571 Teaching Strategies for Biology Teachers (1) (2 laboratory) Full admission to PTE required or consent of instructor. Demonstrations and strategies appropriate for lecture and laboratory instruction. Including computer usage and controversial issues, will be presented. Fee required.

BIO 485/585 Topics in Field Biology (1-10) After preparatory work, study biology in the field on a state, national or international basis. Fee required.

BIO 492/592 Internship in Biological Sciences (1-3) Consent of instructor. On-the-job experience in professional areas under the supervision of an area specialist. S/U graded.

BIO 595 Special Topics in Biology (3) Study of any biological topic at an advanced level.

BIO 621 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 622 Directed Studies (1-3) Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

BIO 655 Advanced Microbiology (4) (2 lecture, 6 laboratory) Prerequisites: BIO 351, CHEM 481. Examine prokaryotic anatomy, physiology, genetics and taxonomy with laboratory studies of bacterial groups and use of advanced microbiological techniques.

BIO 662 Human Ecology (3) Study of human population growth and cultural and societal impacts on ecological systems. Global and large regional areas will be the center of focus.

BIO 690 Invited Topics in Biological Sciences (0.5) Invited speakers present topics of interest pertinent to biology. S/U graded.

BIO 691 Seminar in Biological Sciences (0.5) Students will research and present seminars on selected topics of current biological interest.

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 credit 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.

BIO 792 Doctoral Supervised Teaching (1-6) Experience supervised college level biological sciences teaching. Develop course outlines and effective teaching techniques.

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.

Black Studies

BLS 100 Introduction to Black Studies (3) Reviews the emergence of black studies as an interdisciplinary field and also presents a rudimentary panorama of Afro-American history. Methodological questions and intellectual debates within the field are introduced.

BLS 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.

BLS 102 The Black Woman in America (3) Review the contributions of black women historically in this country in the areas of social and political struggle, education, business, science and sports.

BLS 104 Survey of Africa (3) Explores the geography, culture, philosophy, history, art, politics, economics, women and literature of Africa.

BLS 201 Afro-American History I (3) A survey of the black experience from the African homeland to initial capture, enslavement and emancipation — 1619-1865.

BLS 202 Afro-American History II (3) Examines the lives of black Americans from emancipation to the present.

BLS 204 Introduction to African Literature (3) A study of traditional African tales and selected works from early written works from Africa.

BLS 222 Black Nationalism in America (3) Black Nationalism as an aspect of Afro-American political and cultural belief receives attention here. Major figures include Richard Allen, David Walker, Henry M. Turner, Marcus Garvey and others.

BLS 230 Black Women in Literature (3) A study of black women writers in Africa and the African Diaspora.

BLS 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.

BLS 305 Survey of African-American Literature (3) Prerequisite: ENG 122. Literature by people of African descent receives selective attention: representative African, Afro-Latin American, Afro-Caribbean, Afro-American works. Genres such as political tract, novel, essay, autobiography, folk literature considered at various historical junctures.

BLS 320 Economic Experience of Black America (3) Afro-American poverty, joblessness, job choices and business experiences make up the substance of this course. The effects of racism on black employment, earnings, career opportunities and success are also studied.

BLS 332 Pan-Africanism (3) Traces the development of Pan-Africanism on the African Continent and its effects in Latin American and Caribbean contexts.

BLS 340 The Black Family (3) A social system approach to the study of the Afro-American family, dynamics of family relationships and effects of social, political and economic institutions on black family life.

BLS 360 Music and the Black Experience (3) The historical, thematic and stylistic development of black music from ancient Africa to the present.

BLS 386 Modern African World (3) Comparison of various nationalist movement of the African Continent that led to liberation and independence and emphasis on African experience since the 16th Century.

BLS 395 Aspects of the African-American Experience (3) Topics include Afro-American cultures, black psychology and black media. Repeatable, under different subtitles.

BLS 396 African and Afro-American Worldviews (3) African and Afro-American world view. A study of the philosophy of people of African descent from ancient Africa to the New World.

BLS 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.

BLS 420 Black Urban Politics (3) Course examines 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.

BLS 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.

BLS 456 Leadership and the Black Church (3) Investigates the role of the Black Church in the development of the Afro-American family, philosophy and leadership style from slavery to the present.

BLS 486 Current Issues in Multicultural Education (3) Explores different pedagogical and methodological strategies for understanding and teaching multicultural and diversity issues in the classroom.

BLS 490 Seminar in Black Studies (3)

Prerequisite: BLS 100, BLS 104, BLS 201, BLS 202 or consent of instructor. Preparation for advanced reading and research in black studies. Topics vary with instructor, but regularly address issues of current interest. Consultation on research project chosen by student is also required. Repeatable, under different subtitles.

BLS 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.

BLS 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

Botany

BOT 270 Economic Botany (3) (2 lecture, 3 laboratory) Consider plants that directly affect human welfare: foods, drugs, fibers, naval stores, wood, dyes, insecticides and others according to their taxonomy, structure and ecological requirements. Fee required.

BOT 330/530 Plant Taxonomy (4) (2 lecture, 6 laboratory) Prerequisite: BIO 111. Recognize and identify plants at species and family levels, using the keys and manuals. Native plant collection required. Fee required.

BOT 333/533 Morphogenesis of Algae and Fungi (4) (3 lecture, 3 laboratory) Prerequisite: BIO 111. Study structure, morphogenesis and phylogenetic relationships of algae, fungi. Fee required.

BOT 350/550 General Plant Physiology (4) (3 lecture, 3 laboratory) Prerequisites: BIO 111, CHEM 131. Study physiological factors influencing the chemical and structural composition of plants; absorption and utilization of water and minerals; photosynthesis, translocation, respiration and nitrogen metabolism; and growth and development. Fee required.

BOT 440/540 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. Material fee and field trip fee required.

BOT 475 Plant Culture (3) (2 lecture, 3 laboratory) Prerequisite: BIO 111. Propagate, maintain and understand plants valuable to society for economical, educational, aesthetic reasons. Fee required.

BOT 330/530 Plant Taxonomy (4) (2 lecture, 6 laboratory) Prerequisite: BIO 111. Recognize and identify plants at species and family levels, using the keys and manuals. Native plant collection required. Fee required.

BOT 333/533 Morphogenesis of Algae and Fungi (4) (3 lecture, 3 laboratory) Prerequisite: BIO 111. Study structure, morphogenesis and phylogenetic relationships of algae, fungi. Fee required.

BOT 440/540 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. Fee required.

BOT 350/550 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 and nitrogen metabolism and growth and development. Fee required.

BOT 560 Plant Ecology (4) (3 lecture, 3 laboratory) Prerequisite: BIO 460. 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. Fee required.

BOT 575 Fungal Diseases of Plants (4) (3 lecture, 3 laboratory) Prerequisite: BOT 333. Recognize plant diseases, the physical and biochemical processes involved in the establishment of diseases and their prevention and control. Fee required.

BOT 595 Special Topics in Botany (2) Study of any botanical topic at an advanced level. Repeatable, maximum of three credits under different subtitles.

BOT 622 Directed Studies (1-3) Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

BOT 655 Advanced Plant Physiology (3) Prerequisite: BOT 350. Advanced study of the important physical and chemical principles controlling the supply, uptake, movement, loss and assimilation of inorganic substances by plants during growth and development.

BOT 699 Thesis (1-6) Repeatable, maximum of six credits. S/U graded.

Computer Education

Computer Education courses are administered by the Department of Mathematical Sciences. Additional computer-related offerings can be found under Computing, General and Computer Science.

CE 195 Special Topics in Computer Education (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.

CE 230 Programming Languages in Education (3) Prerequisite: CS 180 with grade of "C" or better. Study a variety of programming languages and their applications in the field of education.

CE 240 Computers in Education (3) Prerequisite: CE 230 with grade of "C" or better. Study ways computers can be used to assist the educational process.

CE 330 Computer-Assisted Instruction (3) Prerequisite: CE 240 with grade of "C" or better. Study the development and use of computer-assisted and computer-managed instructional materials.

CE 340 Methods of Teaching Computer Education (3) Prerequisite: CE 330 with grade of "C" or better. Study and practice effective methods of teaching with computers.

CE 395 Special Topics in Computer Education (1-3) Junior or above or 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.

CE 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.

CE 490 Seminar (1) Junior or above in Computer Education. 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.

CE 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.

CE 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. Unlimited repeatability.

CE 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

Computing, General

Computing, General courses are administered by the Department of Mathematical Sciences. Additional computer-related offerings can be found under Computer Science and Computer Education.

CG 105 Personal Computer Applications (3) Operate and use microcomputers for personal applications such as word processing, spelling correction processing, mail-merging processing, electronic spreadsheet processing and database processing. Emphasize one specific microcomputer for "hands-on" experience.

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 115 FORTRAN 77 Programming (3) Prerequisite: MATH 124 with grade of "C" or better. Become familiar with designing and writing structured programs in the FORTRAN 77 language. Program will involve some technical applications in science and mathematics.

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 125 LOGO Programming (3) Study of the LOGO programming language. Topics include graphics, recursions and list processing.

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.

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.

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 Lifestyles 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.

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

(1-3) 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. Repeatable, a maximum of three credits.

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) Prospective elementary teachers are given a foundation in school health programs and opportunities to develop skills in organizing and presenting learning experiences in a comprehensive and sequential health curriculum.

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 Strategies

(4) Prerequisite: 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.

CH 342 Modern Concepts of Health and Disease

(3) Prerequisite: CH 299. 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 343 Methods and Observation of Health Education

(3) Effectively present health information by using various educational media, community resources, exhibits, experiments and presentations including observation and supervised teaching experience.

CH 350 Introduction to Environmental Health

(3) Prerequisite: CH 299. 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 400/500 Workshop: Stress Management

(2) Course focuses on the causes of stress, its physiological and psychological effects and consequences of prolonged exposure to stressors. Strategies for intervention and personal use will also be presented.

CH 405/505 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 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 471 Safety Education

(3) Prepares teachers and administrators comprehensively to assume responsibility for safety education and accident prevention programming in schools and public service.

CH 492 Internship in Health

(6-12) Prerequisite: CH 410. Work with official or voluntary health agencies. Specific assignments and responsibilities required under guidance and supervision of Department of Community Health faculty. Submit written evaluation at conclusion of internship for purposes of evaluation and recording. Repeatable, maximum of 12 credits.

CH 400/500 Workshop: Stress Management

(2) Course focuses on the causes of stress, its physiological and psychological effects and consequences of prolonged exposure to stressors. Strategies for intervention and personal use will also be presented.

CH 503 Seminar: Substance Abuse

(3) Analyze pharmacological, psychological, sociological and legal implications of drug and alcohol use, misuse and abuse, emphasizing current research and prevention/control measures.

CH 504 Issues in Elementary School Health Education

(3) Focuses on contemporary health issues affecting grade school children. Identifies available resources and effective strategies for parents, schools, media and agencies to address issues and promote health enhancing behaviors.

CH 405/505 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 506 Contemporary Issues in Human Sexuality

(3) Students will pursue in- depth study of current issues in human sexuality. Attention will be given to reviewing the psychological and social forces that shape people's sexual behaviors.

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 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

CH 530 Seminar in Health Promotion Strategies

(3) Prerequisite: 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 Health Program Planning and Evaluation

(4) 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: EPRE 602 or equivalent. 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 650 Seminar in Health Education

(2-4) Present contemporary topics under guidance of qualified graduate faculty and consultants. Repeatable, two times.

CH 692 Graduate Internship (6) Prerequisites: CH 610 and consent of instructor. Put into practice knowledge and skills learned in the classroom. Assume responsibilities in administration, supervision and evaluation and conduct various activities. One full semester of full-time placement is required in a health care setting.

CH 699 Thesis (1-6) Optional for Master of Arts candidates in Health Education. Repeatable, maximum of six credits.

Chemistry Education

CHED 494 Tutoring in Chemistry (1-2) Prerequisites: CHEM 321, CHEM 332. Four hours of instruction dealing with tutoring. Complete 30 clock hours per semester hour of credit in actual tutoring. Attend six bi-weekly coordinator meetings. Prepare a final written evaluation/summary of the tutoring experience. S/U graded. Repeatable, maximum of 2 credits.

CHED 495 Seminar in Teaching Chemistry (2) Full admission to PTE required, certification at the undergraduate level or consent of instructor. Students are prepared to set up, organize and run a high school chemistry laboratory and classroom. S/U graded.

CHED 504 General Chemistry I: Concepts and Applications (3) (2 lecture, 2 laboratory) Prerequisite: CHEM 112 or CHEM 115. Content, pedagogy, laboratory experiences and instructional materials for the teaching of secondary chemistry. Not applicable to a graduate degree in chemistry.

CHED 505 General Chemistry II: Concepts and Applications (3) (2 lecture, 2 laboratory) Prerequisite: CHED 504. Continuation of CHED 504. Additional and advanced content and pedagogy for secondary chemistry. Not applicable to a graduate degree in chemistry.

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 511 Advanced Placement-Chemistry (1-3) Designed to provide content pedagogical and laboratory information related to the teaching of Chemistry in a secondary school advanced placement program. Unlimited repeatability.

CHED 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

CHED 530 Organic Chemistry: Concepts and Applications (3) (2 lecture, 2 laboratory) Colorado Teacher Certification in Sciences required or the equivalent. Structure, properties and reactions of organic compounds will be explored. Applications of basic concepts in modern society will be presented for teachers interested in improving their understanding of organic chemistry. Not applicable to a graduate degree in chemistry.

CHED 560 Physical Chemistry: Concepts and Applications (3) Prerequisites: CHEM 112 or CHEM 115, CHEM 131, MATH 125 and one year of physics. The basic ideas of thermodynamics are presented in a manner appropriate to the needs of the science teacher. Applications will be made to the world about us.

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.

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.

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. Fee required.

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; including, aliphatic and aromatic hydrocarbons with emphasis to the allied health professions (nursing, food and nutrition, health, kinesiology, etc.). Fee required.

CHEM 109 Fundamentals of Chemistry II (5) (4 lecture, 3 laboratory) Prerequisites: CHEM 108. Chemistry of biologically important organic compounds (alcohols, ethers, aldehydes, ketones, acids and their derivatives and amines) and biochemistry of the human organism, including the chemistry of cellular and body constituents and processes, foods and nutrition and metabolic diseases. Fee required.

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. Fee required.

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. Fee required.

CHEM 114 General Chemistry I (4) (3 lecture, 3 laboratory) One year of high school chemistry and two years of high school algebra or equivalent required. Enrichment course for the well-prepared student. Atomic theory, stoichiometry, bonding, states of matter and solutions. Fee required.

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. Fee required.

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. Fee required.

CHEM 320/520 Theory and Use of Analytical Instruments (1) (3 laboratory) Prerequisite: CHEM 131 or 331. Techniques of sample preparation and data collection for IR, NMR, UV-visible and AA spectrophotometers and gas chromatograph. Fee required.

CHEM 321 Chemical Analysis (4) (2.5 lecture, 4.5 laboratory) Prerequisites: 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. Fee required.

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. Fee required.

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. Fee required.

CHEM 360/560 Environmental Chemistry (2) (1.5 lecture, .5 laboratory) Prerequisite: CHEM 131 or CHEM 331. The effect of chemicals in the environment.

CHEM 395 Food Chemistry (3) (2 lecture, 3 laboratory) Prerequisites: CHEM 208 and FND 251 or consent of instructor. Chemistry of foods, food products, food additives and the chemical analysis of foods. Fee required.

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. Fee required.

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) First of two courses exploring modern inorganic chemistry. 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. Fee required.

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. Fee required.

CHEM 451/551 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 452/552 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. Fee required.

CHEM 454 Physical Chemistry II Laboratory (1) (3 laboratory) Prerequisite: CHEM 453. Corequisite: CHEM 452. Continuation of CHEM 453. Fee required.

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) Prerequisite: 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) Prerequisite: 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. Fee required.

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. Fee required.

CHEM 491 Glass Blowing (1) (3 laboratory) Demonstration and practice in techniques of glass blowing and repair of laboratory glass equipment.

CHEM 493 Special Topics in Chemistry (2) Advanced presentation of a topic in chemistry not covered in other courses. Topic determined when offered; e.g., geochemistry, chemical evolution, industrial chemistry. Repeatable, maximum four credits under different subtitles.

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. At least 38 clock hours per credit hour will be spent on investigation. Oral and written reports are required. Unlimited repeatability.

CHEM 320/520 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. Fee required.

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 451/551 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 452/552 Physical Chemistry II (4) Prerequisite: CHEM 551. Chemical kinetics, quantum theory of atoms and molecules and statistical thermodynamics.

CHEM 555 Chemical Kinetics (3) One year of physical chemistry required. An advanced consideration of the factors involved in the rate of chemical reactions and the mechanism by which they occur.

CHEM 558 Chemical Thermodynamics (3) One year of physical chemistry required or equivalent. An advanced study of the fundamental laws of thermodynamics as applied to closed and open systems and the determination of their properties. A mathematical emphasis is stressed.

CHEM 559 Quantum Chemistry (3) One year of physical chemistry required. An advanced study of the fundamental principles of quantum mechanics as applied to simple physical, atomic and molecular systems. A mathematical emphasis is stressed.

CHEM 360/560 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 482/582 General Biochemistry II (4) Prerequisite: 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 or CHEM 208 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 12 credits under different subtitles.

CHEM 600 Seminar in Chemistry (1) Oral report and discussion on some topic of interest from current literature. Repeatable, maximum of 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 654 Statistical Thermodynamics (2) Prerequisite: CHEM 558. Mathematical probability, statistical mechanics, Boltzmann statistics, partition functions and equilibrium constants in terms of gases and solids.

CHEM 695 Thesis Proposal (1) The student will develop a research proposal based on current literature.

CHEM 699 Thesis (1-6) Required of Master of Arts candidates in the Arts and Sciences chemistry program. Repeatable, maximum of 10 credits.

CHEM 755 Supervised Practicum in College Teaching (1-6) Observation of and supervised practice in, college teaching for doctoral candidates who plan to teach on the college or university level, with observation used as a basis for analysis of learning experiences. Repeatable, maximum of six credits.

CHEM 793 Research Practicum (1-4) Consent of instructor. Provides experience in the development and implementation of research techniques, the development of experimental design and the analysis of research data. Repeatable, maximum four credits.

CHEM 797 Doctoral Proposal Research (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. Repeatable, maximum of four credits.

CHEM 799 Doctoral Dissertation (1-12) Required of all doctoral candidates. See PhD in Chemical Education — Minimum requirements for the major in the Graduate School section of this Bulletin. Repeatable, maximum of 12 credits.

Chinese

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.

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.

CHIN 105 Conversational Chinese I (3) For students with no previous Chinese. Develop a basic conversational ability. Emphasis on language use in business or tourism. Discussion of important aspects of Chinese culture and thought.

CHIN 106 Conversational Chinese II (3) Prerequisite: CHIN 105. Continuation of Chinese 105. Basic conversational Chinese with emphasis on language use in business or tourism. Discussion of important aspects of Chinese culture and thought.

Communication Disorders

CMDS 160 Introduction to Human Communication and Its Disorders (3) Observation in UNC Speech-Language Pathology and Audiology Clinic required. Survey identifying characteristics, causes, diagnosis and treatment of speech and language disorders.

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) Sophomores or above. Structure and function of the speech and auditory/vestibular mechanisms.

CMDS 301 Computers for Health and Human Services (2) Introduction to the workings of the computer; managerial, diagnostic and clinical applications of computers in health-related and human services professions.

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 I (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. Fee required.

CMDS 386/586 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 467/567 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 474/574 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. Fee required.

CMDS 478 Aural Rehabilitation and Amplification (3) Prerequisite: CMDS 370. A study of basic principles of aural (re)habilitation and the use of amplification systems for hearing impaired individuals including personal hearing aids and other specialized assistive listening/alerting devices.

CMDS 483/583 Entry/Primary Speech-Language Pathology Practicum (2) Prerequisites: CMDS 360, CMDS 365 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. Fee required.

CMDS 485 Advanced Undergraduate Speech-Language Pathology Practicum (2) Prerequisite: CMDS 483, 3.0 GPA in major courses or consent of clinical coordinator. Supervised practicum with communicatively-disordered clients; for advanced undergraduate students. Repeatable, maximum of six credits. Fee required.

CMDS 487/587 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

CMDS 515 Referenced and Research Writing (1) Content includes library data bases, development of problems and research topics and use of APA style.

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 561 Voice Disorders and Cleft Palate (3) Advanced study in diagnosis and treatment of voice disorders, including those associated with cleft lip/palate.

CMDS 565 Neurogenic Communication Disorders (4) Prerequisite: CMDS 555. Causation, diagnosis and treatment of speech and language disorders resulting from neurological dysfunction.

CMDS 467/567 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 569 Advanced Diagnostic Procedures (1-2) Must be taken for a minimum of four credits. Corequisite: CMDS 583 or CMDS 585. Perform speech-language screenings and diagnostic evaluations. Repeatable, maximum of six credits. Fee required.

CMDS 570 Rehabilitative Audiology (3) Prerequisite: CMDS 370. Theory and procedures for habilitation/ rehabilitation of children and adults with hearing handicap.

CMDS 571 Speech and Hearing Science (3) Prerequisites: CMDS 265 and CMDS 267. Factors related to the study of speech production and audition. Introduction to laboratory techniques for measurement of complex acoustic signals will be emphasized. Fee required.

CMDS 572 Noise (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 474/574 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. Fee required.

CMDS 580 Practicum in Rehabilitative Audiology (2) Prerequisite: CMDS 483. Habilitation/rehabilitation of acoustically-handicapped persons. Repeatable, maximum of six credits. Fee required.

CMDS 582 Pediatric/Educational Audiology (3) Prerequisite: CMDS 370. Philosophy and implementation of diagnosis of hearing loss in children. Diagnostic, therapeutic and educational implications of auditory processing disorders. Services for hearing-impaired children in the schools.

CMDS 483/583 Entry/Primary Speech-Language Pathology Practicum (2) Prerequisites: CMDS 360, CMDS 365 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. Fee required.

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 Advanced Graduate Practicum in Speech-Language Pathology (2) Prerequisite: CMDS 483/583. Supervised individual and group therapy experiences with communicatively-disordered clients. Repeatable, maximum of eight credits. Fee required

CMDS 487/587 Advanced Audiology (3) Prerequisite: CMDS 370. Theory and practice of advanced techniques of audiometric assessment.

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. Fee required.

CMDS 616 Speech and Language Services in the Public Schools (1)

Content includes relevant public laws, child abuse, cultural issues and administrative issues related to services provided in the public schools.

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 660 Clinical Phonology (3)

Advanced study of articulation disorders in children and adults.

CMDS 662 Stuttering (3)

Current theories, therapies and research on stuttering and related disorders of fluency.

CMDS 663 Language Disorders in Children II (3)

Advanced study of causation, diagnosis and therapy for children with language disorders. Pragmatic aspects of language; implications for remediation of language disorders.

CMDS 668 Selected Topics in Communication Disorders (1-4)

Current issues in communication disorders. Sections chosen by instructor to meet needs of students in degree programs. Other sections arranged to accommodate professionals wishing to pursue special topics. Unlimited repeatability.

CMDS 669 Language-Learning and Cognition (3)

Basic neurophysiology related to language-learning and cognition.

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 (5)

Prerequisites: CMDS 487 or CMDS 573 and CMDS 587. Theory and process of differential diagnosis of hearing and auditory processing disorders; electrophysiological techniques for measuring auditory and vestibular function, including electronystagmography, brain stem evoked response audiometry and electrocochleography.

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 Experimental Phonetics (3)

Undergraduate anatomy and physiology required. Advanced physiology of the speech production system, emphasizing normal aspects and select pathophysiological conditions.

CMDS 683 Advanced Topics in Language Disorders (3)

Prerequisite: CMDS 365. Advanced topics and trends related to diagnosis and treatment in child language disorders

CMDS 691 Real-Time Laboratory Applications in the Behavioral Sciences (2)

Prerequisites: Computer literacy course and/or experience in operating micro- or minicomputers or consent of instructor. Use of mini- and microcomputers for real-time applications in acoustics, perception, aerodynamics and physiology.

CMDS 692 Internship in Medical Settings (2-15)

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 15 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, maximum of six credits.

Computer Science

CS 101 Introduction to Computer Science (3)

A beginning-level course which provides a broad introduction to the fundamental concepts and techniques of computer science. Topics covered will include computer architecture, structured programming, data base and information retrieval, and applications of computers in a variety of areas.

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 subtitles.

CS 200 Object-Oriented Analysis Design and Programming (3)

Prerequisite CS 100. 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)

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 of lists, trees, graphs, internal/external sorting and searching, hashing. Concepts related to the interaction among algorithm, data structures, and storage structures for the generating, developing, and 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)

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 221. 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. Study software engineering implementation, testing and operational phases; testing strategies and techniques; configuration management; software quality assurance; and intra/inter-language communication while applying them to the continuation of a team project.

CS 470 Artificial Intelligence (3)

Prerequisite: CS 210, CS 300. Study knowledge representation, automated reasoning, natural language processing, vision processing, expert systems and machine learning; AI programming.

CS 480 Graphics (3)

Prerequisite: CS 210. 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 2 credits.

CS 492 Internship (1-8)

Senior or above or consent of instructor. Obtain practical experience and have opportunities to utilize computer science theory. S/U graded. Repeatable, maximum of eight credits.

CS 497 Senior Project (1-8)

Senior or above. A significant application in computer science will be researched, developed and implemented under the guidance of a computer science professor. Repeatable, maximum of eight credits.

College Student Personnel Administration

CSPA 050 New Student Seminar (0)

Provides the opportunity for new students to learn and adopt methods and skills needed for success in college. Includes time management, study skills, note-taking, reading tips and goal setting. This is a Basic Skills course offered through Continuing Education and does not count in term, cumulative or total credits and will not be calculated in the GPA. S/U graded.

CSPA 173 Career Theories and Employment Trends (2)

Designed to explore career theories and their application to the world of work. Students will investigate current occupational information and trends of the future.

CSPA 210 Human Values (2)

Identify, clarify and critique personal values. Expand awareness of cross-cultural values, lifestyle choices, sources of values and the process of making value commitments.

CSPA 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.

CSPA 260 Paraprofessionals in Residence Life (1-2) Consent of instructor. Majors only. Through a comprehensive training experience become acquainted with the responsibilities of the resident assistant. Emphasizes student development and its application to the residence hall environment. Repeatable, maximum of 2 credits.

CSPA 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.

CSPA 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. Unlimited repeatability.

CSPA 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. S/U graded. Repeatable, under different subtitles.

CSPA 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

CSPA 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.

CSPA 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.

CSPA 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.

CSPA 651 Philosophical, Historical and Cultural Foundations of Student Affairs in Higher Education (3) Study philosophies of education and epistemology. Outlines history of higher education in the United States. Origin/history of role of student affairs. Emphasizes cultural perspective of ethnic minorities, women and other cultural subgroups in higher education.

CSPA 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.

CSPA 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.

CSPA 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.

CSPA 656 Student Services in the Community College (2) Through an understanding of the unique educational mission and philosophy of the community college, the student will develop skills to analyze the student service needs of community college students, design and evaluate delivery systems.

CSPA 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.

CSPA 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.

CSPA 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.

CSPA 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 12 credits under different subtitles.

CSPA 682 Legal Issues in Student Affairs (3) An examination of the legal implications for College Student Personnel Administration and the student-institutional relationship.

CSPA 684 Group Leadership in Student Affairs (2) Majors only. Covers 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.

CSPA 750 College Students: Culture, Characteristics, Campus Life (3) Prerequisite: CSPA 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.

CSPA 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.

CSPA 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.

CSPA 755 Advanced Research Seminar (1) Prerequisite: EPRE 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, one time.

CSPA 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 10 credits.

CSPA 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.

CSPA 797 Doctoral Proposal Research (1-4) Permission of major advisor. A required dissertation proposal experience for all doctoral students. Four hours of credit must be earned in this course in partial fulfillment of requirements for all doctoral degrees before admission to candidacy. S/U graded. Repeatable, maximum of four credits.

CSPA 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, maximum of 12 credits.

Dance

DNCE 166 Ballet (1) Gain knowledge and skill in the activity of ballet. Repeatable, maximum of five credits.

DNCE 167 Ballroom Dance (1) Gain knowledge and skill in the activity of ballroom dancing. Repeatable, maximum of three credits.

DNCE 168 Ethnic Dance (1) Gain knowledge and skill in the activity of ethnic dance. Repeatable, maximum of three credits.

DNCE 169 Partnering (1) Prerequisite 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 (1) Gain knowledge and skill in the activity of jazz dance. Repeatable, maximum of five credits.

DNCE 171 Modern Dance (1) Gain knowledge and skill in the activity of modern dance. Repeatable, maximum of five credits.

DNCE 173 Self-Awareness with Movement (1) Gain knowledge and skill in the activity of self-awareness with movement. Repeatable, maximum of three credits.

DNCE 175 Tap Dance (1) Gain knowledge and skill in the activity of tap dance. Repeatable, maximum of five credits.

DNCE 180 Intermediate Ballet (2) Prerequisite: DNCE 166 or equivalent. Gain intermediate knowledge and skill in the activity of ballet. Repeatable, may be taken five times.

DNCE 181 Intermediate Jazz Dance (2) Prerequisite: DNCE 170 or equivalent. Gain intermediate knowledge and skill in the activity of jazz dance. Repeatable, may be taken five times.

DNCE 182 Intermediate Modern Dance (2) Prerequisite: DNCE 171 or equivalent. Gain intermediate knowledge and skill in the activity of modern dance. Repeatable, may be taken five times.

DNCE 183 Intermediate Tap Dance (1) Prerequisite: DNCE 175 or equivalent. Gain intermediate knowledge and skill in the activity of tap dance. Repeatable, may be taken five times.

DNCE 292 Advanced Ballet (3) Prerequisite: DNCE 180 or consent of instructor. Gain knowledge and skill at advanced level in activity of ballet. Unlimited repeatability.

DNCE 293 Advanced Jazz Dance (2) Prerequisite: DNCE 181. Gain knowledge and skill at advanced level in the activity of jazz dance. Unlimited repeatability.

DNCE 294 Advanced Modern Dance (2) Prerequisite: DNCE 182. Gain knowledge and skill at advanced level in the activity of modern dance. Unlimited repeatability.

DNCE 295 Beginning 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 Beginning Choreography and Improvisation (2) 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 308/508 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 (2) Study and practice basic theories of performing and/or choreography. Unlimited repeatability.

DNCE 355 Dance Performance II (2) Prerequisite: DNCE 354 or consent of instructor. Study and practice of basic theories of dance performance, either in student informal or formal concert setting. Unlimited repeatability.

DNCE 356 Dance Performance III (2) 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. Unlimited repeatability.

DNCE 357 Dance Performance IV (2) Prerequisites: DNCE 354, DNCE 355, DNCE 356 or consent of instructor. Gain performance and/or choreographic experience in a small professional dance company. Unlimited repeatability.

DNCE 358 Repertoire (2) Prerequisites DNCE 166, DNCE 170, DNCE 171. Learning choreographed dances for purpose of perfecting movement memory, musicality, performance ability and dancing as part of ensemble.

DNCE 397 Intermediate Technique, Improvisation and Composition (2) Prerequisites: DNCE 295, DNCE 296. Learn intermediate level dance technique; movement analysis and composition as an intermediate dance student.

DNCE 440 Labanotation/Movement Analysis (2) Prerequisites: DNCE 180, DNCE 181, DNCE 182 and DNCE 295. Consent of instructor. Study of analyzing and notating dance movement.

DNCE 453/553 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 454/554 Dance History and Philosophy (2) Consider the history and development of dance as it is culturally determined and the philosophy influencing dance.

DNCE 455/555 Dance Philosophy/Trends (2) Prerequisites: DNCE 166, DNCE 170, DNCE 171, DNCE 296. Consider trends in dance/art form. Familiarity with dance criticism.

DNCE 456/556 Advanced Technique, Improvisation and Composition (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 459/559 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: KINE 220 or PE 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 308/508 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.

DNCE 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

DNCE 453/553 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 454/554 Dance History and Philosophy (2) Consider the history and development of dance as it is culturally determined and the philosophy influencing dance.

DNCE 455/555 Dance Philosophy/Trends (2) Prerequisites: DNCE 166, DNCE 170, DNCE 171, DNCE 296. Consider trends in dance/art form. Familiarity with dance criticism.

DNCE 456/556 Advanced Technique, Improvisation and Composition (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 459/559 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.

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.

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.

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.

ECON 202 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 245 Urban Planning Economics (3) Prerequisites: ECON 103 and ECON 105. Students will study economic problems relevant to urban areas including land use, congestion, housing and poverty. The role of the private and public sector in resolving these problems will be analyzed.

ECON 250 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 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 300 Intermediate Microeconomics (3) Prerequisites: ECON 105, MATH 124 or MATH 175. The theory of consumer choice, of the business firm and resource allocation.

ECON 304 Women and the Economy (3) Prerequisite: ECON 105. Explore the economic status of women, the institutions that have affected their economic decisions and impact on the performance of the economy.

ECON 305 Labor/Management Economics (3) Prerequisites: ECON 103, ECON 105. Examine American labor movement, development of labor laws and policy, economics of labor markets, employment, collective bargaining practice, union impact on contemporary industrial organization.

ECON 341 Public Finance (3) Prerequisites: ECON 103, ECON 105. Government financing at federal, state and local levels as reflected in expenditures, revenues and debt.

ECON 345 International Trade (3) Prerequisites: ECON 103, ECON 300. Analyze theoretical underpinnings of international trade and their relevance to practical issues. Trade impediments, trade policies and institutions that have evolved in a dynamic international system are also discussed.

ECON 346 International Finance (3) Prerequisites: ECON 103, ECON 105, ECON 350. Analyze theories and functions of the international financial system, stressing balance of payments and national income problems, adjustment mechanisms, exchange rates and capital flows.

ECON 350/550 Intermediate Macroeconomics (3) Prerequisites: ECON 103, ECON 105. Study the determinants of aggregate demand, aggregate supply, employment, macroeconomic objectives and policies.

ECON 360 Economics of Growth and Development (3) Prerequisites: ECON 103, ECON 105. Analyze the theory, processes and history of economic growth and development, emphasizing resource use and productivity in less developed areas.

ECON 400 Managerial Economics (3) Prerequisites: ECON 105, ECON 300, 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 402/502 Contemporary Economic Problems (3) Prerequisites: ECON 103, ECON 105 or consent of instructor. 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 451/551 Quantitative Economics (3) Prerequisites: ECON 300, ECON 350, MATH 131 or MATH 176. Study of the principal mathematical techniques used in economic analysis; fundamental concepts underlying marginal analysis, linear programming, decision and game theory. Microcomputers will be used.

ECON 452/552 Econometrics (4) Prerequisites: ECON 300, ECON 350, BACS 390, MATH 131 or MATH 176. Estimating statistical regression models of economic relationships; treatment of special problems that may arise in analysis of economic data. Microcomputers will be used.

ECON 453 Business and Economic Forecasting (3) Prerequisites: BACS 390, ECON 300, ECON 350, MATH 131 or MATH 176. Analysis of fluctuations in economic activity, study of responsible factors, forecasting techniques and models. Time series model building and forecasting. Emphasizes applied computer assignments.

ECON 455/555 Regional Theory and Methods (3) Prerequisites: ECON 300, ECON 350, MATH 131 or MATH 176. Definition and analysis of regions and their problems; regional programs and operational models. National planning and autonomous development. Microcomputers will be used.

ECON 456 Water Resource Economics (3) Prerequisites: ECON 103, 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 462 Economic History of the United States (3) Prerequisites: ECON 103, 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 470/570 History of Economic Thought (3) Prerequisites: ECON 103, 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 the contributions.

ECON 480/580 Research in Economics (2-5) Prerequisites: ECON 300, ECON 350 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 one time, maximum eight credits.

ECON 492 Internship in Economics (2-5) Prerequisites: ECON 300, ECON 350 or consent of instructor. Internships in the public and private sectors to allow the students to have practical experience in the market place. Repeatable one time, maximum eight credits.

ECON 499 Assessment Review (1) Prerequisites: ECON 300, ECON 350, ECON 452. Review of intermediate macroeconomics, microeconomics and econometrics in preparation for an assessment examination to be given in April. Grade will depend, in part, on a practice examination. Seniors or above.

ECON 402/502 Advanced Contemporary Economic Problems (3) Prerequisites: ECON 103, ECON 105 or consent of instructor. Learn the contribution of economic models and techniques in understanding current issues facing society. Analyze the efficiency and equity impact of alternative solutions.

ECON 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 509 Advanced Placement Program in Economics (1-3) Prerequisites: ECON 103 or ECON 105 or equivalent. Explore methods and materials for teaching Advanced Placement economics at the secondary level. Review basic economic concepts of both macro or micro through a variety of classroom learning experiences. Unlimited repeatability.

ECON 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

ECON 350/550 Intermediate Macroeconomics (3) Prerequisites: ECON 103, ECON 105. Study the determinants of aggregate demand, aggregate supply, employment, macroeconomic objectives and policies.

ECON 451/551 Quantitative Economics (3) Prerequisites: ECON 300, ECON 350, MATH 131 or MATH 176. Study of mathematical techniques used in economic analysis; fundamental concepts underlying marginal analysis, linear programming, decision and game theory. Microcomputers will be used.

ECON 452/552 Econometrics (4) Prerequisites: ECON 300, ECON 350, BACS 390, MATH 131 or MATH 176. Estimating statistical regression models of economic relationships; treatment of special problems in analysis of economic data. Microcomputers will be used.

ECON 455/555 Regional Theory and Methods (3) Prerequisites: ECON 300, ECON 350, MATH 131 or MATH 176. Definition and analysis of regions and their problems; regional programs and operational models. National planning and autonomous development. Microcomputers will be used.

ECON 470/570 History of Economic Thought (3) Prerequisites: ECON 103, 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.

ECON 480/580 Research in Economics (2-5) Prerequisites: ECON 300, 350 or consent of instructor. Learn the basic skills involved in economic research including principles of the scientific methods and model application. Prepare a research proposal and final report on a timely economic problem. Repeatable, one time, maximum eight credits.

Elementary Education: Early Childhood

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) Prerequisite: EDEC 333, provisional or full admission to PTE. 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 460 Primary Curriculum and Methods (3) Prerequisites: EDEC 333 or consent of instructor. Corequisite: EDLS 360. Provisional or full admission to PTE required. Juniors/seniors only. Theories and practices for the education of primary aged children, with an emphasis on curricular organization, content, methodology and scheduling.

EDEC 462/562 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, prosocial behavior and effective pedagogical decisions.

EDEC 463 Diagnostic Teaching in Early Childhood (3) Full admission to PTE required. Junior/seniors only. Discover various diagnostic tools and techniques appropriate for measuring a young child's progress in learning and use results to individualize instruction.

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 graded, unless section is approved (by the Graduate School) as 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 462/562 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, prosocial behavior and effective pedagogical decisions.

EDEC 601 Practicum (1-3) Open by invitation to resident graduate students. Supervised professional activity in early childhood education, approximately 2 hours per day. A well-written paper must be filed with instructor before credit is given. Repeatable, maximum of six credits.

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) Prerequisites: EDEL 420 or 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 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, maximum of six credits.

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, maximum of 12 credits.

Elementary Education

EDEL 200 Orientation to Education (1) Visit and participate in classroom activities (preschool through high school) to determine probable level of degree program emphasis. Engage in diagnostic writing and speaking activities for personalized evaluation.

EDEL 308 Elementary Education Workshop (1-10) Study problems in elementary education. S/U graded. Repeatable, may be taken four times to a maximum of 10 credits, under different subtitles.

EDEL 405/505 Cadet Teaching (1-6) Cadet teaching is the field component based in the school setting taken concurrent with "blocked" classes; i.e., EDRD 410/EDEL 420 and EDEL 440/EDEL 450; emphasis of theory into practice. S/U graded. Repeatable, maximum of eight credits.

EDEL 420 Effective Instruction in Elementary School Mathematics (3) Full admission to PTE 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 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 440 Effective Instruction in Elementary School English/Language Arts (3) Full admission to PTE or certification at undergraduate level required. Examines the nature and acquisition of English as a basis for effective instruction in handwriting, spelling, oral and written composition. Considers methods, materials, selection and placement of content, diagnosis, evaluation and provision for individual differences.

EDEL 450 Effective Instruction in Elementary School Social Studies (3) Full admission to PTE 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 405/505 Cadet Teaching (1-6) Cadet teaching is the field component based in the school setting taken concurrent with "blocked" classes; i.e., EDRD 410/EDEL 420 and EDEL 440/EDEL 450; emphasis of theory into practice. S/U graded. Repeatable, maximum of eight credits.

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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

EDEL 520 Effective Instruction in Elementary School Mathematics (3) Prerequisite: EDRD 510 or take concurrently. Full admission to PTE 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 540 Effective Instruction in Elementary School English/Language Arts (3) Full admission to PTE or certification at undergraduate level required. Examines the nature and acquisition of English as a basis for effective instruction in handwriting, spelling, oral and written composition. Considers methods, materials, selection and placement of content, diagnosis, evaluation and provision for individual differences.

EDEL 550 Effective Instruction in Elementary School Social Studies (3) Corequisites: EDEL 540, EDFE 370. Full admission to PTE 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 (1-3) Open only by invitation to resident graduate students. Supervised professional activity in elementary education, approximately two hours per day. Repeatable, maximum of six credits. A well-written paper must be filed with instructor before credit is given.

EDEL 612 The Elementary School Curriculum (3) A review and analysis of competing conceptualization of the elementary school curriculum with an emphasis on designing, developing, implementing and evaluating an interdisciplinary curriculum. Current research will be surveyed.

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 admission to PTE 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) Prerequisites: EDEL 420 or 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 Researched Applications for Instruction in the English Language Arts, K-9 (3) Prerequisites: EDEL 440 or EDEL 540 or experience as elementary/middle school teacher. Consider problems, trends and issues in the teaching of English, handwriting and spelling. Special focus on research. Content varies to reflect interests and concerns of students.

EDEL 650 Researched Application for Instruction in Social Studies, K-9 (3) Prerequisites: EDEL 450 or EDEL 550 or experience as elementary/middle school teacher. Designed for experienced teachers, this course focuses on strategies for improving social studies curriculum and instructions. Major trends, issues and research affecting educating children for citizenship in a pluralistic, democratic society.

EDEL 679 Researched Applications in Appraisal, Evaluation and Clinical Supervision of Teaching in the Elementary and Middle School (3) Emphasis is placed on the development of knowledge, skills and sufficient comprehension to direct the development of instructional appraisal and evaluation behaviors, with special emphasis on self-improvement modalities.

EDEL 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, maximum of six credits.

EDEL 701 Advanced Practicum in Elementary Education (1-4) Open only by invitation to resident doctoral students. Supervised professional activity in Elementary Level Education. A well written paper must be filed with the supervising instructor before credit is given. Repeatable, maximum of six credits.

EDEL 725 Seminar in Elementary School Mathematics (2) Prerequisites: 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) Prerequisites: EDEL 540 or EDEL 645. 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) Prerequisites: 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 and university levels. 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, maximum of 12 credits.

Foundations of Education

EDF 201 Introduction to Multiculturalism (3) Acquaints students with concepts, content, strategies and resources needed in a multicultural pluralistic environment. Enables student to integrate content on pluralism into community settings. Attitudes and insights emphasized.

EDF 308 Workshop in Foundations in Education (1-3) For undergraduates to study problems in Foundations of Education. Repeatable, under different subtitles.

EDF 364 Foundations of Education (4) Focuses on philosophical, historical and social foundations of education, the impact of technology and social change on schools, educational policy and principles of effective practice, teaching strategies, effective communication, human relations, facilitation of group process, curriculum planning and design.

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 395 Advanced Topics in Foundations of Education (1-3) Topics may derive from need generated by other courses, or from those of a particular group of students. Area covered will be determined by course subtitle. 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 graded, unless section is approved (by the Graduate School) as 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 667 Modern Curricular Trends and Issues (2) Describes curricular and pedagogical practices and trends in the public schools and approaches them in the light of criteria drawn from foundations areas.

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.

EDF 695 Advanced Topics in Foundations of Education (3) These topics may derive from other advanced courses in Foundations of Education, or from the need of a particular student or group of students. Area covered in any one course is determined by a course subtitle. Repeatable, under different subtitles.

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. Unlimited repeatability.

EDFE 270 Field Based Experience (2) Consent of instructor and first semester at UNC or UNC GPA of 2.50. Entry into the teaching profession. Attend orientation presentation and apply for admission to PTE. 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. Designed to introduce students to issues and professional concerns of educators. Students are screened for admittance to PTE. S/U graded.

EDFE 370 Advanced Field Based Experience (1-3) Prerequisite: EDFE 270. Full admission to PTE 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. Unlimited repeatability.

EDFE 401 Practicum (1-3) Full admission to PTE or certification at the undergraduate level required. Open only by invitation to resident undergraduate students. Supervised professional activity in the major field. Two copies of a well-written paper must be filed before credit is given; one with instructor and one with program facilitator. Portfolio required. S/U graded. Repeatable, maximum of three credits.

EDFE 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.

EDFE 444 Supervised Teaching (1-18) Full admission to PTE or certification at the undergraduate level required. Meets student teaching requirement for certification. Supervision by University consultant and certified teacher whose endorsement is consistent with that of the student teacher. Experience includes significant and continuous involvement of the student for 1 credit/week. Portfolio required. S/U graded. Repeatable, maximum of 18 credits, under different subtitles.

EDFE 445 Advanced Supervised Teaching (1-18) Full admission to PTE or certification at the undergraduate level required, EDFE 444. Available to students who have completed minimal supervised teaching requirement for certification but who wish to improve teaching techniques with additional field experience. May be repeated only with permission of instructor. Portfolio required. S/U graded. Repeatable, maximum of 18 credits.

EDFE 501 Practicum (1-4) Full admission to PTE 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. Two copies of a well-written paper must be filed before credit is given; one with instructor and one with program facilitator. S/U graded. Unlimited repeatability.

EDFE 502 Teacher Leadership (3) Develop essential skills, knowledge and competencies that enable educators to assume a broad range of teacher leadership roles including consultation, mentorship, shared decision making approaches and instructional leadership.

EDFE 503 Alternate Teaching Strategies (3) Expands teacher's repertoires in the classroom by developing facility with alternate instructional strategies. Strategies studied and practiced facilitate critical/creative/inductive thinking and social participation and inquiry skills.

EDFE 601 Practicum (1-3) Full admission to PTE or certification at undergraduate level required. Open only by invitation to resident graduate students. Supervised professional activity in student's major field. Two copies of a well-written paper must be filed before credit is given; one with instructor and one with program facilitator. S/U graded. Repeatable, maximum of three credits.

EDFE 610 Field Experience (1-18) Full admission to PTE or certification at graduate level required or previous certification 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. Unlimited repeatability.

EDFE 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.

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.

Educational Field Experience: Laboratory School

All EDLS courses have unlimited repeatability.

EDLS 360 Clinical Experience: Primary (1-3) Full admission to PTE or certification at the undergraduate level required. Consent of instructor. For Early Childhood/Elementary Education majors. Minimum of 25 contact hours with level K-3 children for each hour of credit. Weekly seminar.

EDLS 361 Clinical Experience: Intermediate (1-3) Full admission to PTE or certification at the undergraduate level required. Consent of instructor. Professional development for intermediate Elementary Education majors. Minimum of 25 contact hours with level 4-6 children for each hour of credit. Weekly seminar.

EDLS 362 Clinical Experience: Middle School (1-3) Full admission to PTE 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.

EDLS 363 Clinical Experience: Secondary (1-3) Full admission to PTE or certification at the undergraduate level required. Consent of instructor. Professional development for secondary majors. Minimum of 25 contact hours with level 7-12 children in a specific area for each hour of credit. Weekly seminar.

EDLS 365 Advanced Clinical Experience (1-3) Full admission to PTE or certification at the undergraduate level and, previous clinical experience. Consent of instructor. Enhance personal and professional development through selected classroom experiences. Minimum of 25 contact hours with children for each hour of credit. Weekly seminar.

Elementary Education: Middle School

EDMS 302 Orientation to Middle School (3) Provisional or full admission to PTE or certification at undergraduate level required. Investigate the history, philosophy and current curriculum of middle schools. Emphasize organizational plans, skills required of teachers, nature of the curriculum and problems of articulation with other schools in a system.

EDMS 308 Middle School Workshop (1-10) Concentrate on instructional problems of participants, with problems attacked varying with experts conducting workshops. S/U graded. Repeatable, under different subtitles.

EDMS 360 Middle School Instructional Practices (4) Prerequisite: EDMS 302 and full admission to PTE or undergraduate certification. Students seeking middle school certification will gain knowledge and application of instructional strategies, methods and techniques that are developmentally appropriate to early adolescents at the middle level.

EDMS 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.

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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

EDMS 601 Practicum (1-3) The practicum is a project designed by the student with consent of advisor. It is intended to provide a practical application of the concepts presented within the graduate program. The project is reported in a written form. 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) Investigations of how the content fields of language arts, mathematics, science, social science, reading and related arts connect in the middle school curriculum. Specific attention will be given to identifying common themes, concepts and skills among the various components of the curriculum.

EDMS 670 Instructional Practices in Middle Grades Education (3) Graduates only. This course is designed for graduate students interested in investigating the theories and current trends/issues involved with instructional strategies, methods and management techniques that are developmentally appropriate for young adolescents at the middle school level.

EDMS 790 Supervised Practicum in College Teaching (3) Experiences in observation and supervised practice of college teaching for doctoral candidates planning to teach at college or university levels. Observations and experiences used as a basis for analysis of learning experiences. S/U graded. Repeatable, maximum of six credits.

Elementary Education: Reading

EDRD 003 Introduction to College Reading (3) Consent of instructor. This course emphasizes reading comprehension, vocabulary and rate and seeks to help students develop good study skills. This is a Basic Skills course offered through Continuing Education and does not count in term, cumulative or total credits and will not be calculated in the GPA.

EDRD 130 Improving Reading and Study Skills (3) Instruction and outside assignments designed to develop proficiency in the reading and study skills needed for success at the college level.

EDRD 205 Critical Thinking, Inferential Reading and Evaluative Writing (3) Students will improve critical thinking by studying the organization of thought and by applying critical reading to nonfiction and fiction and evaluative writing to journals, summary-reactions and an analytic paper.

EDRD 308 Reading 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 401 Practicum in Literacy (1-3) Open only by invitation to resident undergraduate students. Supervised professional activity in literacy (approximately two hours per day). A well-written paper must be filed with instructor before credit is given. S/U graded. Repeatable, maximum of three credits.

EDRD 410 Achieving Effective Instruction in Developmental Reading (3) Full admission to PTE 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 admission to PTE 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 414/514 Literature for Children, Adolescents and Young Adults (3) Full admission to PTE or certification at undergraduate level required. Consider interests and abilities governing the choice of literature from kindergarten through young adult years and survey this literature. Emphasize modern literature, use of literature in the curriculum and multiple responses to literature. Field experience included.

EDRD 419/519 Reading and Writing Development of Preschool/Primary Children (2) Acquaints students with current research on early literacy including factors in the environment that enhance or detract from literacy learning and the importance of parents and significant others in literacy development. Implications for primary reading and writing will be included.

EDRD 422 Directed Studies (1-3) Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours for one hour of credit in directed studies.) Repeatable, maximum concurrent enrollment is two times.

EDRD 423/523 Reading and Writing in the Content Areas (3) Full Admission to PTE 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 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 admission to PTE 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 admission to PTE 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

EDRD 414/514 Literature for Children, Adolescents and Young Adults (3) Full admission to PTE or certification at undergraduate level required. Consider interests and abilities governing the choice of literature from kindergarten through young adult years and survey this literature. Emphasize modern literature, use of literature in the curriculum and multiple responses to literature. Field experience included.

EDRD 419/519 Reading and Writing Development of Preschool/Primary Children (2) Acquaints students with current research on early literacy including factors in the environment that enhance or detract from literacy learning and the importance of parents and significant others in literacy development. Implications for primary reading and writing will be included.

EDRD 423/523 Reading and Writing in the Content Areas (3) Full Admission to PTE 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 612 Reading in the Elementary School (3) Full admission to PTE or certification at undergraduate level required. 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) Full admission to PTE or certification at undergraduate level required. Consider locating and evaluating children's and young adult literature and methods of organizing, teaching and evaluating a literature program. Examine issues such as censorship, multicultural literature and style analysis. Mini-research study is required.

EDRD 615 Topical Seminar in Reading/Literacy (3) Advanced study, combined with individual inquiry, in Reading/Literacy education in the elementary and middle school. Addresses landmark research, analysis and synthesis of past/present trends and issues and scholarly pursuit of an individual topic. Repeatable, may be taken four times under different subtitles.

EDRD 617 Evaluation and Correction of Individual Reading Problems (4) Required laboratory arranged. Prerequisites: EDRD 612, EDRD 620 or equivalent. Develop an understanding of the educationally disabled reader/writer in elementary and secondary school. Explore diagnostic/instructional strategies.

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 School (3) 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 admission to PTE 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 637 Teaching Reading at the Adult Level (2) Consider problems of diagnosis, placement, strategies and materials for teaching remedial or developmental reading to college students or other adults in nonacademic settings. Field experience included.

EDRD 642 Teaching the Writing Process in Schools (3) 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/Literacy Research (3) Study research procedures in reading/literacy and their application to education. Critique reading/literacy research, programs and practices. Develop and present group and/or individual projects and reports.

EDRD 670 Directing a School-Wide Reading/Writing Program (3) Prerequisites: EDRD 612 and EDRD 620 or equivalent. 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 and Internship: Elementary/Middle/Secondary (4) Prerequisites: EDRD 617 and consent of instructor. Provide appropriate literacy instruction for elementary/middle school/secondary students experiencing difficulty with reading/writing. Participation in weekly seminars regarding diagnostic/internship strategies, etc. May be completed at each level. S/U graded. Repeatable, up to one time.

EDRD 694 Reading Center Internship: Adult Reading, Literacy and/or Supervision (1-3) Prerequisites: 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, maximum six credits.

EDRD 701 Advanced Practicum in Literacy (1-4) Open only by invitation to resident doctoral students. Supervised professional activity in literacy. A well-written paper must be filed with the supervising instructor before credit is graded. Repeatable, maximum of eight credits.

EDRD 712 Psychology of Reading (3) Teach fundamental aspects of the complex skill of reading — linguistic, psychological, social and physiological — and on what is involved in learning to read. Students will consider perceptual, cognitive, linguistic and motivational factors in reading, writing, thinking and learning in general. Students will become acquainted with research on language, information theory, learning theory, the physiology of the eye and brain, psycholinguistics and many other topics.

EDRD 717 Advanced Diagnostic/Instructional Problems in Literacy Development (3) Laboratory required. Prerequisites: EDRD 612 or EDRD 620; EDRD 617, EDRD 692. Consent of instructor. Refine diagnostic/instructional skills through study of advanced diagnostics, instructional techniques and related research; assist in Center for Literacy Development.

EDRD 745 Topical Seminar in Reading/Literacy (2-4) Advanced study, combined with individual inquiry, in Reading/Literacy education in the elementary and middle school. Addresses landmark research, analysis and synthesis of past/present trends and issues and scholarly pursuit of an individual topic. Repeatable, may be taken four times, under different subtitles.

EDRD 750 The Contributing Professional in Reading (3) Designed for the emerging professional completing a doctoral degree in reading. Includes opportunities to examine and experience a variety of significant professional contributions that are encompassed within the reading of scholarly activities, organizational memberships and service roles for reading and literacy.

EDRD 795 Supervised Practicum in College Teaching (3) Experience in observation and supervised practice of college teaching for doctoral candidates planning to teach at college and university levels. Observations and experiences 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, maximum of 12 credits.

Special Education

EDSE 100 Understanding the Disabled (1) Designed to increase awareness of values about diversity as portrayed in film, develop understanding of how personal values influence behavior towards persons with differences. Overview of disabilities/differences among peoples.

EDSE 200 Human Exceptionality (3) Designed for non-education majors and is intended to assist in the acquisition of specific information regarding human exceptionality while clarifying and developing more positive attitudes and interactional patterns.

EDSE 300 Foundations and Communication in Special Education (3) Historical development and present status of educational programs for handicapped and gifted students. Focus will be on communication, human interaction, parent involvement, professionalism, finance, legalities and trends in special education.

EDSE 301 Development and Learning in Exceptional Students (3) Application of developmental and learning concepts to physical, cognitive, affective and language development of exceptional students. Emphasizes how maturational, environmental and hereditary aspects affect learning and development and their interrelationships.

EDSE 302 Educational Interventions for Meeting the Needs of Exceptional Individuals (3) Exploration of the total child approach to effective special education methodology, as related to instructional content and design, environmental factors, teacher/learner characteristics within cognitive, affective, physical and life management domains.

EDSE 303 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 308 Workshop in Special Education (1-3) For beginning teachers and clinicians. Topics will include observation, techniques, programming for the handicapped, community relations, child development as related to exceptional children and evaluation of children for placement. Materials prescribed by specific workshop offered. Repeatable, under different subtitles.

EDSE 350 Structure of Language (3) Approach language from a syntactical and morphological view as it applies to children, stressing the understanding of the structure of the English language and how human language develops.

EDSE 380 Introduction to the Gifted and Talented (3) To give potential teachers an understanding of talented and gifted children. Learn the characteristics and needs of the gifted and strategies and materials that benefit these children.

EDSE 400 Introduction to Students with Profound Needs (3) Prerequisites: EDSE 300, EDSE 301, EDSE 302, EDSE 303. Full admission to PTE required. Content includes characteristics of students with profound needs, overview of motor, cognitive, communication and social functioning of these students; and current service delivery models.

EDSE 401 Parents of Children with Profound Needs (3) Prerequisites: EDSE 400. This course includes information on parents' needs relative to their child with profound needs. The focus is on family life cycle, coping issues and strategies for working with families.

EDSE 402 Assessment of Students with Profound Needs (3) Prerequisite: EDSE 400. This course emphasizes assessment techniques for individuals with profound needs; e.g., developmental, behavioral and environmental strategies. Use of transdisciplinary assessments and data based instruction also is emphasized.

EDSE 403 Methods of Teaching Students with Profound Needs Birth to 8 Years (3) Full admission to PTE required. Learning strategies, methods and curricula for children who are severely/profoundly handicapped aged birth to 8 years is emphasized. A developmental approach is emphasized with consideration of age appropriateness and ultimate potential.

EDSE 404 Methods of Teaching the Severely/Profoundly Handicapped 9 to Adult (3) Prerequisites: EDSE 400. Full admission to PTE or certification at undergraduate level required. Includes approaches to serving students with profound needs at the prevocational and vocational levels of instruction. Emphasis is on residential-employment competencies and transition from school to work.

EDSE 408 Exceptional Students in the Elementary Classroom (3) Full admission to PTE or certification at undergraduate level required. Provides information about handicapped and gifted students, including identification procedures and specific techniques and materials appropriate for mainstreamed students in the elementary classroom.

EDSE 409 Exceptional Students in the Secondary Classroom (3) Provides information about handicapping conditions, including identification procedures and specific techniques and materials appropriate for mainstreamed students in secondary classrooms.

EDSE 410 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 413 Professional Renewal Experience (1-4) For teachers and administrators. Enhance expertise in respective professional fields. Specific content designated by course title offered and number of hours. Repeatable, under different subtitles.

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 440 Introduction to the Education of the Visually Handicapped (3) Non-majors only. Descriptions of visual handicaps, 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 450 Introduction, Severe Needs: Hearing (3) History of education of severe needs: hearing population, anatomy of the hearing/speech mechanisms, causes and types hearing loss, psychological development of severe needs: hearing population, communication, educational and sociological problems.

EDSE 451 Basic Sign Language (4) Laboratory required. Consent of Instructor. Develop basic skills in manual communication of the hearing impaired through the use of sign language and fingerspelling. Fee required.

EDSE 500 Field of Special Education (3) Historical development and present status of individuals with disabilities and 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 sociocultural, eco-behavioral, political and economic components of effective/ineffective schools and the relationship to child, family, community and professionals. Roles of special educators and different service delivery models presented/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 506 Seminar in Mainstreaming: Exceptional Students in the Regular Classroom (3) Survey course for non-special education graduate students concerning mainstreaming and accommodation of handicapped students in regular classrooms. Emphasis placed on solving classroom problems relating to graduate students' previous experiences with handicapped persons.

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 graded, unless section is approved (by the Graduate School) as 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) Prerequisites: EDSE 400 or 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) Prerequisites: EDSE 400 or EDSE 520. Full admission to PTE 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) Prerequisites: EDSE 400 or EDSE 520. Full admission to PTE 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 admission to PTE 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 530 Parent/Professional Partnerships (3) Prerequisite: EDSE 520. 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 admission to PTE 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 admission to PTE 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 Handicaps (1-2) Required laboratory arranged. Gain ability to understand the use of adapted materials and techniques in teaching independent living to individuals with visual handicaps. Emphasis given to recreational areas. Repeatable, maximum of 2 credits.

EDSE 542 Assessment and Methods for Teaching Students with Visual/Multiple Disabilities (3) Full admission to PTE 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 (1-3)

Required laboratory arranged. Study special braille codes: literacy, mathematical and scientific notation, music and foreign language. Textbook formats for braille, large type and recorded transcriptions. Techniques of teaching reading to students with visual handicaps. Repeatable, maximum of three credits.

EDSE 544 Technology for Students with Visual Handicaps (2)

Learn to operate and to teach the use of technological devices including closed circuit television, optacon, abacus, electronic braille, computer speech, screen and braille adaptations. S/U graded.

EDSE 546 Principles of Orientation and Mobility (2)

Independence in exploration of 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 admission to PTE 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 549 Rehabilitative Teaching of Individuals with Visual Handicaps (3)

Full admission to PTE or certification at undergraduate level required. Learn how rehabilitation of visually handicapped persons is accomplished through counseling, evaluation, higher education, coping skills, preparation for employment and independent living. Consider eye conditions and their implications for employment and discuss stereotyped ideas.

EDSE 551 American Sign Language (4)

Laboratory Required. Students will have the signing knowledge and ability to demonstrate visual discrimination, classifier description, time indicators, house and home, being/affective non-manual markers, transportation and community occupations. Fee required.

EDSE 552 Advanced Sign Language (4)

Laboratory Required. Prerequisite: EDSE 451. Designed to improve students' expressive and receptive skills in the use of finger spelling and signing exact English (SEE). Manual communication skills used in educational and social settings are emphasized. Focus on increasing sign vocabulary, understanding sign concepts, conversational skills and ability to teach and communicate using signing exact English. Fee required.

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. Full admission to PTE or certification at undergraduate level required. 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 admission to PTE 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 601, EDSE 602. Full admission to PTE or certification at the undergraduate level required. Consent of instructor. Supervised practica in programming for and teaching moderate needs students including assigned seminar topics. 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 admission to PTE 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; Consent of major advisor. Full admission to PTE or certification at undergraduate level required. Integrative field experience in practicum settings under college supervisor and certificated teacher. Provides experiences of sufficient scope, intensity and length to assure demonstration of all Teacher II affective program competencies. S/U graded. Repeatable, maximum of 12 credits.

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 and EDSE 503. Full admission to PTE or certification at undergraduate level required. Consent of major advisor. Integrative field experience in practicum settings under college supervisor and certificated teacher. Provides experiences of sufficient scope, intensity and length to assure demonstration of all Teacher II cognitive program competencies. S/U graded. Repeatable, maximum of 12 credits.

EDSE 624 Practicum with Students with Severe Cognitive Needs, Ages 5-12 (3-12)

Prerequisites: Full admission to PTE or certification at undergraduate level; EDSE 500, EDSE 501, EDSE 502 and EDSE 503. Consent of major advisor required. Integrative field experience in practicum settings under college supervisor and certificated teacher. Provides experiences of sufficient scope, intensity and length to assure demonstration of all Teacher II cognitive program competencies. Repeatable, maximum of 12 credits. S/U graded.

EDSE 625 Practicum with Students with Severe Cognitive Needs, Ages 13-21 (3-12) Prerequisites: EDSE 500, EDSE 501, EDSE 502 and EDSE 503. Full admission to PTE or certification at undergraduate level required. Consent of major advisor required. Integrative field experience in practicum settings under college supervisor and certificated teacher. Provides experiences of sufficient scope, intensity and length to assure demonstration of all Teacher II cognitive program competencies. 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 631 Practicum with Students with Severe Communication Needs: Ages 5-21 (3-12) Prerequisites: EDSE 500, EDSE 501, EDSE 502 and EDSE 503. Full admission to PTE or certification at undergraduate level required. Consent of major advisor. Integrative field experience in practicum settings under college supervisor and certificated teacher. Provides experiences of sufficient scope, intensity and length to assure demonstration of all Teacher II communication program competencies. S/U graded. Repeatable, maximum of 15 credits.

EDSE 632 Practicum with Learning Disabled Students, Ages 5-12 (1-12) Prerequisites: EDSE 500, EDSE 501, EDSE 502 and EDSE 503. Full admission to PTE or certification at undergraduate level required. Consent of major advisor required. Integrative field experience in practicum settings under college supervisor and certificated teacher. Provides experiences of sufficient scope, intensity and length to assure demonstration of all Teacher II communication program competencies. S/U graded. Repeatable, maximum of 12 credits.

EDSE 633 Practicum with Learning Disabled Students, Ages 13-21 (1-12) Prerequisites: EDSE 500, EDSE 501, EDSE 502 and EDSE 503. Full admission to PTE or certification at undergraduate level required. Consent of major advisor required. Integrative field experience in practicum settings under college supervisor and certificated teacher. Provides experiences of sufficient scope, intensity and length to assure demonstration of all Teacher II communication program competencies. S/U graded. Repeatable, maximum of 12 credits.

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 handicaps, 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) Study the 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 handicaps 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 admission to PTE or certification at undergraduate level required. Consent of instructor. Supervised teaching experience with students with visual handicaps, K-12, planning and implementing lessons, preparing materials, participating in staffings, IEP/IFSP development and parent conferences. Repeatable, maximum of 12 credits.

EDSE 646 Practicum in Rehabilitative Teaching of Individuals with Visual Handicaps, K-12 (6-12) Prerequisites: EDSE 543, EDSE 546, EDSE 549, EDSE 641 and EDSE 643. Consent of instructor. Supervised teaching experience with individuals with visual handicaps, including development and implementation of strategies for teaching communication, personal and home management, social and recreational skills: home- and/or center-based. Repeatable, maximum of 12 credits.

EDSE 647 Applied Methods in Orientation and Mobility (2) Full admission to PTE or certification at undergraduate level required. Weekly seminar explores methods and strategies for teaching independent travel techniques to students with visual and other handicaps. Student provides individualized instruction to visually impaired person with faculty supervision.

EDSE 648 Practicum in Orientation and Mobility (9) Full admission to PTE 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 651 Speech Science, Severe Needs: Hearing (3) Prerequisite: EDSE 450. Study the physics, acoustic characteristics, process, perceptual features and production of speech; suprasegmental and segmental and application to language for the severe hearing needs person.

EDSE 652 Speechreading, Auditory Training and Amplification (3) Prerequisites: CMDS 370, EDSE 450. Certification at undergraduate level required. Study amplification; personal and group, components, evaluation, maintenance and application to auditory training, speech and speechreading. Develop receptive language through auditory and visual channels for the hearing impaired.

EDSE 653 Speech, Severe Needs: Hearing (3) Prerequisite: EDSE 450. Full admission to PTE or certification at undergraduate level required. Develop competencies to teach speech to meet severe hearing needs, including appropriate methods, teaching sequences, strategies, techniques and materials; develop a speech program, assess speech behaviors of severe hearing needs persons.

EDSE 654 Language, Severe Needs: Hearing (3) Prerequisite: EDSE 450. Full admission to PTE or certification at undergraduate level required. Consent of instructor. Required laboratory arranged. Develop competencies to assess, teach and evaluate language for severe hearing needs persons. Select methods, materials and techniques appropriate for each level; develop comprehensive expressive/receptive language program.

EDSE 655 Reading, Severe Needs: Hearing (3) Prerequisite: EDSE 450. Full admission to PTE or certification at undergraduate level required. Emphasize relationship of cognition/language/reading for severe hearing needs. Learn process, approaches, methods, techniques, appropriate materials and assessment of reading behaviors of severe hearing needs person.

EDSE 656 Methods of Teaching Content: Severe Needs Hearing (3) Prerequisite: EDSE 450. Full admission to PTE 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 the severe hearing needs person.

EDSE 657 Practicum, Severe Needs: Hearing (6-12) Prerequisites: EDSE 653, EDSE 654 and EDSE 656. Full admission to PTE or certification at undergraduate level required. Consent of major advisor required. Individual observation and supervised practice in the education of the severe hearing needs person, K-12. Repeatable, maximum of 12 credits.

EDSE 658 Update Trends for Severe Needs: Hearing (2) Current issues and trends in the education of the hearing impaired. Research update on communication options, secondary disabilities and technological advances in the field of deafness.

EDSE 659 Seminar in Education of the Hearing Impaired (3) Prerequisites: EDSE 500, EDSE 501, EDSE 502 and EDSE 503 or consent of instructor. Designed to synthesize experiences and coursework in the area of hearing impairments with emphasis on recent trends, research and classroom application.

EDSE 680 Administration and Supervision of Special Education (3) The role of various administrative personnel is studied from a situational leadership perspective. Responsibilities of the special education administrator are examined and differences in role will be defined in terms of size of agency. The course is a blend of current theory and practice of administrators of various agencies serving exceptional children.

EDSE 681 Administrative Planning and Program Evaluation in Special Education (3) Prerequisite: EDSE 603. To prepare special education administrators to conduct special education program evaluation, to organize data derived from such evaluations for decision making purposes, to better understand special education resource utilization and to be able to integrate these activities with other special education 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 722 Theoretical Foundations of Special Education II (3) Exploration of fundamental theories in special education and human disability, emphasizing reductionistic theories. Topics include applied behavior analysis, cognitive sciences, selected bio-behavioral perspectives, etc.

EDSE 723 Seminar in Facilitating Personal and Professional Development in Special Education I (3) Assist learners with development of skills and knowledge necessary to function as special educators who effectively interact with diverse students, teachers, administrators and parents.

EDSE 724 Seminar in Facilitating Personal and Professional Development in Special Education II (3) Prerequisite: EDSE 723. Builds on concepts, attitudes and knowledge developed in EDSE 723. It is designed for special educators to apply skills of effective interaction with diverse students, educators and parents.

EDSE 725 Professional Readings in Special Education (1) Designed to foster the skills that enable students to read thoroughly, interpretatively and integratively as a precursor for life-long learning. The content will change each semester as students and faculty jointly select the readings. S/U graded. Repeatable, under different subtitles for a maximum of four credits.

EDSE 726 Seminar in Low Prevalence Exceptionalities (3) Consent of instructor. Issues in education of students who are deaf, hard-of-hearing, blind, visually impaired, deafblind or who have autism, traumatic brain injury or severe exceptionalities. Research, instructional strategies, environments and administrative concerns.

EDSE 727 Seminar in High Prevalence Exceptionalities (3) Investigation of the issues and trends in education of students who are learning disabled, emotionally disturbed, mentally retarded and gifted and talented. 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, under different subtitles for a maximum of 12 credits.

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, under different subtitles for a maximum of 12 credits.

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 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, maximum of 12 credits.

English Education

EED 301 Tutoring Strategies for Composition (1-2) Sophomores or above. Consent of instructor. After training in tutoring strategies, participants will spend 30 class hours per credit assisting in a composition class or writing laboratory to prepare for clinical and student teaching. Repeatable, maximum of four credits, under different subtitles.

EED 341/541 Methods and Materials for Teaching Language and Composition in the Secondary Schools (3) Full admission to PTE or certification at undergraduate level required. Prerequisite to student teaching. Methods and materials for teaching language and composition in the secondary schools. Teaching techniques are a point of emphasis.

EED 402 Methods and Materials for Teaching Literature in Secondary Schools (3) Full admission to PTE or certification at undergraduate level required. Prerequisite to student teaching. Selection of literature, use of media, curriculum and classroom organization, testing, evaluation and materials in a secondary school program.

EED 406 Literature for Young Adults (3) Reading material for young adults. Attention concentrated on junior novels, junior biographies, their authors and on trends and evaluation standards.

EED 502 The Teaching of Writing (3) Full admission to PTE or certification at undergraduate level required or consent of instructor. Methods of improving student writing. Repeatable, maximum nine credits under different subtitles.

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 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

EED 341/541 Methods and Materials for Teaching Language and Composition in the Secondary School (3) Full admission to PTE or certification at undergraduate level required. Prerequisite to student teaching. Methods and materials for teaching language and composition in the secondary schools. Teaching techniques are a point of emphasis.

EED 603 Developing the English Curriculum (3) Full admission to PTE or certification at undergraduate level required. The place of English in the curriculum of the secondary school, with a consideration of appropriate materials and their use.

EED 606 Seminar in Literature for Young Adults (3) PTE or certification at undergraduate level required. Books written for young adults, with emphasis upon junior novels and biographies. Consideration of reading guidance based upon student interests and needs. Development of criteria for evaluating literature for young adults.

EED 754 Supervised Teaching of English: Literature and Composition (2-6) Student will prepare and teach classes under the supervision of instructors chosen or designated in order to give practice in and to evaluate teaching.

Educational Leadership and Policy Studies

ELPS 385 Law and the Classroom Teacher (2) Admission to PTE required. Develop basic understanding of legal structure of American education. Emphasizes teachers' legal rights, responsibilities and liabilities; employment issues; students' rights and duties; and legal issues in discipline.

ELPS 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.

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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

ELPS 601 Understanding Self: Developing a Personal Vision for Educational Leadership (3) Emphasis is placed on experiences to help students determine the probable fit between personal values and the expectations of educational leadership roles.

ELPS 602 Using Inquiry: Framing Problems and Making Decisions for Educational Leadership (3) Aimed at helping educational leaders understand the importance that inquiry plays in creating, acquiring and using knowledge. Topics include decision making, framing problems and exploring alternative knowledge bases.

ELPS 603 Shaping Organizations: Management and Leadership in Education (5) Introduces students to qualities of effective leadership and management; organizational skill development; organizational behavior; and strategic planning in organizations.

ELPS 604 Understanding People: Professional Development and Educational Leadership (5) The fundamentals of working with people in educational organizations is reviewed. Emphasis is on adult development, interpersonal communication, personnel issues and staff development.

ELPS 605 Understanding Environments: Social Political, Economic and Legal Influences in Educational Leadership (5) Prerequisite: ELPS 601. External pressure on educational policies and operations, including demographics and cultural diversity, governance, legislative and judicial influences, sources of revenue and accountability mechanisms to tie societal expectations, resources and educational outcomes.

ELPS 606 Internship in Educational Leadership (1-9) Advisor approval required. Involves part- or full-time leadership assignments in educational organizations. S/U graded. Unlimited repeatability.

ELPS 607 Staff Evaluation Training (2) Prerequisites: ELPS 601, ELPS 602, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. This course will address Colorado Type D Certification requirements by providing training in effective approaches to teacher and staff evaluation. Special attention will be paid to increasing community involvement in setting standards.

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 631 Leadership Issues in Elementary Schools (2) Prerequisite: ELPS 670. Focus on the unique nature of the elementary school as a social institution and the specialized management issues affecting elementary schools. Emphasis on daily management skills.

ELPS 632 Leadership Issues in Middle Schools (2) Prerequisite: ELPS 670. Focus on the unique nature of the middle school (or junior high school) as a social institution and the specialized management issues affecting middle/junior high schools. Emphasis on daily management skills.

ELPS 633 Leadership Issues in Secondary Schools (2) Prerequisite: ELPS 670. Focus on the unique nature of the secondary school as a social institution and the specialized management issues affecting secondary schools. Emphasis on daily management skills.

ELPS 650 School Finance and Budgeting (3) Prerequisites: ELPS 601, ELPS 602, 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: EDAD 610, ELPS 601, ELPS 602, 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 652 Personnel Management in Higher Education (3) Prerequisites: ELPS 601, ELPS 602, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Analyze personnel functions in higher education, with special attention to planning, recruitment, selection and affirmative action/equal opportunity goals and strategies.

ELPS 653 Finance and Resource Management in Higher Education (3) Prerequisites: ELPS 601, ELPS 602, 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.

ELPS 654 Instructional Leadership (3) Prerequisites: ELPS 601, ELPS 602, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Examine the role of the instructional leader in improving the teaching and learning process. Focus on the leader's role in curriculum development and instructional improvement.

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 657 School and Community Relations (3) Prerequisites: ELPS 601, ELPS 602, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Focus on the role of the educational leader in shaping and maintaining mutually supportive relationships between schools and their environment.

ELPS 658 School Personnel Administration (3) Prerequisites: ELPS 601, ELPS 602, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Emphasis is on the practical application of theory related to contract management, job analysis, interviewing and personnel policy development.

ELPS 659 Collective Bargaining and Conflict Management in Education (3) Prerequisites: ELPS 601, ELPS 602, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Reviews the nature of conflict in educational organizations. Alternative strategies for conflict resolution are examined. Special attention will be paid to collective bargaining procedures in schools.

ELPS 660 Law and the Administrator (3) Prerequisites: ELPS 601, ELPS 602, 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 661 Law and Higher Education (3) Prerequisites: ELPS 601, ELPS 602, 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.

ELPS 662 Staff Development and Training (3) Prerequisites: ELPS 601, ELPS 602, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Models of program planning an devaluation will be reviewed, with the end result being the practical application of these models. Emphasis is on context, needs assessment and evaluation.

ELPS 663 Developing Grants and Contracts (2) Prerequisite: ELPS 601. Identify various special funding programs available to schools and colleges and develop proficiency in proposal writing and grant application.

ELPS 664 Organization and Administration of Community Colleges (3) Prerequisites: ELPS 601, ELPS 602, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Analyze the purposes and governance of community college institutions and systems, examine structure and functions and study major administrative problems.

ELPS 665 Policy Analysis and Development (3) Prerequisites: ELPS 601, ELPS 602, 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 602, 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 667 Supervision (3) Prerequisites: ELPS 601, ELPS 602, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Provides insights into proactive techniques to guide the development of effective schools by matching individual abilities with desired organizational goals.

ELPS 668 Higher Education in the United States (2) Prerequisites: ELPS 601, ELPS 602, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Trace origins of American higher education examine evolution of the higher education traditions in the United States; study impact of higher education on existing societal conditions.

ELPS 669 College and University Curriculum (3) Prerequisites: ELPS 601, ELPS 602, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Develop understanding of current higher education practices and issues in the context of historical, philosophical and political influences.

ELPS 670 The Principals: Leadership at the School Site Level (3) Prerequisites: ELPS 601, ELPS 602, 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 675 The Superintendency: Leadership at the School District Level (3) Prerequisites: ELPS 601, ELPS 602, 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 685 Administrative and Organization Behavior (3) Prerequisites: ELPS 601, ELPS 602, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Provides students with a variety of activities and readings to help them analyze the nature of different organizations, as well as the behavior of people who work in those organizations.

ELPS 690 Executive Leadership (3) Prerequisites: ELPS 601, ELPS 602, ELPS 603, ELPS 604, ELPS 605 or consent of instructor. Designed to engage students in the study of leadership. Through a variety of learning activities, students will explore the complex phenomenon of the leadership and the related literature.

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. Unlimited repeatability.

ELPS 751 Doctoral Core I (6) Consent of instructor. Initial doctoral study in educational leadership and policy. Focus on emerging problems and issues in education leadership and helps socialize students as active inquirers and seekers of new knowledge.

ELPS 753 Doctoral Core II (6) Prerequisite: ELPS 751. Consent of instructor. Continuation of doctoral study in educational leadership and policy. Focus on emerging problems and issues in educational leadership and helps socialize students as active inquirers and seekers of new knowledge.

ELPS 797 Doctoral Proposal Research (1-4) Prerequisites: ELPS 751, ELPS 753. To enable advanced doctoral students to learn the essential elements of effective research proposals and to develop analytic skills needed to critique other research. Repeatable, maximum of four credits.

ELPS 799 Doctoral Dissertation in Educational Leadership and Policy Studies 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, maximum of 12 credits.

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 stylistic levels and clear organization.

ENG 123 College Research Paper (3) Prerequisite: ENG 122. Instruction in diction, style, logical analysis, research techniques and organization of college-level research papers.

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.

ENG 138 Modernism in Literature (3) Study movements and ideas (e.g. Freudianism, existentialism, magic realism, postmodernism) in twentieth-century American and/or British literature.

ENG 203 The Essay (3) Prerequisite: ENG 122, ENG 123 or equivalent. An intermediate writing course treating audience, strategies and cohesion. In-depth study of the essay through various modes, disciplines (arts, sciences) and periods will complement student compositions.

ENG 210 Studies in Literature (3) Study of various themes, topics, genres or special problems in literature. Repeatable, maximum nine credits under different subtitles.

ENG 219 Traditional and Modern Grammars (3) Describes standard 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 223 Writing with Sources (3) Prerequisite: ENG 122. This intermediate, interdisciplinary course develops skills in critical thinking, in the use of source materials and in creating longer, more complicated pieces of writing than those required in ENG 122.

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.

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, emphasis on arranging and stating information clearly.

ENG 231 Great Writers in England or America (3) The in-depth study of one English or American writer not featured elsewhere. Subject of the course determined by subtitle. Repeatable, maximum nine credits under different subtitles.

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 nine credits under different subtitles.

ENG 236 Ethnic American Literature (3) Study of the ethnic experience in America as it has been reflected in the works of outstanding ethnic writers within the American literary tradition.

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 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 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, up to nine credits, under different subtitles.

ENG 245 Critical Approaches to Literature (3) Study of literary works through a variety of approaches such as sociological, psychological, deconstructionist and other contemporary theories.

ENG 260 Masterpieces of English Literature (3) Prerequisite: ENG 122. Study of English literature from the beginning to the present. Emphasizes the appreciation, through close reading, of selected major works and the contribution of the literature to contemporary life and thought.

ENG 261 Masterpieces of American Literature (3) Prerequisite: ENG 122. Study of American literature from the beginning to the present. Emphasizes the appreciation, through close reading, of selected major works and the contribution of the literature to contemporary life and thought.

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 nine credits under different subtitles.

ENG 308/508 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 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 nine credits under different subtitles.

ENG 319 Advanced Expository Techniques (3) Prerequisites: ENG 122, ENG 219. 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 335/535 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 340 Creative Writing — Advanced (3) Prerequisite: ENG 240 in the appropriate subtitle or equivalent. Subtitles: Poetry, Fiction, Drama. Repeatable, maximum nine credits 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 Powles 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 403/503 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 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 406/506 Advanced Studies in Drama (3) Study of a variety of dramatists, historical periods or special problems in drama; may focus attention on specific dramatist or sub-genre.

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 subgenre.

ENG 409 Advanced Topics in Literature (3) Topics may focus on themes, literary theory, genres, historical periods or selected writers.

ENG 414/514 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 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 six credits under different subtitles.

ENG 419 Language and the History of English (3) Prerequisite ENG 219. 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 430/530 Advanced Studies in World Literature (3) An investigation of a theme, form or problem that cuts across periods and nationalities. Repeatable, maximum 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 nine credits under different subtitles.

ENG 403/503 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 406/506 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 308/508 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. Unlimited repeatability.

ENG 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

ENG 414/514 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 515 Colorado Writing Project: Teacher Research Design (3) Corequisite ENG 516. Consent of instructor. Course offers experienced teachers of writing the opportunity to do scholarly research in writing pedagogy, analyzing various research designs and project results.

ENG 516 Colorado Writing Project: The Teacher as a Researcher (3) Corequisite ENG 515. Consent of instructor. Course offers the experienced teachers of writing the opportunity to develop their own research project, carry it out, evaluate it and present the results both orally and in writing.

ENG 430/530 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 335/535 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 540 Professional Writing (3) Professional-level writing course in various modes of expression according to subtitle designation, such as poetry, exposition, fiction, etc. Repeatable, up to nine credits, under different subtitles.

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 Studies in Old English (3) Seminars in Germanic and Christian lyrics, elegies, historic poetry; selected prose; linguistic studies, including grammar, phonology, vocabulary, especially for West Saxon dialect; backgrounds of Anglo-Saxon culture. Repeatable, maximum nine credits under different subtitles.

ENG 624 Studies in Middle English (3) Seminars in Chaucer's works; non-Chaucerian drama, romance, ballads, lyrics, selected prose; linguistic studies, including grammar, phonology, emphasis on East Midland dialect; medieval culture. Repeatable, maximum nine credits under different subtitles.

ENG 625 Studies in the Renaissance (3) Seminars in various ideas of the period, genres (drama, prose and poetry) and representative authors. Repeatable, maximum nine credits under different subtitles.

ENG 626 Studies in Restoration and 18th Century (3) Seminars in various ideas of the period, genres (criticism, drama, fiction and poetry) and representative authors. Repeatable, maximum nine credits under different subtitles.

ENG 627 Studies in the Romantic Period (3) Seminars in the origin, purpose, nature of the Romantic Movement, focusing on two or more representative authors. Repeatable, maximum nine credits under different subtitles.

ENG 628 Studies in the Victorian Period (3) Seminars in various genres (criticism, drama, fiction and poetry), representative authors. Repeatable, maximum nine credits under different subtitles.

ENG 629 Studies in 20th Century British Literature (3) Seminars in various ideas of the period, genres (criticism, drama, fiction and poetry) and representative authors. Repeatable, maximum nine credits under different subtitles.

ENG 630 Studies in American Literature (Beginnings to Civil War) (3) Seminars in various genres (criticism, drama, prose and poetry), ideas and representative authors. Repeatable, maximum nine credits under different subtitles.

ENG 631 Studies in American Literature (Civil War to W.W.I) (3) Seminars in various genres (criticism, drama, fiction and poetry), ideas and representative authors during the late 19th century and early 20th century. Repeatable, maximum nine credits under different subtitles.

ENG 632 Studies in American Literature (W.W.I to the Present) (3) Seminars in various genres (criticism, drama, fiction and poetry), ideas and representative authors during the mid 20th century. Repeatable, maximum nine credits under different subtitles.

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 nine credits under different subtitles.

ENG 635 Studies in World Fiction (3) Seminars in various short stories and novels in translation to illustrate a generic or ideological approach to fiction beyond Britain and the United States. Repeatable, maximum nine credits under different subtitles.

ENG 636 Studies in World Poetry (3) Seminars in various poets and aspects of poetry in translation to illustrate a generic, ideological or cultural approach to poetry beyond Britain and the United States. Repeatable, maximum nine credits under different subtitles.

ENG 637 Studies in World Drama (3) Seminars in various plays in translation to illustrate a generic or ideological approach to drama beyond Britain and the United States. Repeatable, maximum nine credits under different subtitles.

ENG 638 Studies in Literary Criticism (3) Seminars in various schools of criticism from the Greeks through the 20th century, combined with the practical application of the theories to works of literature. Repeatable, maximum nine credits under different subtitles.

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 nine credits under different subtitles.

ENG 699 Thesis/Creative Project (1-6) Proposals must be approved by the student's major advisor and the Dean of the Graduate School. S/U graded. Repeatable, maximum of six credits.

ENG 797 Doctoral Proposal Research (1-4) Required of all doctoral students. The student must earn a minimum-maximum of four hours of credit for the research for a doctoral dissertation proposal before admission to candidacy. Repeatable, maximum of four credits.

ENG 799 Doctoral Dissertation (1-12) Required of all doctoral candidates. Repeatable, maximum of 12 credits.

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.

ENST 205 Environment, Politics and Law (2) Analysis of the causes and proposed solutions of environmental problems and of environmental issues and their political resolution.

ENST 215 Human Behavior and Environment (2) Prerequisite: ENST 100 recommended. Examine the interrelationship between human behavior and the environment. Review personal, social and structural dimensions of everyday life as they relate 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.

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.

ENST 245 Nuclear, Solar and Alternative Power (3) Basic principles and applications of nuclear and solar power conversion, including fission, fusion and solar-to-electric. Solar heating of businesses and residences. Alternative power possibilities. Taught by the Physics department.

ENST 247 Politics of the Nuclear Age (2) An investigation into the political, social, economic and military implications of nuclear power and weapons, plus the interrelations between the two. Topics will include the Manhattan Project, the Cold War mentality and the efforts to halt the nuclear arms race.

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 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 writing about nature or human relationships with nature from various periods and cultures. What economic, scientific, philosophic and religious attitudes emerge from attitudes about nature and do these influence human treatment of natural things.

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.

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 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 graded, unless section is approved (by the Graduate School) as 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.

Educational Psychology

EPRE 345 Educational Psychology (3) Principles of human development, learning, motivation, behavior, management and educational testing; their applications to classroom situations.

EPRE 370 Educational Tests and Measurements (3) For prospective teachers and others interested in educationally related applications. Use and interpretation of standardized tests; basic concepts of reliability validity and norms; construction of teacher-made tests.

EPRE 394 Practicum in Educational Psychology (2-4) Prerequisites: EPRE 345. Consent of instructor. Experiential learning in a professional setting in conjunction with supervision by a faculty member. Students work 40 clock hours for each hour of credit. S/U graded. Repeatable, maximum of eight credits.

EPRE 400 Educational Research: Methods (3) Nature of scientific inquiry, research hypotheses, experimental, ex post facto and descriptive research, methods, basic principles of measurement and statistics.

EPRE 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.

EPRE 450 Motivation and Discipline in the Classroom (3) Theories of environmental and personality factors involved in human motivation; applications of these to classroom situations.

EPRE 495 Special Topics in Educational Psychology (1-3) Specialized topics or contemporary issues. Topics vary. Repeatable, maximum two times, under different subtitles.

EPRE 500 Teacher as a Researcher (3) Acquiring the skills and knowledge to understand educational research and conduct research in classroom settings. Identification and definition of research problems, research tools, designs and procedures for pursuing topics.

EPRE 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.

EPRE 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

EPRE 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.

EPRE 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.

EPRE 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.

EPRE 602 Elements of Statistics (3) Prerequisite: EPRE 600. Brief review of descriptive statistics. Covers probability, inference and sampling, correlation, hypothesis testing one-way ANOVA and an introduction to computer statistics packages.

EPRE 603 Analysis of Variance (3) Continuation of EPRE 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.

EPRE 610 Statistical Applications in Educational Research (3) Prerequisite: EPRE 603. Learn the use of statistical software libraries for analyzing data. Topics will include various ANOVA, ANCOVA and MANOVA designs, multiple regression, factor and cluster analyses, path analysis and measurement statistics.

EPRE 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.

EPRE 630 Child and Adolescent Psychology (3) Prerequisite: EPRE 530 or equivalent. Physical, social and emotional development of children from conception through puberty, stressing normal development and major development theories.

EPRE 631 The Psychology of Youth, Adulthood and Aging (3) Prerequisite: EPRE 530 or equivalent. Cognitive, social and physical developments that affect transitions in youth, adulthood and senescence.

EPRE 635 Individual Differences in Cognition (3) Prerequisite: EPRE 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.

EPRE 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.

EPRE 661 Trends and Issues in Educational Psychology (3) Examines professional, philosophical, theoretical issues and trends across the discipline. Students practice and receive feedback regarding written and oral communication skills. S/U graded.

EPRE 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.

EPRE 670 Evaluation: Models and Designs (3) Prerequisite: EPRE 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.

EPRE 671 Evaluation: Advanced Methods (3) Prerequisite: EPRE 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.

EPRE 674 Measurement I: Educational Testing (3) Prerequisite: EPRE 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.

EPRE 675 Measurement II: Advanced Techniques (3) Prerequisite: EPRE 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.

EPRE 680 Qualitative Research Methods (3) Prerequisite: EPRE 600 or equivalent. Qualitative research theory and design, selecting and sampling of qualitative data, methodologies, data collection analysis and interpretation. Evaluation of qualitative research.

EPRE 682 Cognition and Instruction (3) Prerequisite: EPRE 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.

EPRE 684 Advanced Seminar in Human Development (3) Prerequisites: EPRE 630, EPRE 630 or EPRE 631. 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.

EPRE 685 Advanced Seminar in Learning and Cognition (3) Prerequisites: EPRE 540 or EPRE 682. 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.

EPRE 692 Internship in Educational Psychology, Research and Evaluation (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.

EPRE 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.

EPRE 695 Special Topics in Educational Psychology (1-3) Specialized topics or contemporary issues. Topics vary. Repeatable, maximum two times, under different subtitles.

EPRE 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, maximum of six credits.

EPRE 700 Advanced Research Methods (3) Prerequisites: EPRE 600, EPRE 602. Advanced research designs, concepts and methods. Required of all specialist and doctoral candidates.

EPRE 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.

EPRE 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, maximum of 12 credits.

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. Fee required.

ESCI 450 Strategies in Teaching in Earth Sciences (1) (2 laboratory) Demonstration and strategies appropriate for teaching earth science concepts and presentation of controversial issues and management of laboratory and field trip activities.

ESCI 484/584 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.

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 504 Minerals and Rocks (3) (2 lecture, 2 laboratory) No credit for Earth Science majors. A practical course dealing with the origin, classification, recognition and uses of minerals and rocks. Field trip and outside reading are required. Fee required.

ESCI 484/584 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.

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. Unlimited repeatability.

ESCI 600 Introduction to Earth Science Research (2) Consent of instructor. Nature and methods of research in the earth sciences and presentation of scientific findings. 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, maximum of six credits.

English as a Second Language

ESL 050 English for Foreign Students (1-3) Designed to help foreign students with listening, speaking, reading, writing skills and English grammar relating to those skills. Presupposed that students will have basic English communication skills and will take courses toward UNC degree. This is a Basic Skills course offered through Continuing Education and does not count in term, cumulative or total credits and will not be calculated in the GPA. Unlimited repeatability.

ESL 051 Writing for Foreign Students (1-3) Designed to help foreign students with college writing tasks, including essays, term papers, theses. For students whose English language skills are at advanced level. This is a Basic Skills course offered through Continuing Education and does not count in term, cumulative or total credits and will not be calculated in the GPA. Unlimited repeatability.

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 401 Classroom Applications of Educational Technology (2) Provisional or full admission to PTE required. Includes instructional design and media selection, design and utilization of microcomputers applications.

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 two times, under different subtitles.

ET 500 Introduction to Performance Technology (3) Human performance improvement systems (including technology, learning, management, communication, human factors and media) their impact upon the process of education and training are described.

ET 502 Instructional Development (3) Covers development procedures and analysis systems/techniques for determining instructional content. Determines instructional efficiency at systems, curriculum, course and lesson levels.

ET 503 Computers in Education (3) A survey course of computer systems, operating languages and educational applications. Includes types of classroom programs and software applications.

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 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.

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 graded, unless section is approved (by the Graduate School) as 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 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 610 Production of Instructional Materials (3) Prerequisite: ET 504. Techniques of desktop publishing and other modes of media production are emphasized.

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 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 Authorized Systems (3) Prerequisite: ET 524. The generation and validation of computerized courseware. Involves management components for teachers and trainers and instructional components for students.

ET 628 Interactive Video Technologies (3) Prerequisites: ET 502, ET 524. Investigation of the theory, implementation, practice and research on interactive, computer-based instructional systems which include interactive videodisc, video tape and digital video; CD-ROM, rewrite optical; and image capture technologies applied in instructions or performance interventions.

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) Prerequisites: 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, under different subtitles.

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, under different subtitles.

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, under different subtitles to a maximum of three credits.

ET 699 Master's Thesis (1-6) Optional for Master of Arts program. Recommendation of major advisor is required. Topic and thesis format must be approved by major advisor. S/U graded. Repeatable, maximum six credits.

ET 702 Instructional Design Theory and Research (3) Prerequisites: ET 602. Includes examinations of theories underlying instructional design methods. Review and critique of basic and applied research bases is featured.

ET 725 Programming Languages for Educational Application (3) Prerequisite: ET 627. Study of structured programming languages applied to educational practice, design, development and research. Exploration of Object-Oriented Programming and Design as it applies to educational programming. Includes work with high level languages such as Smalltalk/V and C++.

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 782 Research in Instructional Development/Design (3) Prerequisites: ET 602 or consent of instructor. Review and critique of basic and applied research investigating instructional design and development applications in a variety of contexts.

ET 784 Doctoral Seminar in Educational Technology (3) Prerequisite: ET 500. Investigation of the development of the field of educational technology including the theoretical and research bases for the field. Exploration of current research problems and directions for future research in 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 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, maximum 12 credits.

Foreign Languages

FL 341 Methods of Teaching in the Secondary School (3) Full admission to PTE 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 508 Workshop (1-10) 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.

FL 513 Professional Renewal (1-10) 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

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.

FL 601 Practicum (1-10) Open only by invitation to resident graduate students. Supervised professional activity in student's area of interest. Repeatable, maximum 10 credits.

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.

FND 251 Introductory Nutrition (3) Prerequisite: CHEM 108 or CHEM 131. Basic nutrient concepts including individual nutrients and their interactions.

FND 252 Nutrition in the Life Cycle (3) Prerequisite: FND 251. Nutrition applied to the various stages of life, from conception to the later years. Socioeconomic, psychological, physiological factors affecting food intake.

FND 308 Workshops in Food, Nutrition and Dietetics (1-3) Investigate various issues in Food, Nutrition and Dietetics. Each workshop has a subtitle and no subtitle may be repeated for credit. Repeatable, under different subtitles.

FND 342 Food Science I (4) (2 lecture, 2 laboratory) Prerequisite: CHEM 131, FND 251. Study of the chemical and physical properties of food and the effects of processing and preparation, preservation and storage. Fee required.

FND 343 Food Science II (4) (2 lecture, 4 laboratory) Prerequisite: FND 342. Application of the principles of food science to food science research and technology. Fee required.

FND 357 Nutrition in Health and Illness (4) Prerequisites: CHEM 108, ZOO 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 410 Professional Development Seminar (3) Dietetic majors only. Development of the dietetic profession. Examination of topics in nutrition and dietetics not covered in previous coursework. Methods of teaching nutrition in different educational settings.

FND 420/520 Maternal and Child Nutrition (3) Consent of instructor. Prerequisites: FND 250 or FND 251 or FND 357. The study of developmental stages, nutrient requirements, appropriate diet and eating behaviors for children from conception through school age, common 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 Clinical Nutrition I (3) (2 lecture, 2 laboratory) Prerequisites: FND 252, ZOO 350, CHEM 109. Nutrition assessment and intervention during acute and chronic disease. Theory and practical application presented.

FND 431 Clinical Nutrition II (3) (2 lecture, 1 laboratory) Prerequisite: FND 430. Continuation of FND 430. Laboratory arranged. Nutrition assessment and intervention during acute and chronic disease. Theory and practical application presented.

FND 446 Foodservice Systems Management (3) Prerequisites: FND 252, FND 343. Systems approach applied to commercial and noncommercial food service facilities including: procurement, production, distribution, service and maintenance. Management of foodservice operations.

FND 447 Quantity Foodservice (3) (2 lecture, 1 laboratory) Prerequisite: FND 446. Principles of large quantity meal planning, purchasing, preparation, service through laboratory and field experiences in a variety of foodservice facilities.

FND 451 Advanced Nutrition (3) Prerequisite: FND 251, CHEM 208, ZOO 350. Metabolic, physiological and biochemical functions of nutrients and subcellular components and their role in maintaining the integrity of the organism.

FND 452 Community Nutrition (3) Prerequisites: FND 250 or FND 252. Systematic analysis of community food and nutrition problems and programs. Role of public and private sectors in community health promotion.

FND 453 Nutrition Intervention Practicum (1-2) Prerequisites: FND 430, FND 431 or take concurrently. Consent of instructor. Majors only. Application of the principles of clinical and community nutrition through laboratory and clinical experiences. Repeatable, maximum 2 credits.

FND 455/555 Nutrition for Fitness and Athletic Performance (3) Consent of instructor. 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 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

FND 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.

French

FR 100 Beginning French (5) For students with no previous French. Conversational French using oral techniques with reading and writing drills. Stresses comprehension, structure, pronunciation, fluency and cultural awareness.

FR 101 Intensive Elementary French I (3) Some previous knowledge of French required. Accelerated beginning course for students with previous basic French. Conversational French using oral techniques with reading and writing drills. Stresses comprehension, structure, pronunciation, fluency and cultural awareness. Conducted in French.

FR 102 Elementary French II (5) Prerequisites: FR 100 or FR 101 or equivalent. Continuation of 100 or 101. Conversational French using oral techniques with reading and writing drills. Stresses comprehension, structure, pronunciation, fluency and cultural awareness.

FR 116 Contemporary France (3) Become familiar with the culture and society of France with special emphasis on contemporary French issues. Conducted in English.

FR 150 Practicum in Contemporary Culture (1) Previous French required. Study and experience one facet of French culture such as a play, folk dances, film or music. Topic varies. Class conducted in French. Conversation is stressed. Repeatable, maximum of 2 credits under different subtitles.

FR 201 Intermediate French I (3) Prerequisite: FR 102 or equivalent. Review language structures and develop reading and writing skills. Gain vocabulary through conversational practice on topics of cultural interest. Conducted in French.

FR 202 Intermediate French II (3) Prerequisite: FR 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 French.

FR 300 Intermediate French Reading (1-3) Prerequisite: FR 201 or equivalent. Expand and develop reading and analytical skills in preparation for advanced French civilization and literature courses. Conducted in French. Repeatable, maximum four credits.

FR 301 French Conversation and Composition I (3) Prerequisite: FR 202 or equivalent. Develop fluency in writing and conversation and build vocabulary through discussion and compositions about everyday life in the French-speaking world. Conducted in French.

FR 302 French Conversation and Composition II (3) Prerequisite: FR 301 or equivalent. Continue to study the more complex elements of French syntax and sentence structure and acquire flexibility of expression in the written and spoken language. Conducted in French.

FR 311/511 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 312/512 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 350 Practicum in Teaching French (2) Participation in a teaching practicum and a seminar involving the critique and discussion of learning problems and day-to-day difficulties encountered in the French language classroom.

FR 401/501 Intensive French (1-8) Available only on Study Abroad. Experience intensive training in active use of French through formal classroom instruction. Special attention to grammar review, idioms and media language. Conducted in French. Repeatable, maximum eight credits (if course content varies).

FR 402/502 Contemporary Life in France (1-6) Available only on Study Abroad. Examine the customs, institutions and mores of present-day France. Study the historical context of these traditions and how they reflect the French character. Conducted in French. Repeatable, maximum six credits (if course content varies).

FR 403/503 France of the Ancien Regime (1-8) Available only on Study Abroad. Study of social, cultural and political developments in French-speaking Europe from prehistory to the French Revolution with attention to art, architecture, theatre and music. Conducted in French. Repeatable, maximum eight credits (if course content varies).

FR 404/504 Modern France (1-8) Available only on Study Abroad. Study of social, cultural and political developments in post French Revolution, French-speaking Europe, with special attention paid to art, architecture, theatre and music. Conducted in French. Repeatable, maximum eight credits (if course content varies).

FR 405 Business French (3) Prerequisite: FR 202 or equivalent. Learn language skills for use in commercial, professional and government activities. Emphasize acquiring professional vocabulary, building reading and conversational skills and developing mechanics, style and translation of correspondence. Conducted in French.

FR 407/507 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, as defined in the American Council on the Teaching of Foreign Languages (ACTFL) proficiency guidelines for the Oral Proficiency Interview (OPI).

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 450/550 Studies in French Literature (3) Prerequisite: FR 302 or FR 312. Study complete works of major authors representing different movements and genres. Conducted in French. Repeatable, under different subtitles.

FR 475/575 Seminar in French Literature (2) Prerequisite: FR 302 and FR 450. Analyze and discuss French Literature pertaining to a specific topic. Prepare a research paper for class discussion and critique. Conducted in English. Repeatable, under different subtitles.

FR 401/501 Intensive French (4) Graduate status in French. Available only on Study Abroad. Experience intensive training in active use of French through formal classroom instruction. Special attention to grammar review, idioms and media language. Conducted in French. Repeatable, maximum eight credits (if course content varies).

FR 402/502 Contemporary Life in France (3) Graduate status in French. Available only on Study Abroad. Examine the customs, institutions and mores of present-day France. Study the historical context of these traditions and how they reflect the French character. Conducted in French. Repeatable, maximum six credits (if course content varies).

FR 403/503 France of the Ancien Regime (4) Graduate status in French. Available only on Study Abroad. Study of social, cultural and political developments in French-speaking Europe from prehistory to the French Revolution with attention to art, architecture, theatre and music. Conducted in French. Repeatable, maximum eight credits (if course content varies).

FR 404/504 Modern France (4) Graduate status in French. Available only on Study Abroad. Study of social, cultural and political developments in post French Revolution, French-speaking Europe, with special attention paid to art, architecture, theatre and music. Conducted in French. Repeatable, maximum eight credits (if course content varies).

FR 505 Topics in French Civilization (1-3) Graduate status or consent of instructor. Study a variety of selected topics relevant to the Francophone world. Topics to be considered also as material for presentation in the secondary classroom. Conducted in French. Repeatable, under different subtitles to a maximum of 15 credits.

FR 506 Topics in French Literature (1-3) Graduate status or consent of instructor. Reading and discussion of significant works in French-language literature. Works selected and discussed with a focus on their applicability to the secondary classroom. Conducted in French. Repeatable, under different subtitles to a maximum of 10 credits.

FR 407/507 French for Oral Proficiency (3) Graduate status in French. Designed to develop oral proficiency by exposing students to advanced and superior linguistic functions, as defined in the American Council on the Teaching of Foreign Languages (ACTFL) proficiency guidelines for the Oral Proficiency Interview (OPI).

FR 508 Workshop (1-10) 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.

FR 510 Advanced Placement Program-French (1-3) A course designed to provide content and pedagogical information related to the teaching of grammar and literature in the secondary school French advanced placement program. S/U graded. Unlimited repeatability.

FR 311/511 French Civilization and Literature Survey I (3) Graduate status in French. Study of French Civilization and prehistoric times up through the eighteenth century, including the historical, geographical, economic, political, artistic and literary development of France. Conducted in French.

FR 312/512 French Civilization and Literature Survey II (3) Graduate status in French. 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 513 Professional Renewal (1-10) 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

FR 521 Problems in Advanced Grammar (1-3) Graduate status or consent of instructor. Learn the more difficult grammatical structures with special emphasis on structures presenting special difficulties in teaching French. Conducted in French. Repeatable, under different subtitles to a maximum of five credits.

FR 522 Problems in Advanced Composition (1-3) Graduate status or consent of instructor. Emphasize written expression, style and idiomatic usage of the French language. Conducted in French. Repeatable, under different subtitles to a maximum of five credits.

FR 450/550 Studies in French Literature (3) Graduate status in French. Study complete works of major authors representing different movements and genres. Conducted in French. Research paper required. Repeatable, under different subtitles.

FR 475/575 Seminar in French Literature (2) Prerequisite FR 302 and FR 450. Graduate status in French. Analyze and discuss French literature pertaining to a specific topic. Prepare a research paper for class discussion and critique. Conducted in English. Repeatable, under different subtitles.

FR 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.

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.

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.

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.

GEOG 225 Physical Geography (3) Study the natural environments that cover the earth, the processes that shaped them and their role as settings for human action.

GEOG 264 Maps and Imagery (3) Learn effective use of maps and globes and develop skill in reading and interpreting maps and imagery.

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 264. Study the fundamentals, theory and practice of maps and graphic representation. Two one-hour lectures and one credit hour for arranged laboratory work. Fee required.

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 225. 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. 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 325 Advanced Physical Geography: Topics (3) Prerequisite: GEOG 225 or equivalent course. 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. 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. Study the complex patterns of population, politics, economy and lifestyles as they relate to the diverse physical and multicultural environments of Middle America. Analyze the strategic location of this region as it pertains to United States foreign relations.

GEOG 340 Europe (3) Prerequisite: GEOG 100. 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. 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 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. Learn about political phenomena as they relate to a particular geographic setting. Topics of study include territorial expansion, global overpopulation, national resources, territorial sea and warfare. Adequate time will be devoted to class discussion.

GEOG 365 Russia and Eurasia (3) Prerequisite: GEOG 100. 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.

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 392 Field Course in Geography (1-6) Study and apply the techniques used in solving geographic problems in the field and effectively present the results of such studies. Repeatable, may be taken two times.

GEOG 407 Theory and Use of Geographic Information Systems (3) Prerequisites: GEOG 264, GEOG 302. An introduction to the basic concepts and operations of computer-based geographic information systems. Fee required.

GEOG 410 Teaching Geography in Secondary Curriculum (1) Prerequisite: SOSC 341 or equivalent. Full admission to PTE 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.

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 438/538 South America (3) Prerequisite: GEOG 100. Analyze physical features and patterns, placing major emphasis on land utilization, agriculture, resource development, settlement and migration patterns and processes of industrialization.

GEOG 453/553 Geography of the Great Plains (3) Prerequisite: 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. Field trips encouraged.

GEOG 475 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 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. Unlimited repeatability.

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 505 Evolution of Geographic Thought (3) Discuss comparative development of philosophies and operative thought of geographers past and contemporary, in different countries, by analyzing and appraising available literature, particularly themes and topics significant to modern American geographic philosophy.

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 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 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 graded, unless section is approved (by the Graduate School) as 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.

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.

GEOG 438/538 South America (3) Analyze physical features and patterns, placing major emphasis on land utilization, agriculture, resource development, settlement and migration patterns and processes of industrialization.

GEOG 453/553 Geography of the Great Plains (3) 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. Field trips encouraged.

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 570 Classroom Technology in Geographic Education (2) Graduates only or consent of instructor. Introduce noninteractive and interactive technology appropriate for teaching K-12 geography. Develop units using interactive technology for teaching geography.

GEOG 575 Seminar in Quantitative Geography (3) Prerequisite: GEOG 475 or equivalent. Undertake selected research projects that provide experience in the use of quantitative techniques in interpreting geographical data.

GEOG 578 Seminar in Research Methodology (3) An introduction to methods of organizing and carrying out research on geographic questions, with particular emphasis on data collection and interpretation strategies. Students will plan and carry out research exercises.

GEOG 590 Advanced Research Seminar (3) Prerequisites: GEOG 578 or consent of instructor. Research will be undertaken on selected geographic issues; emphasis on the directed application of acquired research skills.

GEOG 592 Field Course in Geography (1-6) Study and apply techniques used, solve geographic problems in the field and effectively present results of such studies. Unlimited repeatability.

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.

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. Fee required.

GEOL 110 Geology and Society (3) Interaction between people and the geological environment. Deals with such topics as earth dynamics, geologic time, origin of landscapes, natural resources and geologic hazards such as volcanoes, earthquakes, floods and landslides.

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. Fee required.

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. Fee 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. Fee required.

GEOL 330 Earth Materials (3) (2 lecture, 3 laboratory) Prerequisites: GEOL 100 or GEOL 201. Crystals, minerals and igneous, metamorphic and sedimentary rocks — their origins, descriptions and classifications.

GEOL 340/540 Paleontology (4) (2 lecture; 6 laboratory) Prerequisites: GEOL 202. Fossil animals and plants — fossilization processes, collecting procedures, specimen preparation, description, classification, functional morphology, paleoecology, biostratigraphy, evolutionary trends. Field trip required. Fee 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. Fee required.

GEOL 421/521 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. Fee required.

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 450/550 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. Fee required.

GEOL 460/560 Geomorphology (3) (2 lecture, 3 laboratory) Prerequisites: GEOL 100 or GEOL 202. Origin and evolution of landforms with emphasis on fluvial processes; hydraulic characteristics of streams, morphology of drainage basins, landscape evolution by stream sculpture and deposition and lithologic, climatic and structural controls. Fee required.

GEOL 464/564 Glacial and Quaternary Geology (3) Prerequisites: 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. Fee required.

GEOL 470/570 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. Fee required.

GEOL 481/581 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. Fee required.

GEOL 482/582 Geology Field Camp (6) Prerequisites: GEOL 421, GEOL 470, GEOL 481. Six weeks of field geology including mapping of a variety of geological terrains using topographic maps, aerial photographs, plane table and other methods.

GEOL 510 Ground-water Geology (2) Ground-water in the geologic setting. Hydrology of ground-water basins. Well hydraulics. Principles of flow in saturated and unsaturated materials. Modeling of hydrogeologic systems. Applications to ground-water contamination and management problems.

GEOL 421/521 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. Fee required.

GEOL 525 Economic Geology (3) Prerequisite: GEOL 320. Deals with the origin and occurrence of metallic and related mineral deposits and also with the origin, migration and accumulation of oil and natural gas deposits. Field trip required. Fee required.

GEOL 532 Igneous and Metamorphic Petrology (2) (1 lecture, 3 laboratory)

Prerequisites: GEOL 421 or GEOL 521. Description and classification of igneous and metamorphic rocks, phase relations of minerals, origin of igneous rocks and processes of metamorphism. Field trip required. Fee required.

GEOL 533 Sedimentary Petrology (2) (1 lecture, 3 laboratory) Prerequisites: GEOL 421 or GEOL 521. Advanced study of sedimentary rocks. Various techniques, including use of the petrographic microscope, will be employed to analyze these rocks and to interpret their histories. Field trip required. Fee required.

GEOL 535 Tectonics (2) Prerequisite: GEOL 202. The earth's tectonic features and the models which have attempted to explain them. Detailed study of modern plate tectonic theory and the evidence which supports it.

GEOL 340/540 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. Fee required.

GEOL 450/550 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. Fee required.

GEOL 460/560 Geomorphology (3) (2 lecture, 3 laboratory) Prerequisites: GEOL 100 or GEOL 202. Origin and evolution of landforms with emphasis on fluvial processes; hydraulic characteristics of streams, morphology of drainage basins, landscape evolution by stream sculpture and deposition and lithologic, climatic and structural controls. Fee required.

GEOL 464/564 Glacial and Quaternary Geology (3) Prerequisites: 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. Fee required.

GEOL 567 Volcanic Geology (3) (2 lecture, 3 laboratory) Prerequisites: 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. Fee required.

GEOL 470/570 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. Fee required.

GEOL 481/581 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. Fee required.

GEOL 482/582 Geology Field Camp (6) Prerequisites: GEOL 421 or GEOL 521, GEOL 470 or GEOL 570, GEOL 481 or GEOL 581. Six weeks of field geology including mapping of a variety of geological terrains using topographic maps, aerial photographs, plane table and other methods.

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. Fee required.

GEOL 595 Special Topics in Geology (1-4) An opportunity to explore areas of geology beyond the scope of existing department offerings. Repeatable, under different subtitles.

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.

General Education Pilot Program**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.

GEP 102 Evolutions of Cultures (3)

Prerequisite: GEP 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.

GEP 103 The Modern World (3) Prerequisite:

GEP 102 or consent of instructor. A study of the development of the modern world from the early sixteenth century to the late nineteenth century using texts and works of art from around the world.

GEP 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.

GEP 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.

GEP 301 World of the Liberal Arts Capstone: The Present Age (3) Prerequisite:

Completion of all other courses required for the pilot or consent of instructor. An interdisciplinary seminar exploring the bearing of important ideas in the liberal arts on the present age (i.e., from about 1900 to the present) and on our lives.

GEP 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.

GEP 303 Social World Capstone: Conflict, Cooperation and Change (3) Prerequisite:

Completion of all other courses required for the pilot or consent of instructor. An interdisciplinary seminar exploring the convergence of theories, problems, methodologies, analytical skills, and ethics in the social world. Issues of gender, class and multiculturalism will be examined.

German

GER 100 Beginning German (5) For students with no previous German. Conversational German using oral techniques with reading and writing drills. Stresses comprehension, structure, pronunciation, fluency and cultural awareness.

GER 101 Intensive Elementary German I (3) Some previous knowledge of German required. Accelerated beginning course for students with previous basic German. Conversational German using oral techniques with reading and writing drills. Stresses comprehension, structure, pronunciation and cultural awareness. Conducted in German.

GER 102 Elementary German II (5) Prerequisite: GER 100 or GER 101 or equivalent. Continuation of 100 or 101. Conversational German using oral techniques with reading and writing drills. Stresses comprehension, structure, pronunciation, fluency and cultural awareness.

GER 116 Contemporary Germany (3) Become familiar with the culture and society of Germany with special emphasis on contemporary German issues. Conducted in English.

GER 150 Practicum in Contemporary Culture (1) Previous German required. Study and experience one facet of German culture such as a play, folk dances, film or music. Topic varies. Class conducted in German. Conversation is stressed. Repeatable, under different subtitles to a maximum of 2 credits.

GER 201 Intermediate German I (3) Review language structures and develop reading and writing skills. Gain vocabulary through conversational practice on topics of cultural interest. Conducted in German.

GER 202 Intermediate German II (3) Prerequisite: GER 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 German.

GER 300 Intermediate German Readings (1-3) Prerequisite: GER 201 or equivalent. Expand and develop reading and analytical skills in preparation for advanced German civilization and literature courses. Repeatable, maximum four credits. Conducted in German.

GER 301 German Conversation and Composition I (3) Prerequisite: GER 202 or equivalent. Develop fluency in writing and conversation and build vocabulary through discussion and compositions about everyday life in the German-speaking world. Conducted in German.

GER 302 German Conversation and Composition II (3) Prerequisite: GER 301 or equivalent. Continue to study the more complex elements of German syntax and sentence structure and acquire flexibility of expression in the written and spoken language. Conducted in German.

GER 311/511 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 312/512 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 350 Practicum in Teaching German (2) Participation in a teaching practicum and a seminar involving the critique and discussion of learning problems and day-to-day difficulties encountered in the German language classroom.

GER 401/501 Intensive German (1-8) Available only on Study Abroad. Emphasize active use of the language through formal classroom instruction. Special attention to idioms, nuances of German and language of the media. Conducted in German. Repeatable, maximum eight credits (if course content varies).

GER 402/502 Contemporary Life in Germany (1-6) Available only on Study Abroad. Examine the customs, institutions and mores of present-day Germany. Study the historical context of these traditions and how they reflect the German character. Conducted in German. Repeatable, maximum six credits (if course content varies).

GER 403/503 Practicum in Germany (1-8) Available only on Study Abroad. Experience work environment of the German business person, artisan, worker or professional through direct work experience. Conducted in German. Repeatable, maximum eight credits (if course content varies).

GER 404/504 Modern Germany (1-8) Available only on Study Abroad. Examine traditions, customs institutions and mores of today's German-speaking Europe and how these reflect the national character of the people. Conducted in German. Repeatable, maximum eight credits (if course content varies).

GER 405 Business German (3) Prerequisite: GER 202 or equivalent. Learn language skills for use in commercial, professional and government activities. Emphasize acquiring professional vocabulary, building reading and conversational skills and developing mechanics, style and translation of correspondence. Conducted in German.

GER 407/507 German for Oral Proficiency (3) Intermediate oral proficiency in German. Designed to develop oral proficiency by exposing students to advanced and superior linguistic functions, as defined in the American Council on the Teaching of Foreign Languages (ACTFL) proficiency guidelines for the Oral Proficiency Interview (OPI).

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 450/550 Studies in German Literature (3) Prerequisite: GER 202 or equivalent. Variable topics include analysis and discussion of poetry, prose, drama and literary periods from Middle Ages to present. Conducted in German. Repeatable, under different subtitles.

GER 475/575 Seminar in German Literature (2) Prerequisite: GER 302 or equivalent. Analyze and discuss German Literature pertaining to a specific topic. Prepare a research paper for class discussion and critique. Conducted in English. Repeatable, under different subtitles.

GER 401/501 Intensive German (4) Graduate status in German. Available only on Study Abroad. Emphasize active use of the language through formal classroom instruction. Special attention to idioms, nuances of German and language of the media. Conducted in German. Repeatable, maximum eight credits (if course content varies).

GER 402/502 Contemporary Life in Germany (3) Graduate status in German. Available only on Study Abroad. Examine the customs, institutions and mores of present-day Germany. Study the historical context of these traditions and how they reflect the German character. Conducted in German. Repeatable, maximum six credits (if course content varies).

GER 403/503 Practicum in Germany (4) Graduate status in German. Available only on Study Abroad. Experience work environment of the German business person, artisan, worker or professional through direct work experience. Conducted in German. Repeatable, maximum eight credits (if course content varies).

GER 404/504 Modern Germany (4) Graduate status in German. Available only on Study Abroad. Examine traditions, customs, institutions and mores of today's German-speaking Europe and how these reflect the national character of the people. Conducted in German. Repeatable, maximum eight credits (if course content varies).

GER 505 Topics in German Civilization (1-3) Graduate status or consent of instructor. Study of a variety of selected topics relevant to the German world. Topics to be considered also as material for presentation in the secondary classroom. Conducted in German. Repeatable, under different subtitles to a maximum of 15 credits.

GER 506 Topics in German Literature (1-3) Graduate status or consent of instructor. Reading and discussion of significant works in German-language literature. Work selected and discussed with a focus on their applicability to the secondary school classroom. Conducted in German. Repeatable, under different subtitles to a maximum of 15 credits.

GER 407/507 German for Oral Proficiency (3) Graduate status in German. Designed to develop oral proficiency by exposing students to advanced and superior linguistic functions, as defined in the American Council on the Teaching of Foreign Languages (ACTFL) proficiency guidelines for the Oral Proficiency Interview (OPI).

GER 508 Workshop (1-10) 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.

GER 311/511 German Civilization and Literature Survey I (3) Graduate status in German. Study of German civilization from prehistoric times up through the 19th century, including the historical, geographical, economic, artistic and literary development of Germany. Conducted in German.

GER 312/512 German Civilization and Literature Survey II (3) Graduate status in German. 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 513 Professional Renewal (1-10) 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

GER 521 Problems in Advanced Grammar (1-3) Graduate status or consent of instructor. Learn the more difficult grammatical structures with emphasis on structures presenting special difficulties in teaching German. Conducted in German. Repeatable, under different subtitles to a maximum of five credits.

GER 522 Problems in Advanced Composition (1-3) Graduate status or consent of instructor. Emphasis on written expression, style and idiomatic usage of the German language. Conducted in German. Repeatable, under different subtitles to a maximum of five credits.

GER 450/550 Studies in German Literature (3) Graduate status in German. Variable topics include analysis and discussion of poetry, prose, drama and literary periods from Middle Ages to present. Conducted in German. Repeatable, under different subtitles.

GER 475/575 Seminar in German Literature (2) Graduate status in German. Analyze and discuss German literature pertaining to a specific topic. Prepare a research paper for class discussion and critique. Conducted in 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.

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.

GERO 235 Issues in Adulthood (3) Examines primary roles and developmental tasks of adulthood. Issues and life transitions explored from the perspective of the individual, family and society.

GERO 394 Practicum in Gerontology (1-4) Make application to the department before registration. Repeatable, maximum eight credits.

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 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 in 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 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 15 credits.

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 programs 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 495/595 Special Topics in Gerontology (1-4) Course designed to investigate specific aspect of Gerontology. Repeatable, under different subtitles to a maximum of six credits.

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 and the Aged (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 for Aging Programs (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 non-profits. Directed to non-accountants. Develop basic skills in financial control and fundraising.

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) S/U graded. Repeatable, maximum 15 credits. Only 12 credits may be counted towards degree program.

GERO 694 Practicum in Gerontology (1-4) Make application to the department before registration. Repeatable, maximum eight credits.

GERO 699 Thesis (1-6) S/U graded. Repeatable, maximum six credits.

Hispanic Studies

HISP 101 Introduction to Mexican American Studies (3) A general course designed to provide the student with an understanding of Mexican American culture. Taught in English.

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.

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.

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.

HISP 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 lifestyle of the contemporary Mexican. Taught in English.

HISP 220 Women in Hispanic Society (3) Study of women in Hispanic society, their role and participation from Middle Ages to the present through literary works. Taught in English.

HISP 225 History of the Chicano in the Southwest (3) Examines the history and heritage of the contemporary Chicano or Mexican-American. Deals with contributions of the Spaniard, the Indian and the Mestizo. Taught in English.

HISP 300 Social Stratification in the Mexican-American Community (3) Examines the variables affecting the social stratification of the Mexican-American community in the Anglo-American society, social class differences in Mexican-American communities and Mexican-American social mobility. Taught in English.

HISP 370 Chicano Psychology (3) The course is designed to examine the behavior of Mexican-Americans in an Anglo-American cross-cultural setting. Taught in English.

HISP 395 Historical, Philosophical, Legal and Cultural Dimensions of Bilingual Education (3) Designed to examine the linguistic, political and cultural assumptions underlying American public education. Taught in English.

HISP 400 Bilingual and English as a Second Language Methods (3) Address issues which are relevant to teaching methodologies for the Bilingual/Multicultural and ESL classroom.

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.

HISP 414 Contemporary Chicano Issues (3) A study of external and internal issues affecting the Chicano community.

HISP 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.

HISP 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.

HISP 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

HISP 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.

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.

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.

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.

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.

HIST 113 Asian Civilization II: The Modern Transformation (3) Examination of the modern transformation of East, South and Southeast Asian societies.

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.

HIST 120 Western Civilization from Ancient Greece to 1689 (3) A survey of Western Civilization from Ancient Greece to the Glorious Revolution.

HIST 121 Western Civilization from 1689 to the Present (3) A survey of Western Civilization from the Glorious Revolution to the present.

HIST 130 Middle East History I (3) The Middle East from the rise of Islam to the fall of Baghdad in 1258 with an emphasis on political and cultural achievements.

HIST 131 Middle East History II (3) The Middle East from the Mongols to the present with an emphasis on Ottoman institutions and European imperialism.

HIST 216 History of Spain and Portugal (3) A survey of Iberian history from the Reconquista to the post-Franco era emphasizing political and cultural developments.

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 218 The Modern Middle East (3) Chronologically surveys the political and social history of the modern Middle East over the past two hundred years with an emphasis on the Arab states, Iran and Turkey.

HIST 224 History of Colorado (3) A survey of Colorado history from prehistoric times to the post World War II era.

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 Intellectual History (3) An examination of the growth and development of American thought by surveying major works of literature in their historical context and selected examples of popular culture, which reflect and influence intellectual trends.

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 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 twentieth century revolution or liberation movements.

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.

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.

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 309/509 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 lifestyles.

HIST 310/510 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 311/511 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 314/514 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 315/515 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 317 Themes in Middle Eastern History (3) Designed to emphasize certain select topics in Middle Eastern history, ranging from ancient origins and development of religions to Arab nationalism and Islamic fundamentalism as a background for today's challenges.

HIST 318/518 Modern Africa (3) A study of the social, political, economic and cultural transformation of twentieth-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 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 329/529 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, sectionalist 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 333/533 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 337/537 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 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 344 Nature and the American West (3)

For students of history and related disciplines with an interest in the ecological and environmental history of the American West. Subjects include resource development and human interaction with the land.

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 350/550 Industrial America (3)

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 352/552 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, with an emphasis on American military and naval operations.

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)

A study of the causes and consequences of the French Revolution of 1789 and its impact on 19th century France and Europe. After Napoleon, the course will analyze strains of politics, intellectual life and society leading to 1848 upheaval.

HIST 376 France from 1848 (3)

A study of the 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 Soviet History, 1917 to the Present (3)

A detailed consideration of the establishment of the Soviet Union and its role in the world to the present.

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 389/589 Modern Europe (3)

A consideration in depth of European historical development from 1815 to the present, focusing on political, diplomatic and economic matters. Repeatable, under different subtitles to a maximum of nine credits.

HIST 390 The World Wars, 1914-1945 (3)

A course on the two great European wars of the twentieth century, emphasizing the interaction between political objectives, social resources and military strategy.

HIST 397 History Colloquium (3)

Introduction to major historical and interdisciplinary works; discussion of their historiographical significance.

HIST 399 Introduction to Historical Research (3)

Prerequisite: ENG 122. Historical methodology and historiography.

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 480 Senior Seminar (3)

Seniors. Students will examine a specific topic and write a critical essay incorporating research, historical methodology, analysis and expository skills. Repeatable, under different subtitles to a maximum of six credits.

HIST 492 Internship (1-3) Independent, individualized projects jointly directed by faculty supervisors and staff of cooperating office or institution. Repeatable, maximum six credits.

HIST 495 Topics in American History (3)

Seniors. In-depth examination of various aspects related to American social and cultural history since the American Revolution. Repeatable, under different subtitles to a maximum of six credits.

HIST 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.

HIST 309/509 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 lifestyles.

HIST 310/510 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 311/511 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 512 Seminar in Asian History (3)

Investigates selected topics in the history of China, Japan, India and Southeast Asia. Repeatable, under different subtitles to a maximum of six credits.

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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

HIST 314/514 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 315/515 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 516 Seminar in Latin American History (3)

Investigates selected topics in Latin American history. May focus on colonial or post-independence period. May be taken twice under different subtitles.

HIST 318/518 Modern Africa (3)

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 Advanced Study in American Colonial History (3)

Investigates topics in the history of colonial and revolutionary America through direct research and/or readings.

HIST 522 Seminar in Southwest History (3)

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 329/529 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 530 Topics in American History (3) Investigation of a topic in American history. Content depends on instructor. Repeatable, under different subtitles to a maximum of nine credits.

HIST 333/533 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 535 Advanced Placement Program-US History (1-3) 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. Unlimited repeatability.

HIST 536 Advanced Placement Program in European History (1-3) 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. Unlimited repeatability.

HIST 337/537 Advanced Study in the History of American Education (3) 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) A consideration of selected topics in European Intellectual History from the Enlightenment to the present in a seminar format.

HIST 350/550 Industrial America (3) 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 352/552 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, with an emphasis on American military and naval operations.

HIST 557 Seminar in Medieval and Renaissance History (3) A seminar for advanced undergraduate and graduate students that will investigate select topics in medieval and renaissance history through research and readings.

HIST 389/589 Modern Europe (3) A consideration in depth of European historical development from 1815 to the present, focusing on political, diplomatic and economic matters. Repeatable, under different subtitles to a maximum of nine credits.

HIST 593 Practicum in Teaching History (2) To examine on-site methodologies of master teachers and their interaction with students from area secondary schools in order to understand and teach the program of historical analysis.

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, maximum six credits.

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 2 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 four credits.

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.

HRS 308 Workshop in Human Services (1-4) Course designed to investigate a specific aspect of Human Services. Repeatable, under different subtitles to a maximum of nine credits.

HRS 380/580 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, industry.

HRS 385 Working with Families in Rehabilitation (3) Prerequisites: 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 386/586 Community Integrated Employment (3) Emphasis will be on supported employment programs (from sheltered workshops to community) and transition from school to work.

HRS 391/591 Independent Living in Rehabilitation (3) In-depth study of independent living center programs and concepts. Focus on demonstration and research as applied to people with disabilities.

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 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 18 credits.

HRS 495 Special Topics in Rehabilitation (1-4) Course designed to investigate a specific aspect of rehabilitation. Repeatable, maximum nine credits.

HRS 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.

HRS 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

HRS 380/580 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 Occupation 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 386/586 Community Integrated Employment (3) Emphasis will be on supported employment programs (from sheltered workshops to community) and transition from school to work.

HRS 590 Rehabilitation Services in Facilities and the Private Sector (3) Prepares counselors for rehabilitation service delivery in private-for-profit rehabilitation programs, community service facilities, business and industry. Addresses legal issues, worker compensation, expert witness, transition, supported work and ethics.

HRS 391/591 Independent Living in Rehabilitation (3) In-depth study of independent living center programs and concepts. Focus on demonstration and research as applied to people with disabilities.

HRS 595 Special Topics in Rehabilitation (1-4) Course designed to investigate a specific aspect of rehabilitation. Repeatable, under different subtitles, maximum of nine credits.

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. Unlimited repeatability.

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 606 Psycho-Social Aspects of Disability (3) Develop sensitive awareness of handicapping nature of disabilities and relationship between disability and psychological, social and vocational aspects of successful adjustments.

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 635 Cultural and Family Concerns in Rehabilitation (3) Provides theoretical and practical knowledge necessary to effectively counsel families who have disabled family members. Concerns of disabled persons in various cultures are addressed with emphasis on appropriate family intervention.

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 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 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. Fee required.

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. Fee required.

HRS 755 Supervised Practicum in College Teaching (3) Experiences in observation and supervised practice in teaching at college or university level. Repeatable, maximum nine credits.

HRS 757 Advanced Practicum in Rehabilitation Administration (3) 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 nine credits.

HRS 758 Advanced Practicum in Rehabilitation Research (3) Students will receive supervised experience in rehabilitation research, including research methods and design. Final research paper of publishable quality required. Repeatable, maximum nine credits.

HRS 759 Advanced Practicum in Rehabilitation Counseling Supervision (3) 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 760 Professional Development Seminar in Rehabilitation (1) Admission to doctoral program required or consent of instructor. Provide forum for development and discussion of research, professional issues, trends field human rehabilitation. Repeatable, maximum four credits.

HRS 794 Advanced Clinical Internship (1-6) This supervised rehabilitation counseling internship is structured to philosophy, functions and clientele of agency and interest, background and capabilities of individual students. Repeatable, maximum six credits.

HRS 797 Doctoral Proposal Research (1-4) 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) Required of doctoral candidates. Students must earn 12 hours of dissertation credit for doctoral requirements. S/U graded. Repeatable, maximum 12 credits.

Humanities

HUM 111 The Classical Period Through the Middle Ages (3) Study values, beliefs, customs of the period through literature, visual arts, philosophy, mythology and history.

HUM 112 The Renaissance to the Present (3) Study values, beliefs, customs, social and intellectual history of the period through literature, visual arts, philosophy and music.

HUM 115 Literature and Arts of the Orient (3) An introduction to the literature, arts and thought of the Orient.

HUM 120 Studies in Film (3) An approach to film emphasizing genre, theme, director or historical period. Repeatable, under different subtitles to a maximum of nine credits.

HUM 210 Topics in the Humanities (3) Interdisciplinary study of major themes or problems in civilization, incorporating social, philosophical and/or aesthetic perspectives. Repeatable, under different subtitles to a maximum of nine credits.

HUM 225 Studies in Asian Humanities (3) A study of the literature and other arts of India, China or Japan in their historical, philosophical and aesthetic settings. Repeatable, under different subtitles to a maximum of nine credits.

HUM 320 The Art of the Film (3) An introduction to the major creative filmmakers; Griffith, Welles, Bergman, Antonioni, etc. and to their characteristic technical and thematic concerns.

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.

HUM 410 Advanced Seminar in the Humanities (3) One or more great literary or artistic works in relation to history, philosophy and other arts. Repeatable, maximum nine credits.

HUM 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.

Interdisciplinary Studies

ID 109 President's Scholars Symposium (1) Open to recipients of the President's Honor Scholarship. UNC professors discuss research interests and contemporary issues. S/U graded.

ID 208 Feminism: An Interdisciplinary Analysis (3) Discuss feminist movement and utilize an interdisciplinary perspective to analyze how myth affects identity and attitudes of the "male world" and of women in relation to themselves and society.

ID 300 Global Futures (3) Consent of instructor. Consider the interrelatedness of human equality issues to one another and to world environmental threats. Develop and apply ethical theories for resolving conditions and phenomena that threaten global survival.

ID 308 Workshop (1-3) Study problems in education, with area covered in any one workshop determined by title. Repeatable, under different subtitles.

ID 325 Human Sexuality (3) A multidisciplinary approach to the physiological, psychological and sociological aspects of human sexuality including critical analyses of research methodology.

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 (1-3) 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

ID 599 Capstone Seminar (3) Prerequisite: EPRE 500. A culminating experience in the Graduate Interdisciplinary Master of Arts program. Integration of content and pedagogy coursework/experiences, as well as the development of action research projects into final products.

ID 702 The Teacher in the College Community (3) A survey of current issues in higher education, the role of faculty in collegiate settings and typical instructional problems. Required of all Doctor of Arts candidates in mathematics and music. Should be taken during the first year of graduate study.

Japanese

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.

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.

JAPN 105 Conversational Japanese I (3) For students with no previous Japanese. Develop a basic conversational ability. Emphasis on language use in business or tourism. Discussion of important aspects of Japanese culture and thought.

JAPN 106 Conversational Japanese II (3) Prerequisite: JAPN 105. Continuation of JAPN 105. Basic Conversational Japanese with emphasis on language use in business or tourism. Discussion of important aspects of Japanese culture and thought.

JAPN 116 Contemporary Japan (3) Become familiar with the culture and society of Japan with special emphasis on contemporary Japanese issues. Conducted in English.

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.

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.

JAPN 422 Directed Studies (1-4) Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hours.) Repeatable, maximum concurrent enrollment is two times.

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 its history and current function.

JMC 210 Newswriting (3) Prerequisite: Functional typewriting skill (25 wpm). Consent of instructor. Sharpen skills and judgment in reporting and writing for broadcast and non-broadcast mass media. Fee required.

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. Fee required.

JMC 310 Feature Writing for News Media (3) Prerequisite: JMC 210. Majors only. Consent of Instructor. Researching and writing about ideas, trends, personalities and events in formats and styles useful to all mass media. Fee required.

JMC 340 Broadcast Newswriting (3) Prerequisites: JMC 210 and JMC 241. Majors only. News for the ear and for the television camera eye; radio, television and cable newscasts. Fee required.

JMC 341 Advanced Radio Production (3) Prerequisite: JMC 241. Majors only. Broadcast quality audio productions; writing and adapting materials especially for the radio medium. The hardware, software and programming used in radio broadcasting. Fee required.

JMC 342 Television Production (4) Prerequisite: JMC 241. Consent of instructor. Majors only. Learn the terminology, procedures and skills of basic studio television production. Application of techniques to the production of programs. Fee required.

JMC 345 Broadcast Advertising and Promotion (3) Majors 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. Fee required.

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. Fee required.

JMC 380/580 Public Relations (3) Majors 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) Prerequisites: 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) Prerequisite: JMC 100. The effects of media content and media industries on contemporary society; evaluation of current media criticism and the role of media in society.

JMC 391 Literary Journalism (3) Juniors or above. Explores the writings of persons trained prevalently as journalists, relating major themes in journalism and fiction to popular listings. Questions of narrative form are stressed.

JMC 397 Journalism History (3) The growth and development of major issues and principles of American culture as reflected in the history, writings, professional standards and social contributions of leading men and women in the mass media.

JMC 404 Practicum (1-3) Gain experience with behind-the-scenes set-up and preparation of labs, special productions and individual projects; assist with labs, editing sessions and/or field work. Unlimited repeatability.

JMC 408 Special Topics (3) Current issues or problems in journalism and mass communications.

JMC 410 Advanced News (3) Majors only. Prerequisite: JMC 210. Local beats, columns and editorials; becoming familiar with local and national issues. Fee required.

JMC 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.

JMC 443/543 Electronic Field Production (4) Prerequisite: JMC 342. Majors only. The techniques of remote video production and video editing; producing short programs or segments using these techniques. Fee required.

JMC 444/544 Cable Television Production (3) Prerequisites: JMC 342, JMC 443. Majors only. The techniques and theories needed to produce regularly scheduled cable television programs. Fee required.

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 481/581 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 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 Journalism and Mass Communications Internship (1-3). One semester of full-time work in news, broadcast media, public relations, advertising or related organizations. Repeatable, maximum three credits.

JMC 495 Television Criticism (3) Study the effect of television as an informative, persuasive, entertaining and culturally indoctrinating medium. Fee required.

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 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.

JMC 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

JMC 443/543 Electronic Field Production (4) Majors only. The techniques of remote video production and video editing. Produce short programs or segments using these techniques. Fee required.

JMC 444/544 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. Fee required.

JMC 566 Telecommunications Management (3) Prerequisites: JMC 460 or equivalent. The social, cultural, economic and interpersonal variables impacting decision-making in commercial and public telecommunications; and contemporary issues and problems in management.

JMC 380/580 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 481/581 Public Relations Techniques (3) Prerequisites: JMC 210, JMC 380. Effective tools and techniques used by the professional public relations practitioner.

JMC 583 Philosophies and Procedures of Public Relations (3) Case study approach to advanced study of the public relations process and its application to a variety of institutions from business to education.

JMC 591 Seminar: International Mass Communications (3) The economics, social impact and philosophical dimensions of international mass communications: the industries, the policies and the issues. Special focus is given to case studies of particular countries and the impact of one country's media on the life and culture of another.

JMC 592 News Media and Public Policy (3) The structure, policies and content of the news media and how these relate to issues of public policy.

JMC 593 Professional Perspectives (3) The ethics and responsibilities of professional communicators in journalism and mass media, especially as they relate to and result from the problems and situations they confront as employees and managers.

JMC 595 Seminar in the History of Mass Communications (3) The lives and accomplishments of major figures in the development of contemporary journalism in the context of the times in which they lived and worked.

JMC 596 Seminar in Mass Communication Theory (3) A survey of major theories, seminal research findings and cultural critiques relevant to mass communication processes.

JMC 597 Media Freedom and Censorship (3) Graduate students only. The evolution of media freedom in the United States from colonial times to the present, with attention to the many attempts at censorship of all kinds.

JMC 601 Practicum (1-8) Supervised professional activity in student's area of emphasis. Two copies of a well-researched paper are required. Repeatable, maximum eight credits.

JMC 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.

JMC 699 Thesis (1-6) Required for Master of Arts candidates in the Journalism and Mass Communication emphasis. S/U graded. Repeatable, maximum six credits.

Kinesiology

KINE 215 Kinesiology: The Integrated Study of Human Movement (1) To provide an introduction to contemporary kinesiology, the integrated study of human movement and its applications.

KINE 216 Computer Applications in Kinesiology (1) To provide an introduction to the use of computer technology in Kinesiology.

KINE 220 Anatomical Kinesiology (3) Study of the anatomical bases of human movement. Laboratory provides application of principles. Fee required.

KINE 221 Mechanical Kinesiology (3) Application of mechanical principles in the study of human movement. Laboratory provides application of concepts. Fee required.

KINE 222 Physiological Kinesiology (3) Investigate the basic concepts in the physiological components of human movement. Laboratory provides application of principles. Fee required.

KINE 223 Neuromotor Kinesiology (3) Study of the neuropsychological components of motor behavior, with an emphasis on movement problems. Laboratory provides application of concepts.

KINE 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.

KINE 380 Prevention and Care of Sports Injuries (2) Prerequisites: KINE 220, KINE 221 or equivalents. Emphasis on prevention of injury to the young athlete participating in sport. Includes an overview of mechanisms, initial care, reconditioning and basic wrapping and taping techniques of common sports injuries and organization of preventive programs. Fee required.

KINE 381 Practical Experiences in Care of Athletic Injuries (3) Prerequisites: KINE 380 or equivalent. Admission to Athletic Training Clinical Program required. Consent of instructor. Divided into four modules for three semester hours each. One module will be offered each semester. Modules are: anatomy applied to injury, emergency care and referral, modality application and program administration. Minimum requirement of 12 hours. Repeatable, maximum 15 credits.

KINE 390 Cardiopulmonary Resuscitation Certification (1) Basis, 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. Upon successful completion, student will receive certification through the American Heart Association and/or the American Red Cross.

KINE 400/500 Fitness Management (3) Majors only. Juniors or above. 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.

KINE 402/502 Human Performance Assessment (3) Prerequisite: KINE 222, KINE 410/510 or equivalent. Majors only. Juniors or above. Uses and techniques of assessment in fitness, work capacity and sport. Experience in the use and interpretation of laboratory and field tests. Fee required.

KINE 404/504 Exercise Nutrition and Body Composition (3) Prerequisite: KINE 222 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.

KINE 406/506 Exercise Programming (3) Prerequisites: KINE 222 & KINE 402 or equivalent. Majors only. Juniors or above. Examination of the competencies necessary for the design, the organization and the implementation of preventive and rehabilitative exercise programs.

KINE 408 Workshop in Kinesiology (1-3) Offers a variety of workshops on special topics. S/U graded. Repeatable, under different subtitles.

KINE 410/510 Principles of Electrocardiography (3) Prerequisite: KINE 222 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. Fee required.

KINE 415 Senior Research Project (1-3) Consent of instructor. Provide an opportunity for senior students to participate in a research project. S/U graded. Repeatable, maximum three credits.

KINE 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.

KINE 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.

KINE 485 Mechanism and Evaluation of Sports Injury (3) Prerequisites KINE 380 or equivalent. Admission to the Athletic Training Clinical Program required and consent of instructor. For majors only. Techniques, procedures and skill for the recognition and evaluation of acute and chronic injuries. Includes history, inspection, palpation, functional testing and special evaluation techniques.

KINE 486 Clinical Methods of Sports Injury Rehabilitation (3) Prerequisites: KINE 380 or equivalent. Admission to the Athletic Training Clinical Program required and consent of instructor. For 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.

KINE 487 Therapeutic Modalities (2)

Prerequisites: admission to the Athletic Training Clinical Program required and consent of instructor. For majors only. Theory, basis and use of cold, heat, hydrotherapy, muscle stimulation, compression and other modalities utilized in the management of sports injury.

KINE 492 Internship in Fitness and Exercise Kinesiology (6-12)

Prerequisites: Completion of KINE 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 12 credits.

KINE 400/500 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.

KINE 402/502 Human Performance Assessment (3)

Prerequisite: KINE 222, KINE 410/510 or equivalent. Majors only. Uses and techniques of assessment in fitness, work capacity and sport. Experience in the use and interpretation of laboratory and field tests. Fee required.

KINE 404/504 Exercise Nutrition and Body Composition (3)

Prerequisites: KINE 222 or KINE 626 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.

KINE 406/506 Exercise Programming (3)

Prerequisites: KINE 222 or KINE 626 or equivalent. Majors only. Examination of the competencies necessary for the design, the organization and the implementation of preventive and rehabilitative exercise programs.

KINE 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.

KINE 410/510 Principles of Electrocardiography (3)

Prerequisite: KINE 222 or KINE 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. Fee required.

KINE 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

KINE 579 Prevention and Care of Sports Injuries (2)

Prerequisites: KINE 220 or KINE 620, KINE 221 or KINE 621 or equivalents. An expanded examination of injury prevention in youth sports. Includes an overview of mechanisms, initial care, reconditioning and basic wrapping and taping techniques of common sports injuries and organization of preventive programs. Fee required.

KINE 580 Advanced Prevention, Care and Rehabilitation of Athletic Injuries (3)

Prerequisites: KINE 380 or KINE 579 or equivalent. Analyze, evaluate and apply current techniques and practices to injuries in the school physical activity and sports programs.

KINE 581 Practical Experiences in Care of Athletic Injuries (3)

Prerequisite: KINE 380 or KINE 579 or equivalent. This course is divided into four modules for three semester hours each. One module will be offered each semester. These modules are: anatomy applied to injury, emergency care and referral, modality application and program administration. Repeatable, maximum 15 credits.

KINE 620 Advanced Anatomical Kinesiology (3)

Prerequisite: KINE 220 or equivalent. Make an advanced study of the structural components of human movement, with special attention to the analysis of movement problems. Fee required.

KINE 621 Advanced Mechanical Kinesiology (3)

Prerequisite: KINE 221 or equivalent. Make an advanced study of the mechanical components of human movement, stressing the analysis of movement problems. Fee required.

KINE 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.

KINE 623 Advanced Neuromotor Kinesiology (3)

Prerequisite: KINE 223 or equivalent. Advanced study of the influence of developmental and aging processes upon movement across the lifespan.

KINE 624 Advanced Developmental Kinesiology (3)

Prerequisite: KINE 223 or equivalent. Advanced study of the influence of developmental and aging processes upon movement across the lifespan.

KINE 625 Laboratory Techniques in Kinesiological Research (1-3)

Consent of instructor. Titles: Mechanical — Computer Analysis Systems I and II, Electronic Analysis Systems, Videographic Analysis Systems, Cinematographic Analysis Systems; Physiological — Biochemical Analysis, Ergometric Analysis; Psychological — Psychological Skills Techniques and Training; Perceptual and Motor Analysis Systems; and Meta-Analysis in KPE Research. Repeatable, under different subtitles. Fee required.

KINE 626 Advanced Physiological Kinesiology (3)

Prerequisite: KINE 222 or equivalent. Advanced study of physiological systems involved with human movement. Fee required.

KINE 629 Concepts in Kinesiology (1-3)

Consent of instructor. Experiences provided are: Mechanical — Mechanical Analysis of Locomotion Skills, Mechanical Analysis of Projection Skills, Mechanical Analysis of Manipulation Skills; Physiological — Muscle Physiology, Cardiopulmonary Physiology, Physiological Principles of Conditioning; Psychological — Perception, Motivation, Motor Learning, Neuromotor Mechanisms in Motor Control. Repeatable, under different subtitles.

KINE 635 Exercise and Sports Psychology (3)

Application of psychological concepts, principles and empirical findings to exercise programs and organized sport settings.

KINE 670 Advanced Sociological Kinesiology (3)

Advanced study of the application of sociological concepts and theories to current issues in kinesiology.

KINE 680 Concepts in Sports Kinesiology (1-3)

Consent of instructor. Repeatable, under different subtitles.

KINE 685 Concepts in Dance Kinesiology (1-3)

Consent of instructor. Repeatable, under different subtitles.

KINE 690 Problems in Human Movement (3)

Prerequisites: Competency or equivalent in four of the following: KINE 620, KINE 621, KINE 623, KINE 624, KINE 626 and KINE 670. Individual and group study of problems related to scientific bases of human movement.

KINE 692 Graduate Internship in Kinesiology (6)

Consent of instructor. Supervised experience structured to the special philosophy and functions of the student's graduate program. S/U graded.

KINE 694 Special Topics in Kinesiology (1-3)

Engage in a course of study designed to investigate a special topic. Repeatable, maximum three credits.

KINE 699 Thesis (1-6)

Optional for Master of Arts students on recommendation of major advisor. S/U graded. Repeatable, maximum six credits.

KINE 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 six credits.

KINE 797 Doctoral Proposal Research (1-4)

Required of all doctoral students. Students must earn four hours of credit for the doctoral dissertation proposal research in partial fulfillment of doctoral requirements before admission to candidacy. S/U graded. Repeatable, maximum four credits.

KINE 799 Doctoral Dissertation (1-12)

Required of all doctoral candidates. Students must earn 12 hours of credit for dissertation as partial fulfillment of the doctoral requirements. S/U graded. Repeatable, maximum 12 credits.

Mathematics

MATH 023 Intermediate Algebra (3) Elementary concepts of algebra including quadratic equations, the function concept and systems of linear equations. This is a Basic Skills course offered through Continuing Education and does not count in term, cumulative or total credits and will not be calculated 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 124 College Algebra (4)

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.

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.

MATH 127 Elementary Functions (4)

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.

MATH 131 Calculus and Analytic Geometry I

(4) High school mathematics through trigonometry with the grade of "C" or better and score at a predetermined level on the placement exam. First course in 3-course sequence in analytic geometry and calculus. Limits, derivatives, extrema, related rates, applications of integral to problems in area, volume, work and centers of mass.

MATH 132 Calculus and Analytic Geometry II (4) Prerequisite: MATH 131 with the grade of "C" or better. Second course in 3-course sequence in analytic geometry and calculus. Exponential and logarithmic functions, trigonometric functions, their inverses, derivatives and integrals, sequences and series.

MATH 175 Topics in Finite Mathematics (3) 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.

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 and score at a predetermined level on the placement exam. Techniques and applications of differential and integral calculus.

MATH 181 Fundamentals of Mathematics I (3) First of a 3-course sequence particularly pertinent to prospective arithmetic teachers, presenting arithmetic and algebra from modern approach. Understand mathematical structures, including natural numbers, integers, rational numbers, relations, functions and equations.

MATH 182 Fundamentals of Mathematics II (3) Prerequisite: MATH 181. Continuation of MATH 181. Includes probability, statistics, measurement and applications of mathematics in science.

MATH 190 Mathematics and Liberal Arts (3) 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.

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 132 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 229 Graph Theory (3) Prerequisite: MATH 132, MATH 228 with the grade of "C" or better. Study concepts of graph theory and several applications. Topics: planar graphs, chains, cycles, trees, map coloring, Euler's formula, matching and optimization problems.

MATH 233 Calculus and Analytic Geometry III (4) Prerequisite: MATH 132 with the grade of "C" or better. Third course in 3-course sequence in analytic geometry and calculus. Arc length, surface of revolution, parametric equations and vectors functions of several variables.

MATH 283 Informal Geometry (3) Study informal Euclidean geometry suitable for the K-8 curriculum, employing laboratory techniques where applicable.

MATH 295 Topics in Mathematics (1-3) An interest in continuing growth in mathematics required. Survey topics in geometry, analysis, algebra, statistics, topology and number theory that are not in existing courses and possibly problem solving or introduction to mathematics and technology. Repeatable, under different subtitles.

MATH 305 Mathematics of Finance (3) Ability to solve algebraic equations and use logarithms required. Study simple and compound interest, bank discount, annuities, amortization and insurance. Scientific or business calculator required.

MATH 321 Introduction to Abstract Algebra (4) Prerequisite: MATH 221 and MATH 228 with the grade of "C" or better. Standard concepts of abstract algebra including groups, rings, integral domains and fields.

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 (4) Prerequisites: MATH 221, MATH 228 and high school synthetic geometry with the grade of "C" or better. Build on Euclidean geometry background by proving classical and modern Euclidean theorems. Study the foundations of geometry through investigating non-Euclidean and projective geometries.

MATH 350 Elementary Probability Theory (3) Prerequisite: MATH 132 with the grade of "C" or better. Learn about discrete and continuous probability, Bayes' theorem, one-dimensional random variables and the expected values of random variables, Bernoulli, binomial, Poisson geometric, hypergeometric and multinomial probability law.

MATH 351 Elementary Statistics Theory (3) Prerequisite: 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 386 Topics in Math with Technology (1-2) Prerequisite: MATH 132. Consent of instructor. Mathematical topics will be studied using appropriate technology. Repeatable, maximum three times.

MATH 395 Topics in Mathematics for Teachers (3) Emphasis will be on problem solving skills, reasonableness of answers, using calculators and computers and on problem posing.

MATH 403 Structure of Numbers (3) Prerequisite: MATH 132 with the grade of "C" or better. Beginning with Peano's postulates for the natural numbers, the integers are obtained by extension. Rational and real and complex numbers are then obtained by further extensions. Isomorphisms are stressed.

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 (2) Junior and above in Mathematics. Survey of history of mathematics from antiquity to the present, emphasizing both development of mathematical concepts and the people involved.

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) Consent of instructor. 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

MATH 520 Functions and Equations (3) Graduates only. Polynomial equations including De Moivre'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 521 Vectors and Matrices (2) Graduates only. Study of vectors and matrices, connections to other areas, and topics in mathematics and the use of vectors and matrices in 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) Graduate only. Combinations and graph theory addressing three broad categories of problems: existence, enumeration and optimization. Blend of mathematics, real-world applications and development of mathematical reasoning skills, guided by the NCTM Yearbook.

MATH 529 Mathematical Problem Solving (2) 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 544 Introduction to Differential Geometry (3) Prerequisite: MATH 432 or equivalent. The geometry of curves and surfaces will be studied. The notions of curvature for lines and surfaces will be analyzed and their relationships to topology discussed.

MATH 545 Introductory Analysis (3) Prerequisites: MATH 540. Sequences, series, differentiation, Riemann-Stieltjes Integral, series of functions, special functions and functions of several variables.

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) Consent of instructor. 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 Symmetry in Mathematics (3) Prerequisite: A graduate level course in Algebra. Course provides an overview of the theoretical and practical roles of group structures in various fields of mathematics.

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 Topics in Advanced Algebra (3) A graduate level course in algebra required. Topics in Groups, Rings, Fields, polynomials over Rings and Fields. Content depends on instructor's choice. Repeatable, may be taken two times under different subtitles.

MATH 632 Complex Variables (3) A course in complex analysis required. Analytic and meromorphic functions in the complex plane. Integration, conformal mapping and advanced topics.

MATH 633 Geometric Analysis (3) Prerequisite: 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) Prerequisite: MATH 536. Abstract spaces, Lebesgue measure, continuity, integration and differentiation theorems, Baire category.

MATH 644 Differential Geometry (3) A course in Analysis required. 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) Prerequisite: MATH 536. 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 subtitle.

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 754 Intern Teaching in Mathematics (1-4) Primarily for doctoral candidates preparing to teach in colleges or community colleges. Experience and supervised practice, with attention to various aspects of teaching-learning process and analysis of self-growth. Repeatable, may be taken two times.

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 four credits.

MATH 799 Doctoral Dissertation (1-12) Required of all doctoral candidates. Repeatable, maximum 12 credits.

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.

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 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: EDLS 363. Full admission to PTE required. For prospective teachers seeking certification at the middle school, junior high or senior high school level. Gain skill in constructing teaching strategies, understanding curriculum problems and applying basic theories in teaching and learning mathematics. Early field experience desirable.

MED 487/587 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, skilled 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. Unlimited repeatability.

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 graded, unless section is approved (by the Graduate School) as 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 577 Mathematics Teachers Workshop (1-3) No more than six credits may be applied on any one graduate degree. Work on problems K-14. S/U graded. Repeatable, under different subtitles to a maximum of 12 credits.

MED 585 Teaching Elementary and Middle School Mathematics (2) Graduates only. Designed for those certified elementary/middle school teachers who will be pursuing a specialization in the teaching of mathematics. Strong mathematics content background necessary.

MED 487/587 Technology, Manipulatives and NCTM Standards (3) Classroom use of mathematics software, calculators, pattern blocks, attribute blocks, geoboards, geometric solids, MIRAs and others presented to teach problem solving, skilled 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 Survey of Research in Mathematics Education (2) Graduates only. The goals of this course are to synthesize and reconceptualize post 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 2 times.

MED 672 Trends in Mathematics Education (4) Graduates only. Current trends and issues that affect the teaching of school mathematics. Projects, readings and group work with focus on national and international studies and movements related to the teaching of mathematics.

MED 673 Preparation of Mathematics Specialists in Grades K-8 (3) Prerequisite: BA 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 600 or consent of instructor. 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 600 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 Advanced Seminar: Postsecondary Cognitive Processes (2) Consent of Instructor. Discussion of post-secondary mathematics topics. Reading of research in teaching mathematics in post-secondary education. Repeatable, may be taken two times under different subtitles.

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 710 Seminar in Postsecondary 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 Seminar on Philosophy of Educational Mathematics (2) Consent of Instructor. This seminar will foster open discussion and exploration of educational mathematics in the broadest sense of the word.

MED 765 Mathematical Structures and Education (3) Course presents various approaches to basic and advanced mathematical structures. Analyzes educational difficulties related with each approach. Content depends on instructor's choice.

Meteorology

MET 110 Climate and Humans (3) A general education course that explores the interrelationships between people and climate. The factors and elements of climate, impact of people on climate and influence of climate on historical events.

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. Fee required.

MET 306 Dynamic Meteorology I (3) (2 lecture, 3 laboratory) Prerequisite: MET 205. In-depth treatment of the radiation and gas laws, atmosphere thermodynamics and stability, cloud dynamics, precipitation processes and the use of adiabatic charts. Fee required.

MET 315 Meteorological Instruments and Codes (2) (4 laboratory) Prerequisites: MET 205 or MET 306. Meteorological instruments and their operations; weather maps and data exchange; codes and plotting of charts. Fee required.

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 24 credits.

MET 407/507 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. Fee required.

MET 421/521 Climatology (3) Prerequisites: MET 205 or MET 500. 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 441/541 Synoptic Meteorology (3) Prerequisite: MET 407/507. Corequisite: MET 442/542. Development and movement of air masses, fronts and associated weather systems. Synoptic weather charts and their uses.

MET 442/542 Synoptic Meteorology Laboratory (2) (4 laboratory) Corequisite: MET 441/541. Analysis and forecasting exercises and activities. Fee required.

MET 443 Synoptic Laboratory: Current Weather (2) (4 laboratory) Prerequisite: MET 306 or MET 500. Use of current weather charts and data in analysis and forecasting exercises. Field trips to NOAA and National Weather Service Forecast offices. Fee required.

MET 460/560 Mesometeorology (3) Prerequisite: MET 306. Mesoscale weather phenomena, such as thunderstorms, tornadoes, tropical cyclones, lee wave and downslope winds.

MET 465/565 Radar Meteorology (3) Prerequisites: MET 205, MATH 131. Majors only. Principles of radar operation and radar remote sensing techniques. Types of radar and their applications in meteorology.

MET 470/570 Satellite Meteorology (3) Prerequisites: MET 407 or MET 441 or MET 507 and MET 541. Use of atmospheric data and cloud imagery from satellites for understanding the atmosphere and forecasting the weather.

MET 500 Survey of Meteorology (3) (2 lecture, 3 laboratory) Principles of atmospheric science for teachers. Earth-atmosphere energy budget, pressure, temperature, wind, humidity, clouds, atmospheric stability, precipitation processes, air masses and fronts, current weather. Fee required.

MET 407/507 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. Fee required.

MET 421/521 Climatology (3) Prerequisite: MET 205 or MET 500. 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 or MET 500. 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 441/541 Synoptic Meteorology (3) Prerequisite: MET 407/ 507. Corequisite: MET 442/542. Development and movement of air masses, fronts and associated weather systems. Synoptic weather charts and their uses.

MET 442/542 Synoptic Meteorology Laboratory (2) (4 laboratory) Corequisite: MET 441/541. Analysis and forecasting exercises and activities. Fee required.

MET 460/560 Mesometeorology (3)

Prerequisite: MET 306. Mesoscale weather phenomena, such as thunderstorms, tornadoes, tropical cyclones, lee wave and downslope winds.

MET 465/565 Radar Meteorology (3)

Prerequisites: MET 205 and MATH 131. Majors only. Principles of radar operation and radar remote sensing techniques. Types of radar and their applications in meteorology.

MET 470/570 Satellite Meteorology (3)

Prerequisites: MET 407 or MET 441 or MET 507 and MET 541. Use of atmospheric data and cloud imagery from satellites for understanding the atmosphere and forecasting the weather.

MET 595 Special Topics in Meteorology (1-4)

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.

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 basic works by Plato, Dante, Machiavelli, others. Credit in General Education category 4 for Philosophy or English or History.

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. Offered by History, English and Visual Arts. Credit in General Education category 4 for History or Literature or Fine Arts.

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. Credit in General Education category 7 for Multicultural or International Cultures courses.

MIND 285 Idealism and Despair in the American Renaissance (3) Critically analyze and debate the ideas of mid-19th century creators and activists who fostered the development of the American mind and investigate the relevance of these ideas today. Credit in General Education category 4 for Philosophy or Literature.

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 in their time and now. Credit in either Political Science or Economics in General Education category 5.

MIND 288 Contemporary Arts Connections (3) Designed to involve students in synthesizing, analyzing and evaluating present-day visual art/music/theatre/dance and understanding its impact on and relationship to society. Team-taught by Music, Theatre and/or Visual Arts. Credit in General Education category 4.

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? Credit in General Education category 7.

MIND 290 Search for Meaning (3) An investigation through primary readings into the search for meaning of three world thinkers (Socrates, Lao Tzu, Francis of Assisi) and a study of the relevance of their search to our own. Team-taught by Philosophy and History. Credit in General Education category 4 for Philosophy and History.

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. Credit in General Education category 7.

MIND 293 Play as a Route to Insight and Creation (3) An examination through primary sources of the ideas of artists, philosophers and scientists regarding the role of play in intellectual insight and artistic creation. Credit in General Education category 4 for Philosophy or English.

MIND 294 Revolutions in Science (3) Any UNC Science laboratory course required or consent of instructor. A science course engaging students in scientific inquiry while introducing them to principal scientific revolutions since the 16th century such as inertia, evolution, thermodynamics, genetics, plate tectonics, cosmology and others. Credit in General Education category 6 for Earth Sciences or Life Sciences or Physical Sciences.

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. Team-taught by Music, Theatre and/or Visual Arts for General Education credit in category 4.

MIND 299 Great Ideas in the History of the Arts (3) The concept of "utopia" and various aspects of idealism will be examined through the study of works of art in the fields of music, theatre and the visual arts. Team-taught by Music, Theatre and Visual Arts. Credit in General Education category 4.

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 Operations (2) Techniques of small unit operations and troop leading procedures. Physical fitness training.

MS 287 Leadership Development and Introduction to Military Operations (2) (2 lecture, 6 laboratory) Consent of instructor. Introduction to principles of leadership and basic military skills during 6-week paid ROTC basic camp at Fort Knox, Kentucky. (May be taken in lieu of MS 111, 121, 211, 221.)

MS 311 Leadership Assessment (3) Prerequisites: MS 111, MS 121, MS 211 and MS 221 or MS 287 or consent of instructor. Leadership Development Program. Leadership style of each student assessed through simulations and role play. Physical fitness training. Laboratory required.

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 exercise.

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 (1) Laboratory required. Consent of instructor. Corequisite: HIST 250 during fall semester of MS IV year. Application of military staff functions while serving in leadership roles in the Army ROTC.

MS 421 Role and Ethics of the Officer (3) Laboratory required. Consent of instructor. 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.

Musical Theatre

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. Focus on basic singing technique for actors. Within the context of this class the acting students will study both theory and practical application of vocal technique as it applies to musical theatre and musical theatre auditioning.

MT 285/485 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 necessary for preparation of a show for public performance will be offered. Unlimited repeatability.

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.

MT 342 Workshop in Directing/Choreography in Musical Theatre (3) (2 lecture; 3 laboratory) Prerequisite: THEA 240. A study of specific techniques required of the director for production of various musical theatre styles and production problems.

MT 353 Musical Theatre Production (2) Admission by audition only. Production and presentation of musical theatre or tour format before live audiences. Unlimited repeatability.

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 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. Unlimited repeatability.

MT 465 Musical Theatre Workshop (3) (2 Lecture, 2 Laboratory) Prerequisite: MT 360, MUS 270/470 or consent of instructor. Corequisite: MUS 407. Study of role preparation and styles, particularly developing necessary skills to approach and prepare audition materials and new roles. Repeatable, maximum six credits.

MT 470 Senior Project in Musical Theatre (3)
Consent of instructor, advisor and coordinator of program. Qualified seniors only. Practical experience in the production and performance of a musical theatre work. Techniques of acting, singing, character analysis, stage direction and dance (when applicable) will be studied. S/U graded.

MT 475 Music Dance Workshop (1) For cast of musical theatre or opera theatre production. Practical experience in dance and stage movement in preparation for public performance. Repeatable, maximum four credits.

MT 285/485 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 necessary for preparation of a show for public performance will be offered. Unlimited repeatability.

Medical Technology

MTEC 410 Clinical Chemistry (3) Basic principles of chemistry 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 clinical chemistry 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-Immunohematology (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 Immunohematology 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 Immunohematology 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) Basic principles of hematology methods, blood dyscrasias and other hematologic abnormalities like anemias, leukemias, changes in hematologic tests associated with multiple 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 finished 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.

Music

MUS 100 Recitals, Concerts and Productions (No credit) All undergraduate Music majors are required to attend all weekly departmental recitals in their major areas, all Convocations, plus a minimum of 12 major recitals, concerts and productions each semester in residence. S/U graded. Unlimited repeatability.

MUS 101 Sight-Singing and Theory I (4) Sight-singing of diatonic melodies; melodic, harmonic and rhythmic dictation; study of intervals, scales, triads, the dominant seventh chord and non-harmonic tones in analysis and the connection of triads in four voice writing. Class meets 4 days a week, with the fifth day for keyboard laboratory. Class is open to all students, but is intended primarily for music majors and minors. Unlimited repeatability. Fee required.

MUS 102 Sight-Singing and Theory II (4)
Prerequisite: MUS 101. Continuation of the ear-training and written materials of MUS 101 in greater depth and detail. Principles of harmonic progression, diatonic common chord modulation, non-harmonic tones, the Classic Period, developmental techniques and small homophonic forms. Class meets 4 days, with the fifth day for keyboard laboratory. Fee required.

MUS 140 Introduction to Music (3) A non-technical course aiming to increase the enjoyment and appreciation of music for students with little or no previous background. This course will be devoted to listening and discussion of the assigned listening.

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 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 necessary to students of music, fine arts and theatre, with emphasis on problems of style, organization, logical thinking and sources unique to these areas.

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 demonstrate an equivalent knowledge of the material covered in that class. Develop performance in sight reading, harmonization and piano technique. Fee required.

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. Fee required.

MUS 163 Beginning String Instruction I (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 164 Beginning String Instruction II (1)
This is a continuation of the study of MUS 163. Additional studies in string performance and string literature are presented with greater clarification of the process of how to establish string classes with basic knowledge of string playing problems and their solutions.

MUS 201 Advanced Sight-Singing and Theory I (3) Prerequisite: MUS 102. A study of diatonic seventh chords, borrowed chords, secondary dominants, augmented sixth chords, chromatic and inharmonic modulation and musical forms of the Classic and Romantic Periods; sight-singing and harmonic and melodic dictation related to chromatic harmony; early 20th century techniques. Class meets 3 days each week, plus one half-hour keyboard laboratory. Fee required.

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. Fee required.

MUS 204 Music Fundamentals and Experiences (3) For university students with minimal musical background. The purpose of this course is to acquire knowledge and understanding of musical concepts and terminology through research, critical writing, music analysis and performance.

MUS 206 Music Methods and Materials for Elementary Teachers (1) Prerequisite: MUS 101 or MUS 204. Develop understandings and musical skills related to methodology for a multifaceted music curriculum in the elementary classroom, including the integration of music with other disciplines. Two class meetings per week.

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. Unlimited repeatability. 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. Unlimited repeatability.

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. Unlimited repeatability.

MUS 230 String Ensemble (1) Small chamber groups that rehearse regularly and are coached by a faculty member. Unlimited repeatability.

MUS 231 Brass Ensemble (1) Small chamber groups that rehearse regularly and are coached by a faculty member. Unlimited repeatability.

MUS 232 Woodwind Ensemble (1) Small chamber groups that rehearse regularly and are coached by a faculty member. Unlimited repeatability.

MUS 233 Percussion Ensemble (1) Small chamber groups that rehearse regularly and are coached by a faculty member. Unlimited repeatability.

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. Unlimited repeatability.

MUS 241 Perceiving the Arts (3) The purpose of this course is to develop and extend perception and understanding of the constituent elements of music, theatre, visual arts and dance. The student will explore, encounter and discuss varied art forms and media as integral parts of the processes of reading, attending arts events and critical writing.

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.

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.

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.

MUS 247 Music Cultures of the World (3) The purpose of this course is to increase the student's understanding and appreciation of the music of other cultures through the study of many types of folk music and an introduction to the methods of ethnomusicology.

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. Fee required.

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. Fee required.

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. Unlimited repeatability.

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. Unlimited repeatability.

MUS 267 University Symphony Orchestra (1-3)
Audition required. Comprised of the best string, wind, brass and percussion players. Read and perform standard repertoire of the modern symphony orchestra. Perform concerts regularly both on and off campus. Annually sponsors a Concerto Competition. Unlimited repeatability.

MUS 268 Chamber Orchestra (1) Audition required. Comprised of outstanding strings and selected winds, this group performs literature from the Baroque to the present, specializing in material specifically designed for chamber orchestra. The ensemble presents concerts regularly on and off campus. Unlimited repeatability.

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. Unlimited repeatability. Fee required for Non-Majors.

MUS 270 Individual Performance in Voice (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 271 Individual Performance in Piano (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 272 Individual Performance in Organ (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 273 Individual Performance in Strings (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 274 Individual Performance in Woodwinds (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 275 Individual Performance in Brass (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 276 Individual Performance in Percussion (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 277 Individual Instruction in Composition (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 278 Individual Performance in Harp (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 279 Individual Performance in Guitar (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 280 Mixed Concert Choir (1) Audition required. Limited to approximately 60-65 singers and is open to all students. The Choir performs a wide range of literature, from the classics to contemporary works. Widely recognized for its excellence, the Concert Choir performs concerts on campus and tours annually. Unlimited repeatability.

MUS 281 Women's Glee Club (1) Audition required. Membership in this group of 30-40 singers is open to all female students. The Glee Club performs concerts on campus each semester and joins with the Concert Choir in performance of large masterworks with orchestra. Unlimited repeatability.

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. Unlimited repeatability.

MUS 284 Men's Glee Club (1) Audition required. Open to all University men, this group performs often on campus and in the community; in addition to touring within the state. The Men's Glee Club sings a wide variety of literature from sacred anthems to spirituals, folk songs and popular music. Unlimited repeatability.

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. Unlimited repeatability.

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. Unlimited repeatability.

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. Unlimited repeatability.

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. Unlimited repeatability.

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. Unlimited repeatability.

MUS 290 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. Unlimited repeatability.

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. Unlimited repeatability.

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. Unlimited repeatability.

MUS 297 Summer Festival Orchestra (1-3) Audition required. Serves as the nucleus of the summer music festival, presenting two concerts and accompanying the opera. Unlimited repeatability.

MUS 301/301 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. Fee required.

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. Fee required.

MUS 307/307 History of Instruments and Instrumental Practice (3) A historical study of the development of musical instruments and the performance practices associated with them.

MUS 308/308 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. Unlimited repeatability.

MUS 310 Teaching General Music in Elementary Schools (2) Prerequisite: MUS 210. Admission to PTE 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 PTE required. Examine materials, methods and procedures for teaching instrumental music in elementary schools. In-class presentations and clinical experience required.

MUS 314 Guitar in the Classroom (1) Music majors only or consent of instructor. Learn to play guitar, including basic folk and classical techniques. Approached from a pedagogical, accompaniment and conceptual standpoint useful for the development of a guitar program in public school music curriculum and for accompaniment development in the general music and vocal public school program.

MUS 315 Music and Recreation (1) For non-music majors only. Sing and learn skills that will enable the student to lead community songs, lead community performance, play simple social instruments including guitar and help others listen to music.

MUS 316 Choral Arranging (2) Prerequisite: MUS 203. Study techniques for arranging choral music suitable for school choral groups in different settings and age levels.

MUS 317 Teaching Instrumental Music in Secondary Schools (1) Required clinical experience arranged. Prerequisite: MUS 312. Investigate the factors relating to the teaching of instrumental music in the secondary school and develop an understanding of the administrative skills necessary to run an outstanding program of music education at the secondary level.

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 321 Orchestral/String Literature, Pedagogy and Conducting (2) Prerequisite: MUS 163, MUS 164, MUS 320 or consent of instructor. Examine string and full orchestra literature, pedagogical materials and procedures for rehearsing and conducting string and full orchestral instrumental groups in elementary and secondary schools. In-class presentations required.

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. Continue work begun in MUS 323, refining conducting techniques; studying more complex scores; other advanced problems in conducting; examining 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 develop ability to create and perform jazz solos involving more complex chord progressions and rhythmic and formal frameworks. Cover effective techniques and materials for teaching these skills at secondary levels.

MUS 334/334 Acting for Singers (2) Instruction in the special needs of the singer/actor: staging of arias, improvisation, freeing the voice through movement. Repeatable up to one time.

MUS 336/336 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 338/338 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 339/339 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.

MUS 346/346 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 347/347 Jazz Arranging, Vocal Jazz and Studio Orchestra (2) Prerequisite: MUS 346 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. Fee required.

MUS 348/348 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. Unlimited repeatability.

MUS 349/349 Accompanying and Coaching II (2) Prerequisite: MUS 348/348 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. Unlimited repeatability.

MUS 352/352 Principles of Piano Teaching I (2) Compare current piano methods. Study technical and musical problems with a beginning student. Offered every other year.

MUS 353/353 Principles of Piano Teaching II (2) Prerequisite: MUS 352/352 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) Develop a teaching knowledge of clarinet and saxophone, their problems, functions and possibilities. As a prospective teacher, learn pedagogic and concert literature to understand tone production problems and acquire sufficient 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 (BME). Covers the teaching fundamentals of brass and percussion instruments.

MUS 403 Acoustics of Music (2) A study of the physical properties of sound as compared with the psychoacoustical characteristics of perceived experience. Emphasis is placed on practical applications in music that are of value to the musician.

MUS 406/506 UNC String Project Pedagogy and Supervised Teaching Practicum (1-2) Consent of Director, UNC String Project. Qualified students are assigned to specific, supervised string teaching assignments. Students are continuously involved in planning/teaching process on a weekly basis, including pedagogical class sessions. Credit hours, not to exceed two per semester, dependent upon classroom/clinical experience hours assigned. Unlimited repeatability.

MUS 407 Individual Coaching in Musical Theatre Repertory I (3) Prerequisites: MUS 260 or MUS 469 (6 hours) or by audition, THEA 360. Corequisite: MT.465. A laboratory course to provide the advanced student with training in integrating music and theatre techniques. Special emphasis on preparation of audition materials and resumes. Class meets 4 hours per week. Repeatable, maximum six credits.

MUS 410/510 Vocal Pedagogy (2) An introduction to the science and teaching of singing. Emphasis is placed upon the study of the skeletal system and the muscles involved in breathing and phonation, vocal acoustics and learning theories, past and present.

MUS 414 Music for Students with Special Needs (2) Prerequisite: MUS 206 or MUS 310. Designed to examine current ideas, activities and materials for the development of musical and/or functional behaviors of handicapped pupils.

MUS 415/515 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 416/516 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 417/517 Band Arranging (2) Prerequisite: MUS 303. Designed for prospective instrumental music teachers. The practical application of arranging techniques for K-12 ensembles will be emphasized through study of three — to eleven-way scoring.

MUS 421 Small Jazz Ensembles (1) Open to any student by audition. Groups consist of a rhythm section plus 3 or 4 horns. Unlimited repeatability.

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. Sing standard jazz literature; sing scat and deal with contemporary jazz notation. Perform on and off campus. Open to any UNC student. Unlimited repeatability.

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. Unlimited repeatability.

MUS 426 Orchestral Excerpts: Percussion (1) Consent of Instructor. Emphasis is on professional level performance of standard orchestral literature. Unlimited repeatability.

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. Unlimited repeatability.

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. Unlimited repeatability.

MUS 429 Orchestral Excerpts: Woodwind (1) Consent of Instructor. Depending on need, separate excerpt classes in bassoon, clarinet, flute and oboe are offered. Unlimited repeatability.

MUS 430 String Ensemble (1) Small chamber groups that rehearse regularly and are coached by a faculty member. Unlimited repeatability.

MUS 431 Brass Ensemble (1) Small chamber groups that rehearse regularly and are coached by a faculty member. Unlimited repeatability.

MUS 432 Woodwind Ensemble (1) Small chamber groups that rehearse regularly and are coached by a faculty member. Unlimited repeatability.

MUS 433 Percussion Ensemble (1) Small chamber groups that rehearse regularly and are coached by a faculty member. Unlimited repeatability.

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. Unlimited repeatability.

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. Unlimited repeatability.

MUS 448 Collegium Musicum (1) Audition required. This performing group is concerned with little-performed music of all types. The goal of the organization is to give the student experience in preparing and performing early music, music for unusual media and experimental music of all types. Unlimited repeatability.

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 454/554 Pedagogical Approaches to Keyboard Literature (2) Evaluate various approaches to the study of keyboard literature through student participation in teaching and performing. Unlimited repeatability.

MUS 457 Multicultural Music Education (2) Prerequisite: MUS 210. Study of potential music educational practices within a multicultural school environment. Emphasis is given to concepts of pluralism in American society.

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. Unlimited repeatability.

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. Read and perform standard repertoire of the modern symphony orchestra. Perform concerts regularly both on and off campus. Annually sponsors a Concerto Competition. Unlimited repeatability.

MUS 468 Chamber Orchestra (1) Audition required. Comprised of outstanding strings and selected winds, this group performs literature from the Baroque to the present, specializing in materials specifically designed for chamber orchestra. The ensemble presents concerts regularly on and off campus. Unlimited repeatability.

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. Unlimited repeatability. Fee required for Non-Majors.

MUS 470 Individual Performance in Voice (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 471 Individual Performance in Piano (2-4) Consent of Instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 472 Individual Performance in Organ (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 473 Individual Performance in Strings (2-4) Consent of Instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 474 Individual Performance in Woodwinds (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 475 Individual Performance in Brass (2-4) Consent of Instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 476 Individual Performance in Percussion (2-4) Consent of Instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 477 Individual Instruction in Composition (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 478 Individual Performance in Harp (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 479 Individual Performance in Guitar (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 480 Mixed Concert Choir (1) Audition required. Limited to approximately 60-65 singers and open to all students. The Choir performs a wide range of literature, from the classics to contemporary works. Widely recognized for its excellence, the Concert Choir performs concerts on campus and tours annually. Unlimited repeatability.

MUS 481 Women's Glee Club (1) Audition required. Membership in this group of 30-40 singers is open to all female students. The Glee Club performs concerts on campus each semester and joins with the Concert Choir in performance of large masterworks with orchestra. Unlimited repeatability.

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. Unlimited repeatability.

MUS 484 Men's Glee Club (1) Audition required. Open to all University men, this group performs often on campus and in the community, in addition to touring within the state. The Men's Glee Club sings a wide variety of literature from sacred anthems to spirituals, folk songs and popular music. Unlimited repeatability.

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. Unlimited repeatability.

MUS 486 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. Unlimited repeatability.

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. Unlimited repeatability.

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. Unlimited repeatability.

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. Unlimited repeatability.

MUS 490 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. Unlimited repeatability.

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. Unlimited repeatability.

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. Unlimited repeatability.

MUS 497 Summer Festival Orchestra (1-3) Audition required. Serves as the nucleus of the summer music festival presenting two concerts and accompanying the opera. Unlimited repeatability.

MUS 301/501 18th Century Counterpoint (2) Prerequisite: MUS 202. Study of two- and three-voice counterpoint as found in the invention, canon, fugue and chorale prelude. Fee required.

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 406/506 UNC String Project Pedagogy and Supervised Teaching Practicum (1-2) Consent of Director, UNC String Project. Qualified students are assigned to specific, supervised string teaching assignments. Students are continuously involved in planning/teaching process on a weekly basis, including pedagogical class sessions. Credit hours, not to exceed two per semester, dependent upon classroom/clinical experience hours assigned. Unlimited repeatability.

MUS 307/507 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 308/508 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 410/510 Vocal Pedagogy (2) An introduction to the science and teaching of singing. Emphasis is placed upon the study of the skeletal system and the 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

MUS 514 History and Literature of the School Band (2) An overview of the 20th century American school band movement. Examines history, trends and literature for bands of all levels.

MUS 415/515 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 416/516 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 417/517 Band Arranging (2) Prerequisite: MUS 303 or consent of instructor. Designed for prospective instrumental music teachers. The practical application of arranging techniques for K-12 ensembles will be emphasized through study of three- to eleven-way scoring.

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. Unlimited repeatability.

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. Unlimited repeatability.

MUS 533 Curriculum Trends in Music Education (3) Study curriculum trends in music education, including methods of teaching, curriculum development and aesthetic education.

MUS 334/534 Acting for Singers (2) Instruction in the special needs of the singer/actor: staging of arias, improvisation, freeing the voice through movement.

MUS 336/536 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 338/538 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 339/539 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 346/546 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 347/547 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. Fee required.

MUS 348/548 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. Unlimited repeatability.

MUS 349/549 Accompanying and Coaching II (2) Prerequisite: MUS 348/548 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. Unlimited repeatability.

MUS 550 Score Reading and Analysis (1) A continuing course dealing with analysis of wind/orchestral/choral literature. Emphasis is placed on relating analysis techniques to preparation and performance of compositions for wind/orchestral/choral ensemble. Literature studied will vary from semester to semester. Repeatable up to four times.

MUS 551 Individual Performance in Conducting (2) Continuing study of advanced problems in instrumental conducting. Emphasis is placed on physical and mental aspects of the art. Regular conducting experience with University ensembles is an integral part of the course. Repeatable up to four times.

MUS 352/552 Principles of Piano Teaching I (2) Compare current piano methods. Study technical and musical problems with a beginning student. Offered every other year.

MUS 353/553 Principles of Piano Teaching II (2) Prerequisite: MUS 352/552 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 454/554 Pedagogical Approaches to Keyboard Literature I (2) Evaluate various approaches to the study of keyboard literature through student participation in teaching and performing. Unlimited repeatability.

MUS 559 Opera and Oratorio Literature (2) Study of the solo repertoire in opera and oratorio literature.

MUS 564 Problems in Teaching Voice (2) Prerequisite: MUS 410/510 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 600 Introduction to Musical Scholarship (2) An introduction to writing and scholarly research problems in music. Attitudes and aims of the music scholar, studies in bibliography, reference materials, sources, editions, oral and written reports, reviews, outline procedures and various types of research included. 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 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 609 Graduate Seminar in Middle and Junior High Choral and General Music (3) Graduate standing and school music teaching experience. Discover materials, methodologies, philosophies and trends in teaching choral and general music at these levels.

MUS 610 Research in Music Education (3) Develop concepts and skills that will enable the music educator to understand and evaluate research in music education. Study the design and techniques of empirical research in music education. Complete a research study to present for publication consideration.

MUS 611 Comprehensive Musicianship in High School Choral Performing Groups (3) Make a comprehensive study of choral literature for high school performing groups, emphasizing the style, history, analysis, conducting, rehearsal techniques and performance of literature.

MUS 614 Seminar in Administration and Coordination of the School Music Program (3) Graduate standing and school music teaching experience. Overview problems of organizing, administering and coordinating K-12 music programs, including curriculum, teacher growth, scheduling, budget and public relations.

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 Bulletin. Unlimited repeatability.

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 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. Sing standard jazz literature; sing scat and deal with contemporary jazz notation. Perform on and off campus. Unlimited repeatability.

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. Unlimited repeatability.

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. Unlimited repeatability.

MUS 630 String Ensemble (1) Small chamber groups that rehearse regularly and are coached by a faculty member. Unlimited repeatability.

MUS 631 Brass Ensemble (1) Small chamber groups that rehearse regularly and are coached by a faculty member. Unlimited repeatability.

MUS 632 Woodwind Ensemble (1) Small chamber groups that rehearse regularly and are coached by a faculty member. Unlimited repeatability.

MUS 633 Percussion Ensemble (1) Small chamber groups that rehearse regularly and are coached by a faculty member. Unlimited repeatability.

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. Unlimited repeatability.

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. Investigate opera from Florentine beginnings in 1600, through Venetian, Neapolitan and French styles to 1750; growth of chamber, orchestral and solo instrumental music, religious vocal music and principal forms.

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) A study of the major trends in the music of the twentieth century accompanied by an investigation into their social and cultural bases. The technical aspects of twentieth century music are more thoroughly investigated in the companion 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. Class is designed to help solve specific brass teaching problems encountered by the experienced teacher 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. Designed to explore the problems and solutions encountered by the teacher of woodwind instruments at the K-12 level.

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. Unlimited repeatability.

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. Unlimited repeatability.

MUS 667 University Symphony Orchestra (1-3) Audition required. Comprised of the best string, wind, brass and percussion players. Read and perform standard repertoire of modern symphony orchestra. Perform concerts regularly both on and off campus. Annually sponsors a Concerto Competition. Unlimited repeatability.

MUS 668 Chamber Orchestra (1) Audition required. Comprised of outstanding and selected winds, this group performs literature from the Baroque to the present, specializing in material specifically designed for chamber orchestra. The ensemble presents concerts regularly on and off campus. Unlimited repeatability.

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. Unlimited repeatability. Fee required for Non-Majors.

MUS 670 Individual Performance in Voice (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 671 Individual Performance in Piano (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 672 Individual Performance in Organ (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 673 Individual Performance in Strings (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 674 Individual Performance in Woodwinds (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 675 Individual Performance in Brass (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 676 Individual Performance in Percussion (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 677 Individual Instruction in Composition (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 678 Individual Performance in Harp (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

MUS 679 Individual Performance in Guitar (2-4) Consent of instructor. Unlimited repeatability. Fee required for Non-Majors.

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, from the classics to contemporary works. Widely recognized for its excellence, the Concert Choir performs concerts on campus and tours annually. Unlimited repeatability.

MUS 681 Women's Glee Club (1) Audition required. Membership in this group of 30-40 singers is open to all female students. The Glee Club performs concerts on campus each semester and joins with the Concert Choir in performance of large masterworks with orchestra. Unlimited repeatability.

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. Unlimited repeatability.

MUS 684 Men's Glee Club (1) Audition required. Open to all University men, this group performs often on campus and in the community, in addition to touring within the state. The Men's Glee Club sings a wide variety of literature from sacred anthems to spirituals, folk songs and popular music. Unlimited repeatability.

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. Unlimited repeatability.

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. Unlimited repeatability.

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. Unlimited repeatability.

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. Unlimited repeatability.

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. Unlimited repeatability.

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. Unlimited repeatability.

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. Unlimited repeatability.

MUS 692 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. Unlimited repeatability.

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. Unlimited repeatability.

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 697 Summer Festival Orchestra (1-3) Audition required. Serves as nucleus of the Summer Music Festival, presents two concerts and accompanies the opera. Unlimited repeatability.

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, maximum six credits.

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 four credits.

MUS 799 Doctoral Dissertation (1-12) Required of all doctoral candidates. Repeatable, maximum 12 credits.

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.

NURS 204 Health Promoting Behaviors (3) For students of any major. Assessment of health behaviors across the life span. Introduction to behaviors and lifestyles that promote one's own health.

NURS 230 Effective Parenting (3) For students of any major. Comparative theories of growth and development as related to emotional needs of children. Effective approaches for parenting children from birth through adolescence.

NURS 300 Conceptual Foundations (3) Clinical Level III status. Introduces the self-care conceptual basis of nursing practice and the professional nurse's role with patients. Emphasizes self-care theory, nursing process, ethical-legal principles and nursing care plans.

NURS 301 Physical Assessment Theory (2) Clinical Level III status. Theoretical introduction to nursing physical assessment as a component of nursing process incorporating the self-care framework. Emphasis on the utilization of the techniques of inspection, palpation, percussion and auscultation.

NURS 302 Physical Assessment Laboratory (.5) Clinical Level III status. Corequisite: NURS 301. Clinical practice in basic physical examination. S/U graded.

NURS 303 Basic Nursing Practice (4) (8 laboratory) Clinical Level III status. A course involving simulated and living laboratory experiences that enable the student to achieve beginning skills in assisting patients in activities of daily living and skills in therapeutic nursing measures. S/U graded. Program fee required.

NURS 304 Childbearing Families (3) Clinical Level III status. Provides knowledge to develop and implement nursing care in relationship to families in their reproductive years, emphasizing the development and maximization of self-care capabilities.

NURS 305 Conceptual Foundations for RNs (4) R.N. admitted to the School of Nursing required. Bridge course for RN students which explores the conceptual basis of professional nursing including nursing theory, the self-care framework, legal principles and nurse-client interactions.

NURS 306 Nursing Care of Children (3) Prerequisite: NURS 300, NURS 301, NURS 303. Provides knowledge to develop and implement nursing care with both well and sick children as individuals within families. Emphasis on maximizing the self-care capabilities of children within families.

NURS 309 Nursing Care of the Adult I (3) Clinical Level III status. Concepts essential for nursing care of adults requiring medical/surgical interventions for self-care deficits due to illness or injury including the physiological, psychosocial and preventative aspects of care.

NURS 315 Clinical Research and Theory (3) Prerequisite: STAT 250, ENG 122. An introduction to scientific inquiry including the research critique and identification of researchable problems in clinical practice. The self-care framework of nursing is viewed in relation to clinical research.

NURS 316 Interpersonal Processes for Health Care Professionals (3) Juniors or above. The focus is on professional relationships in interdisciplinary health care environments designed to assist the student relationships. Self and other assessment will be the foundation to determine interpersonal strategies in conflict management.

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.

NURS 319 Cultural Issues in Health Care (1) Identifies social and cultural influences on health care and emphasizes the application of transcultural theory concepts to nursing practice. S/U graded.

NURS 320 Basic EKG Interpretation (2) Prerequisites: ZOO 341, ZOO 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 322 Diagnostic Procedures for Disease Assessment (1) Clinical majors or consent of instructor. Designed to assist the nurse in understanding diagnostic procedures. Invasive and noninvasive diagnostic tests are examined along with client preparation and implications for nursing care.

NURS 323 Complementary Healing Modalities (2) Prepare students to consider the philosophical foundations in health and illness and explore a variety of complimentary healing modalities such as therapeutic touch, imagery and movement.

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 Physical Assessment for RNs (4) A current R.N. license is required. Designed to provide RNs cognitive and technical skills in problem-oriented recording, history taking and physical examination. Emphasis placed on identification of normal from abnormal findings and assessment across the lifespan.

NURS 329 Nursing Care of the Adult II (3) Clinical Level III status. Continued study of concepts essential for nursing care of adults requiring medical/surgical interventions for self-care deficits due to illness or injury including the physiological, psychosocial and preventative aspects of care.

NURS 340 Childbearing Families Practicum (5) (10 laboratory) Clinical Level III status. Provides clinical opportunities to observe, apply and participate in the development of self-care capabilities and nursing care in regard to childbearing families. S/U graded. Program fee required.

NURS 360 Practicum in Care of Children (4) (8 laboratory) Prerequisite: NURS 300, NURS 301, NURS 303. Corequisite: NURS 306. Application of knowledge of nursing care of children requiring medical-surgical interventions, laboratory and clinical experience will focus on self-care deficits and self-care capabilities of children and families. S/U graded.

NURS 390 Adult Nursing Practicum (6) (12 laboratory) Prerequisite: NURS 300, NURS 301, NURS 303. Application of knowledge of nursing care of adults requiring medical-surgical interventions. Laboratory and clinical experience will focus on self-care deficits due to illness or injury. S/U graded. Program fee required.

NURS 402 Community Nursing Theory (3) Clinical Level IV status required. Study of nursing within the context of cultures, families, communities and society including principles of health maintenance, health promotion and disease prevention.

NURS 404 Nursing Adaptions for the Elderly (1) Admission to Clinical Level III required. Discusses developmental, physiologic and psychosocial changes of aging and their impact on health. Emphasizes variations in nursing practice and the health care environment which promote wellness and self-care economically. S/U graded.

NURS 406 Rehabilitation Nursing (3) Clinical level IV status or R.N. status required. Concepts related to the nursing care of adults with self-care deficits due to chronic illness.

NURS 407 Mental Health Nursing (3) Clinical Level IV status required. Psychosocial nursing theory emphasizing: interpersonal relationships, principles of communication, group processes, developmental theories, recognition of abnormal behavior and interventions that enhance mental health care capabilities of individuals, families and groups.

NURS 408 Nursing Workshop (1-3) Offers undergraduate students an opportunity to increase nursing knowledge and skills. Repeatable, under different subtitles.

NURS 409 Applied Nursing Research (1-3) Prerequisite: NURS 315. Qualified undergraduate students will conduct original research or implement the utilization of nursing research in clinical practice. Repeatable, maximum five credits.

NURS 415 Professional Perspectives (3) Majors only. Utilize analysis, synthesis and critical thinking skills to examine current issues and trends which challenge the professional nature of the nursing discipline.

NURS 420 Community Nursing Practicum (4) (8 laboratory) Corequisite: NURS 402. Application of concepts of health maintenance, health promotion and disease prevention through a clinical experience in a community agency. S/U graded. Program fee required.

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 430 Nursing Management (2) Majors only. Explore administrative concerns that affect health care consumers. Examine management strategies necessary for quality care, utilization of human and financial resources, cost containment and other aspects of health care. S/U graded. Program fee required.

NURS 440 Complex Nursing (2) Majors only. Synthesizes knowledge and practice concepts, including leadership and management through clinical experiences. S/U graded.

NURS 441 Issues and Concepts in Geriatric Nursing (3) Clinical Level IV status required or consent of instructor. Developmental approach to the theories of aging (physiological, psychological, psychosocial and environmental). Emphasizes nursing roles related to adult lifespan developmental tasks and transitions and age-related changes.

NURS 442 Ethical Issues in Health Care (3) Open to upper division students of any major. Analyzes and evaluates client and professional ethical dilemmas in the delivery of health care services. Emphasizes application of ethical principles in health care decisions.

NURS 450 Professional Nursing Roles (5)

Prerequisite: NURS 440. Clinical Level IV status required. A combination of seminar and supervised practicum experience that provides a socialization into the role set of the professional nurse. S/U graded.

NURS 455 Hemodynamic Monitoring (2)

Clinical nursing major or RN status. An overview of hemodynamic monitoring with emphasis on nursing management of the patient being monitored. S/U or letter graded.

NURS 470 Mental Health Practicum (4) (8 laboratory)

Corequisite: NURS 407. Living laboratory course providing experiences in clinical application of psychosocial nursing process. Opportunity to apply theoretical knowledge of therapeutic communication and interpersonal relationship skills with patients and families. 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 495 Topics in Nursing (1-3)

Prerequisite: NURS 329 and NURS 390. A study of advanced topics in nursing essential for clinical and specialty areas of practice. Repeatable up to one time, under different subtitles.

NURS 505 Nursing Research (3)

Prerequisite: NURS 315 or equivalent. 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)

Role of nurse as leader and change agent explored in relation to health promotion strategies with chronically ill adults.

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 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

NURS 520 Computers and Health Care (3)

Graduates and majors only. Students will examine computer software programs designed specifically for nursing and health care systems. Emphasis on application of informatics in the health care settings.

NURS 522 Nursing Management (3)

Majors only or consent of instructor. Graduate students only. Introduction to foundations of nursing management including current management and professional practice models. Emphasizes communication strategies in human resource management and application of theory to professional practice realities.

NURS 595 Special Topics (1-3)

Graduate students only. Intensive study of advanced nursing topics beyond the scope of existing departmental course offerings. Two copies of scholarly paper must be filed before credit is given. Repeatable, under different subtitles.

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. Impact of chronic illness on all age groups is examined using a developmental approach. Health maintenance and wellness promotion are explored. Fee required.

NURS 603 Care of Chronically Ill Child (4)

Required laboratory arranged. Prerequisite: NURS 502, NURS 505 or take concurrently. The impact of chronic illness on all age groups is examined using a developmental approach. Health maintenance and wellness promotion are emphasized. Fee required.

NURS 604 Care of Chronically Ill Adult (4)

Prerequisites: See prerequisites to program; NURS 600, NURS 602; NURS 505 or take concurrently. Required laboratory arranged. Emphasis is on nursing assessment, planning, implementation and evaluation of health promotion strategies for the chronically ill adult. Fee required.

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 (3)

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 supervision of a faculty member. Two copies of scholarly paper must be filed before credit is given. (Minimum of 25 clock hours required per credit hour.) Repeatable, maximum concurrent enrollment is two times.

NURS 630 Teaching Strategies in Nursing (3)

Prerequisites: EPRE 540, EPRE 674. 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. Corequisite: 640. 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 and NURS 640 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 (6)

Prerequisites: EPRE 540 or EPRE 681 or EPRE 682; EPRE 674 or EPRE 670 or PPSY 670 or CH 610; NURS 630. Synthesis of concepts from nursing theory, research and education courses. Experience with curriculum development and analysis. Fee required.

NURS 680 Family Nurse Practitioner Role Practicum (9)

Prerequisite: NURS 650. Corequisite: NURS 690. Graduates and majors only. Final clinical experience (24-32 hrs/week) provides students opportunity to practice primary care intervention with families in underserved and/or rural areas.

NURS 690 Advanced Clinical Role (2-3)

Prerequisites: NURS 602, NURS 603, NURS 604, NURS 650 and concurrent with NURS 680 for FNP students. Majors only. Advanced practice role development. Roles of consultant, manager, researcher and clinician are examined in relation to health promotion nursing interventions.

NURS 691 Applied Nursing Research (2-4)

Majors only. Application of concepts from graduate research in a completed scholarly project, under direction of a graduate faculty member. Repeatable, maximum four credits.

NURS 693 Practicum (1-3)

Graduate students only. Minimum of 45 clinical hours per semester hour of credit. Supervised professional nursing activity. Two copies of scholarly paper must be filed before credit is given. S/U graded. Repeatable, maximum three credits.

NURS 699 Thesis (1-6)

Terminal program course. All other courses should be taken before or concurrently with this course. Guided research project that demonstrates evidence of original thought as well as advanced knowledge of the research process. S/U graded. Repeatable, maximum six credits.

Oceanography

OCN 110 Oceans and Humankind (3)

Various aspects of people and technology concerning the oceans, including foods and minerals, coastal erosion, submersibles, diving, recent technological developments, pollution and international political implications.

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. Fee required.

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. Fee required.

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. Fee required.

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 500 Survey of Oceanography (3) Principles of oceanography from a non-mathematical approach. Physical features of water, currents, geological features of sea floors, life, food and mineral resources, recent technological developments and international political implications.

OCN 595 Special Topics in Oceanography (1-4) Explore topics in Oceanography beyond existing departmental offerings. Specific topics determined by student interest and instructor. Repeatable, under different subtitles.

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.

Physical Education

PE courses numbered 100 to 195 have unlimited repeatability.

PE 100 Basketball (1) Gain knowledge and skill in the game of basketball.

PE 101 Flag Football (1) Gain knowledge and skill in the game of flag football.

PE 102 Soccer (1) Gain knowledge and skill in the game of soccer.

PE 103 Softball (1) Gain knowledge and skill in the game of softball.

PE 104 Volleyball (1) Gain knowledge and skill in the game of volleyball.

PE 109 Billiards (1) Gain knowledge and skill in the game of billiards. Fee required.

PE 110 Badminton (1) Gain knowledge and skill in the game of badminton.

PE 111 Bowling (1) Gain knowledge and skill in the game of bowling. Fee required.

PE 112 Fencing (1) Gain knowledge and skill in the activity of fencing.

PE 113 Fly Fishing/Trap Shooting (1) Gain knowledge and skill in the activities of fly fishing and trap shooting.

PE 114 Golf (1) Gain knowledge and skill in the game of golf. Fee required.

PE 115 Ice Skating (1) Gain knowledge and skill in the activity of ice skating.

PE 116 Water Safety Instructor (2) A current Basic and Emergency Water Safety or Lifeguard Training certificate is required. Purpose of this instructor course is to train instructor candidates to teach the American Red Cross Water Safety courses. Fee required.

PE 117 Racquetball (1) Gain knowledge and skill in the game of racquetball. Fee required.

PE 118 Swimming (1) Gain knowledge and skill in the activity of swimming.

PE 119 Tennis (1) Gain knowledge and skill in the game of tennis. Fee required.

PE 120 Lifeguard Training (1) Designed by the American Red Cross to focus attention on the 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. Fee required.

PE 121 Basic and Emergency Water Safety (1) Purpose of this course is to teach personal and community water safety. Students successfully completing this course will receive American Red Cross Certification.

PE 125 Backpacking and Hiking (1) Gain knowledge and skill in the activities of backpacking and hiking.

PE 126 Canoeing (1) Gain knowledge and skill in the activity of canoeing. Fee required.

PE 127 Cross-Country Skiing (1) Gain knowledge and skill in the activity of cross-country skiing. Fee required.

PE 128 Cycling (1) Gain knowledge and skill in the activity of cycling.

PE 129 Downhill Skiing (1) Gain knowledge and skill in the activity of downhill skiing. Fee required.

PE 130 Kayaking (1) Gain knowledge and skill in the activity of kayaking. Fee required.

PE 131 Orienteering and Wilderness Survival Skills (1) Gain knowledge and skill in the activities of orienteering and wilderness survival. Fee required.

PE 132 Adventure Activities (1) Students will participate in high and low level rope adventure activities. Fee required.

PE 133 Scuba Diving (1) Gain knowledge and skill in the activity of scuba diving. Fee required.

PE 134 Self Defense (1) Gain knowledge and skill in the activity of self defense.

PE 135 Technical Climbing (1) Gain knowledge and skill in the activity of technical climbing.

PE 136 Intermediate Adventures Activities (1) Prerequisite: PE 132. Designed to provide students with increased challenges on the UNC adventure course. The course will culminate in a field trip in the mountains. Fee required.

PE 145 Activity for Stress Management (1) Use of a variety of physical activities to control stress.

PE 146 Aerobics (1) Improve personal skills and fitness through aerobic activities. Fee required.

PE 147 Aquacize (1) Improve personal skills and fitness through aquacize activities.

PE 148 Exercise and Weight Control (1) Improve personal skills and fitness through exercise and weight control activities.

PE 149 Fitness and Conditioning (1) Improve personal skills and fitness through fitness and conditioning activities.

PE 150 Jogging and Walking (1) Improve personal skills and fitness through jogging and walking.

PE 152 Swimming Conditioning (1) Improve personal skills and fitness through swimming activities.

PE 153 Weight Training (1) Improve personal skills and fitness through weight training activities.

PE 165 American Square and Folk Dance (1) Gain knowledge and skill in the activity of square and folk dance.

PE 169 Gymnastics (1) Gain knowledge and skill in the activity of gymnastics

PE 172 Rhythmic Gymnastics (1) Combines dance and gymnastics movements and integrates the use of hands and apparatus (i.e., hoops, balls, ropes, ribbons).

PE 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 and mixers.

PE 185 Varsity Baseball (1) Consent of instructor. Participate in the sport of varsity baseball.

PE 186 Varsity Basketball (1) Consent of instructor. Participate in the sport of varsity basketball.

PE 187 Varsity Football (1) Consent of instructor. Participate in the sport of varsity football.

PE 189 Varsity Gymnastics (1) Consent of instructor. Participate in the sport of varsity gymnastics.

PE 190 Varsity Swimming (1) Consent of instructor. Participate in the sport of varsity swimming.

PE 191 Varsity Tennis (1) Consent of instructor. Participate in the sport of varsity tennis.

PE 192 Varsity Track and Field (1) Consent of instructor. Participate in the sport of varsity track.

PE 193 Varsity Volleyball (1) Consent of instructor. Participate in the sport of varsity volleyball.

PE 194 Varsity Wrestling (1) Consent of instructor. Participate in the sport of varsity wrestling.

PE 195 Varsity Women's Soccer (1) Participate in Varsity Women's Soccer.

PE 207 Analysis and Teaching of Individual Sports (2) Develop knowledge, skills, analysis techniques and teaching competencies in the sport of golf, archery and bowling. Fee required.

PE 208 Analysis and Teaching of Tumbling and Gymnastics (2) Develop knowledge, skills, safety procedures, teaching progressions and analysis techniques in the sport of tumbling and gymnastics.

PE 209 Analysis and Teaching of Dance (2) Develop knowledge, skills, analysis techniques and teaching competencies in various types of Dance.

PE 210 Movement Fundamentals and Motor Development (3) Majors/minors only. Movement integrated approach to the study of maturational, growth and experiential components of motor development. Focus on performance and analysis of fundamental and sport related movement skills in teaching school-aged populations.

PE 211 Weight Training and Anatomy (3) Majors/minors only. An integrated study of structural anatomy and weight training as the two areas relate to enhancing performance in human movement.

PE 212 Fitness and Conditioning and Physiology (3) Majors/minors only. Learn and apply physiological principles to human movement through specific health-related activities.

PE 213 Sports and Mechanics (3) Majors/minors only. Study and apply biomechanical analysis of human movements through the specific sports of track and field, swimming and golf.

PE 214 History and Philosophy (2) Review different perspectives of physical education, sport and fitness. Historical and philosophical implications for today's physical education programs will be identified and discussed.

PE 215 Analysis and Teaching of Basketball (2) Teach movement skills, rules and game strategies of basketball to professional preparation degree candidates completing a major or minor in physical education.

PE 216 Analysis and Teaching of Football (2) To teach movement skills, techniques, rules and game strategies of football. Develop knowledge, skills and analysis techniques in the sport of football.

PE 217 Analysis and Teaching of Soccer (2) The objective is to provide students with an understanding of teaching and analyzing the correct techniques, skills and basic knowledge to teach/coach the game of soccer.

PE 218 Analysis and Teaching of Softball (2) Develop knowledge, physical skills, teaching competence and analysis techniques in the sport of softball.

PE 219 Analysis and Teaching of Volleyball (2) Teach movement skills, rules and game strategies of volleyball to professional preparation degree candidates completing a major or minor in physical education.

PE 220 Analysis and Teaching of Baseball (2) Develop knowledge, physical skills, teaching competence and analysis techniques in the sport of baseball.

PE 226 Analysis and Teaching of Racquet Sports (2) Develop knowledge, skills, teaching and analysis techniques in the sports of tennis and badminton; and an overview of racquet sport techniques. Fee required.

PE 227 Analysis and Teaching of Track and Field (2) Develop knowledge, skills, teaching and analysis techniques in the sport of track and field.

PE 228 Analysis and Teaching of Wrestling (2) Develop knowledge, skills, analysis and teaching techniques in the sport of wrestling.

PE 229 Adventure Activities and Motor Learning (3) Majors/minors only. Presents content, method, safety and management of adventure ropes courses activities, as well as critical topics in the study of motor learning. Fee required.

PE 230 Analysis and Teaching of Self Defense (2) Develop knowledge, skills, teaching and analysis abilities in the study of self defense techniques for men, women and children.

PE 231 Women in Sport (2) Investigate social/cultural influences, biophysiological and psychological aspects, historical perspectives and political realities, which shape opportunities and performances of American sport women.

PE 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. Fee required.

PE 234 Approaches and Methods of Bike Touring and Cycling (2) Consent of instructor. Develop students' knowledge and skills in teaching bicycle touring, cycling and mountain biking. Focus on approaches and methodology of teaching and leading bike touring. Bike racing will also be introduced.

PE 235 Approaches and Methods of Cross-Country and Adventure Skiing (2) Consent of instructor. Develop skills in teaching the fundamentals of cross-country skiing, with additional consideration given to various aspects of back-country skiing. Students also will learn about planning a ski trip to include equipment, clothing, food, trail etiquette and considerations and winter hazards.

PE 236 Approaches and Methods of Technical Rock Climbing and Basic Mountaineering (2) Consent of instructor. Develop knowledge and techniques for teaching basic mountaineering with an emphasis on technical rock climbing, particularly top-rope climbing experiences.

PE 237 Approaches and Methods of Whitewater and Wilderness Canoeing (2) Consent of instructor. Focuses on approaches and methodology of teaching and leading safe lake and river travel. Students learn about paddle techniques for lakes and rivers, minimum impact camping and wilderness canoeing.

PE 238 Approaches and Methods of Winter Wilderness Living Skills and Travel - Wilderness Ski Expedition (2) Consent of instructor. Focuses on approaches and methodology of teaching and leading safe winter travel experiences. Students learn about winter environments, snow mechanics, avalanche prediction, winter camping and back country ski expeditions.

PE 239 Approaches and Methods of Outdoor Adventure and Wilderness Living Skills and Travel - Backpacking (2) Consent of instructor. Focuses on approaches and methodology of teaching and leading safe backpacking and wilderness travel experiences. Students learn backpacking skills, wilderness camping, navigation skills and minimum impact camping techniques.

PE 266 Seminar in Management and Instruction in Physical Education (1) Corequisite: EDFE 270. Focus on current issues and concerns of students during their early physical education field experience in the public schools.

PE 288 Physical Education Activities for the Elementary School (1) Elementary majors/minors only. Full PTE admittance required. Study of effective teaching, learning theories, basic movement principles and activities included in a quality, well-rounded program of physical education in the elementary school.

PE 308/508 Workshop in Physical Education (1-3) Study in the problem areas of participants. Problems will vary with experts conducting workshops. S/U graded. Repeatable, under different subtitles.

PE 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.

PE 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.

PE 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.

PE 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.

PE 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.

PE 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.

PE 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 officiating.

PE 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.

PE 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.

PE 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.

PE 322 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.

PE 335 Sports Pedagogy (2) Designed to analyze and study teaching and coaching behaviors that are necessary for students interested in the coaching profession.

PE 336 Pedagogy of Outdoor Physical Education (3) Designed to explore the history, principles, philosophy and pedagogy of outdoor physical education. Interdisciplinary strategies and instruction materials will be presented.

PE 344 Clinical Experience in Teaching Physical Education (3) Corequisites: PE 345, PE 346 and PE 347. Full admission to PTE required. Teach under close supervision with immediate feedback and discussion with supervising teacher. Learn video taping and objective analysis.

PE 345 Methods of Teaching Elementary Physical Education (2) Corequisites: PE 344, PE 346 and PE 347. Full admission to PTE required. Study of effective teaching in elementary physical education with an emphasis on analysis of teaching, maximizing student learning time, classroom management skills and lesson, unit and program planning.

PE 346 Methods of Teaching Secondary Physical Education (2) Corequisites: PE 344, PE 345 and PE 347. Full admission to PTE required. Study of effective teaching in secondary physical education with an emphasis on analysis of teaching, maximizing student learning time, classroom management skills and lesson, unit and program planning.

PE 347 Tests and Measurements in Physical Education (2) Corequisites: PE 344, PE 345 and PE 346. Full admission to PTE required. Receive a foundation in techniques of evaluation, including elementary statistical procedures, preparation and administration of skill and written tests and use of other evaluative materials in the field including computers.

PE 367 Adapted Aquatics (2) Study and apply methods of teaching swimming to students with various disabilities. Course leads to Red Cross Instructor of Adapted Aquatics. Laboratory required.

PE 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, one time.

PE 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.

PE 432 Adapted Physical Education (3) Prerequisite: KINE 220. Study various disabling conditions, assessment methodology and federal regulations as they apply to teaching disabled persons in public school physical education. Practical experience laboratory.

PE 436 Social-Cultural Foundations in Physical Education (2) Examine basic sociological concepts and issues, group dynamics theories and attitudes and value information as they apply to sports and physical education.

PE 438/538 Physical Education for the Learning Disabled (2) Develop, implement and evaluate physical education programs for the mentally retarded, emotionally disturbed and learning disabled. Emphasize program development according to federal regulations.

PE 439/539 Physical Education for the Physically Disabled (2) Learn skills required to develop and implement a physical education program for the physically handicapped, especially student placement in the least restrictive alternative.

PE 461 Administration and Law (2) Acquaint the student with administrative practices and legal concerns which are incorporated in physical education teaching. Emphasis is on practical application of administrative and legal concepts.

PE 464 Legal Issues in Human Performance and Leisure Studies (3) Course involves the study of legal issues related to the professions of physical education, athletics, fitness and leisure. Emphasis will be on understanding legal responsibilities and applying safety procedures and risk management measures.

PE 466 Seminar in Student Teaching for Physical Educators (3) Must be taken concurrently with student teaching. Develop peer support system, discuss problems in difference between theory and practice. Improve competencies in reaching optimal levels of instruction and management time.

PE 308/508 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.

PE 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

PE 438/538 Physical Education for the Learning Disabled (2) Develop, implement and evaluate physical education programs for the mentally retarded, emotionally disturbed and learning disabled. Emphasize program development according to federal regulations.

PE 439/539 Physical Education for the Physically Disabled (2) Learn skills required to develop and implement a physical education program for the physically handicapped, especially student placement in the least restrictive alternative.

PE 541 Motor Assessment and Prescription (2) Acquire knowledge about valid and reliable tests of motor assessment and learn to prescribe physical education activities based on the results of the assessment instruments.

PE 550 Program Management (3) Develop an understanding of theories and principles involved in managing a program in human performance and leisure studies.

PE 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.

PE 576 Sport Promotion and Marketing (3) Develop 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. Primary focus will be on the application of marketing principles to specific sport scenarios.

PE 602 Introduction to Research in Kinesiology and Physical Education (3) Receive an introduction and some application of strategy and methods of research to problem solving in physical education, recreation and kinesiology.

PE 612 Measurement of Human Performance (3) Receive sound background in tools, techniques and methods of evaluation. Emphasize construction of both written and activity tests and use of other evaluative tools.

PE 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.

PE 615 Qualitative Research in Physical Education, Recreation and Kinesiology (3) The epistemological and practical underpinnings of qualitative research as an alternative or complement to quantitative research will be studied in this course through readings, class discussions and a practical project.

PE 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.

PE 630 Adventure Ropes 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.

PE 631 Outdoor Physical Education and Adventure 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.

PE 635 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.

PE 640 Curriculum in Physical Education (3) Consider the principles underlying curriculum instruction, various curriculum elements and build a curriculum in physical education.

PE 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.

PE 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.

PE 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.

PE 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.

PE 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.

PE 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.

PE 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.

PE 680 Perspectives in Physical Education and Sport (3) Philosophical perspectives of issues in physical education and sport, which are influenced by contemporary trends in American education.

PE 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.

PE 688 Legal Aspects (3) Study the law and implications relative to physical education and sport. Emphasis on legal theory and responsibilities and risk management.

PE 692 Graduate 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, maximum six credits.

PE 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 up to one time.

PE 696 College Teaching in Kinesiology and Physical Education (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.

PE 699 Thesis (1-6) Optional for Master of Arts students on recommendation of major advisor. S/U graded. Repeatable may be taken two times to a maximum of six credits.

PE 703 Research Seminar in Physical Education (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.

PE 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 four credits.

PE 799 Doctoral Dissertation (1-12) Doctoral students must earn a minimum-maximum of 12 hours of credit for the dissertation. S/U graded. Repeatable, maximum 12 credits.

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?

PHIL 101 Critical Thinking and Writing (3) Prerequisite: ENG 122. Introduction to methods of critical thinking as required for critical and evaluative writing.

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, Leibnitz, Berkeley, Hume, Kant, James, Sartre.

PHIL 115 Philosophy and Current Affairs (1-3) Offerings under this heading will explore philosophical issues connected with matters of widespread current controversy or general public debate. Repeatable, under different subtitles.

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 logic which provides an intensive introduction to the basic principles and methods of formal logic.

PHIL 241 Formal Logic II (3) Prerequisite: PHIL 240. A second course in logic which rounds out the development of the formalized language introduced in the first semester by providing a system of inference rules for first order logic and then establishing a number of metatheorems.

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 to enable students to apply the theories to contemporary ethical problems.

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 352 Business Ethics (3) In-depth examination of selected topics in business ethics (e.g., reverse discrimination in hiring, the social responsibilities of business, conflict of employee obligations, ethical issues in advertising.)

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. Unlimited repeatability.

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. Unlimited repeatability.

PHIL 500 Topics in Critical Thinking (1-3) An examination of the principles of critical thinking and of their application to practical problems in education, law, medicine or other professions. Repeatable, under different subtitles to a maximum of 12 credits.

PHIL 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.

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. Fee required.

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. Fee required.

PHYS 235 Microcomputer Electronics (3) Prerequisite: MATH 124. Learn elementary digital electronics with application to microcomputers, logic families, integrated circuits, microprocessors and interfacing of memory and input/output devices. Not acceptable elective for physics majors.

PHYS 236 Computer Graphics and Computational Methods (3) Knowledge of algebra, elementary programming ability required. Spreadsheets and plotting programs for engineering and science. Three dimensional graphics, printed circuit CAD programs, sprites for illustration and instruction.

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. Fee required.

PHYS 241 General Physics II (5) (4 lecture, 3 laboratory) Prerequisite: 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. Fee required.

PHYS 301 Seminar in Physics (1) Focus on current topics in physics not covered in existing departmental offerings. Oral report required. S/U graded. Repeatable, with 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) Prerequisite: PHYS 221, PHYS 241 or take concurrently. Important topics in physics of 20th century, including relativity, atomic, nuclear, quantum concepts, uncertainty, lasers. Fee required.

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) Prerequisite: PHYS 241 and MATH 132 DC and AC circuits. Laboratory required. Theory and use of electronic devised and circuits including analog and digital electronics, D/A and A/D conversion and computer interfacing. Structure of solid state devices. Fee required.

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. Fee required.

PHYS 347 Optics (4) (3 lecture, 3 laboratory)

Prerequisites: PHYS 241, MATH 132. Geometric and physical optics, instrumentation, wave theory, light sources and lasers. Fee required.

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 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 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. Further topics in D/A and A/D conversion, structure of solid state devices, computer interfacing and computer algorithms for use in signal processing and controls. Fee required.

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. Fee required.

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, perturbations 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 12 credits.

PHYS 475 Seminar in Teaching Physics (2)

For prospective physics and physical science teachers at the secondary school level. Curricula and problems teachers may encounter in classrooms.

PHYS 550 Current Topics in Physics (1-3)

Open only by invitation to resident graduate students. Supervised professional activity in student's major field, approximately two hours per day. Two copies of a well-written paper must be filed with instructor before credit is given. Repeatable, may be taken two times under different subtitles.

PHYS 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.

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 graded, unless section is approved (by the Graduate School) as 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 558, 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 562 Teacher Effectiveness (2)

Designed for teachers, counselors, administrators, psychologists and other school personnel to learn specific skills for developing and fostering effective relationships with students, parents, colleagues.

PPSY 565 Psychology of Prejudice (2)

Graduate students only. Examination of the development of prejudicial attitudes through consideration of the counseling and social psychological literature. Discussion will focus on current changes in the United States with regard to demographic, socioeconomic and sociocultural trends.

PPSY 566 At Risk Students: Opportunities and Strategies (3)

Gain knowledge and understanding of "high risk students" and expand the teachers' repertory 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. Two copies of a well-written paper must be filed before credit is given, one with instructor and one with division director. S/U graded. Repeatable, maximum 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)

Provides a comprehensive study of a variety of therapeutic counseling approaches and techniques used effectively with children and adolescents. Focuses on how significant others in the lives of children and adolescents may be involved in therapeutic counseling within the home, school and community.

PPSY 604 Career Development and Occupational Systems (2)

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 (2)

Corequisite: PPSY 605. Study theory and methods of group counseling including applications in school settings for helping students with educational planning, career decisions and interpersonal relations.

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)

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 611 Externship in Guidance Services (5)

Consent of instructor. Minimum of 300 on site hours required. Majors only. A culminating field experience for counseling students engaged in guidance activities in a school setting under supervision. Permission must be obtained by the end of the seventh week of the preceding semester. S/U graded.

PPSY 612 Practicum in Individual Counseling (5)

Prerequisite: 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.

PPSY 613 Externship in 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 Externship in Counseling with Youth and/or Adults (5) Consent of instructor. Majors only. Minimum of 300 on site hours required. A culminating field experience for counseling students engaged in counseling activities with junior/senior high or college students in a school setting under supervision. Permission must be obtained by the end of the seventh week of the preceding semester. S/U graded.

PPSY 616 Career Theory, Counseling and Assessment (3) Study methods and techniques in career guidance, counseling and placement, relationship of theoretical constructs to counselor behavior and delivery of guidance, counseling and placement services.

PPSY 617 Play Therapy: Theory and Practicum (3) Prerequisite: PPSY 612 and consent of instructor. Study theoretical bases for play therapy and conduct play therapy under faculty supervision.

PPSY 622 Directed Studies (1-3) Minimum of 25 clock hours required per credit hour. Individualized investigation under the direct supervision of a faculty member. Repeatable, maximum concurrent enrollment is two times.

PPSY 623 Counseling Diverse Populations (2) Majors only. An examination of various counseling skills and strategies which may be helpful in counseling individuals from diverse cultural backgrounds. Sensitizes students to the concerns of various ethnic and nonethnic minority groups.

PPSY 624 Assessment and Treatment of Substance Abuse (3) Majors only. Examination of the major treatment approaches to substance abuse and their accompanying theories of etiology. Investigation of the pharmacological and medical aspects of commonly used substances. Explore meaning of addiction and abuse in relation to 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 634 Death and Dying (2) Study views of death and dying from early childhood through older adults, emphasizing research dealing with effects of death on young and old. Develop a personal understanding of death.

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 654 Child Abuse and Neglect (2) Introduce students to the major issues related to child abuse. Students will learn detection and causes for all forms of child abuse and neglect. Emphasis will be placed upon the professional responsibilities within Colorado Law for reporting child abuse and on resources in assisting the child-victim.

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 660 Psychological Consultation: Theory and Practice (2) Prerequisite: PPSY 655 or equivalent. Overview of consultation theory and practice. Mental health, expert, collaborative, behavioral and organizational models will be discussed and applied to problems in school/agency settings.

PPSY 662 Group Dynamics and Facilitation (2) Corequisite: PPSY 605. Consent of practicum coordinator. Majors only. The course is designed to study the theoretical bases of group process; including leadership roles, stages of group development, facilitation styles and the research and development of the use of groups in counseling and therapy.

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 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 668 Sexuality Counseling (3) Designed to increase the effectiveness of counselors in treating various sexual issues. Topics to be covered include male and female sexual systems, sexual myths, variations in sexual behavior and common sexual concerns. Various therapeutic approaches to treatment will be presented.

PPSY 669 Advanced Methods: Marriage and Family Therapy (3) Prerequisites: PPSY 612, PPSY 662 and PPSY 665. Course will expand on family therapy models presented in PPSY 665 and include other significant models in the field. Training activities will include diagnosis, assessment, case presentations, enactments and other experiential work. Video use and analysis is significant part of course.

PPSY 670 Psychological Testing and Measurement (3) Understanding psychological testing in depth through (1) an overview of the measurement process, (2) an understanding of test construction, (3) familiarity with instruments and (4) overview of using test results.

PPSY 671 Testing: Analysis and Interpretation (2) Prerequisite: PPSY 670. 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 Individual Tests of Intelligence and Personality (2) Prerequisite: PPSY 670. A survey course of the major intelligence and personality tests used by professional psychologists. Test measurement and interpretation are addressed; test administration is not taught.

PPSY 674 Intellectual and Cognitive Assessment (5) Prerequisite: PPSY 670 and consent of instructor. Historical and theoretical bases of intellectual and psychoeducational testing. Supervised practice in administration, scoring, interpretation and reporting of assessment results.

PPSY 675 Intelligence Assessment (3) Prerequisite: PPSY 670 and consent of instructor. Historical and theoretical bases of intelligence measurement; extensive supervised practice in administration and interpretation of Stanford-Binet Scale and Wechsler scales and integration of test data with other assessment techniques.

PPSY 676 Infant and Toddler Neuropsychological Assessment and Intervention (3) Prerequisites: EPRE 630 or EDSE 501, PPSY 674 or PPSY 675. Covers developmental neuropsychology including perception, attention, emotion, communication, kinesthetic development and acquisition of abstract thinking skills with emphasis on the psychological evaluation and habilitation of infants and toddlers.

PPSY 678 Practicum in Personality and Clinical Assessment (5) Prerequisites: PPSY 674 or PPSY 675 and consent of instructor. Develop major strategies and techniques for individual personality assessment of children and adults. Integrate projective assessments with cognitive and behavioral measurements.

PPSY 679 Diagnostic Practicum (3) Prerequisite: PPSY 674 or PPSY 675; PPSY 676 and consent of instructor. Development of integrative skills in synthesizing assessment data. Case studies of varying ages and referral types are developed.

PPSY 680 Special Populations Practicum (1-3) 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 679. S/U graded. Repeatable, maximum three credits.

PPSY 681 Systems Intervention Practicum (3) Prerequisite: PPSY 655. Consent of instructor. Supervised field experience with professional seminar. Application of consultation strategies to schools, mental health or criminal justice agencies.

PPSY 692 Externship (2-8) Consent of practicum coordinator. Majors only. Minimum of 600 total on site hours required. A culminating field experience for qualified agency counseling students in areas of specialty. Permission of instructor must be obtained by the end of the seventh week of the preceding semester. S/U graded. Repeatable, maximum eight credits.

PPSY 693 Practicum in Group Facilitation (4)

Prerequisites: PPSY 662, PPSY 702, PPSY 712. Consent of practicum coordinator. 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 694 Practicum in Family Therapy (4)

Prerequisites: PPSY 612, PPSY 666, PPSY 712. Consent of practicum coordinator. Majors only. Receive supervised experiential training, read relevant literature, discuss current issues and participate in dialogue with supervisors, co-workers and clients. Develop specific diagnostic and therapeutic skills, applying them in family intervention. S/U graded.

PPSY 695 Seminar: Contemporary Issues in Family Therapy (2)

Prerequisites: PPSY 665, PPSY 666. Majors only. In-depth study of current issues and research in family therapy. Topics change with each offering.

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 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)

Prerequisites: PPSY 617, PPSY 665, 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 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 2 credits.

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 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 763 Introductory Seminar in School Psychology (2)

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 693 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)

Prerequisite: 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 or PPSY 675; 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: EPRE 602. Learn the theory and practice of psychological program evaluation, taking both a non-statistical and statistical approach. Use data to promote systems change techniques for evaluating effectiveness of consultation therapy, guidance and placement.

PPSY 782 Introduction to Rorschach Administration and Scoring (2)

Prerequisites: PPSY 558, PPSY 675 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)

Prerequisite: PPSY 674, PPSY 676, PPSY 679 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 20 credits.

PPSY 791 Internship in Counseling Psychology (4-6)

Consent of instructor. Majors only. For the doctoral candidate in counseling psychology who will complete a one-year, 12-month, 2,000-hour internship after completion of coursework. Register for 4-6 credits per semester for three consecutive semesters of internship. Repeatable, maximum 18 credits.

PPSY 792 Internship in Counselor Education (3-6)

Consent of instructor. For the doctoral student in Counselor Education. Must complete a total of 1200 on site hours in an approved setting for a total of 12 semester hours. Repeatable, maximum 12 credits.

PPSY 793 Intake Practicum (1)

Prerequisites: PPSY 702, PPSY 712 and consent of practicum coordinator. Majors only. Provides experience through the Psychological Services Clinic in the initial referral and assessment phase of therapy. The student will evaluate prospective clients and make recommendations regarding treatment. S/U graded.

PPSY 794 Clinic Practicum (2)

Prerequisites: PPSY 702, PPSY 712, PPSY 793 and consent of practicum coordinator. Majors only. Students gain experience as staff clinicians in the Psychological Services Clinic by providing direct therapeutic services to clients and engaging in case management procedures. S/U graded. Repeatable, maximum 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 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-maximum of 12 hours of credit for the dissertation in partial fulfillment of requirements for all doctoral degrees. S/U graded. Repeatable, maximum 12 credits.

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.

PSCI 105 Introduction to Political Science (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.

PSCI 150 Research in Political Science (2)

Acquire familiarity with the information sources of political science. Preparation of a bibliography on a topic chosen by the student. Required of all PSCI majors.

PSCI 203 Colorado Politics (3) Examination of Colorado state and local politics including the institutions and processes of policymaking from a comparative perspective.

PSCI 207 Women and Politics (2) 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) Consider historical background and theory of public administration. Interrelationships of public policy formulation and administrative execution and technological and environmental pressures on administrators. Emphasize bureaucratic decision-making, planning, budgeting and public personnel administration.

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.

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 Law-Making Process in the United States (3) Prerequisite: PSCI 100. Sophomores or above. An examination of the law-making process with emphasis on the Presidency and Congress and the roles of the public interest groups, political parties and the media in the identification and resolution of issues.

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 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) Prerequisites: 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 10 credits.

PSCI 401 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 405 Problems in American Politics (3) Prerequisites: PSCI 100, PSCI 105, PSCI 150 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, PSCI 150 and a course in Group D. Seniors only. Topics of current interest or controversy in comparative politics.

PSCI 422 Directed Studies (1-3) Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.) Juniors and seniors only. To count for credit toward major, students must have taken two courses in the elective group they propose to do the directed study. Repeatable, maximum concurrent enrollment is two times.

PSCI 425 Problems in International Relations (3) Prerequisites: PSCI 100, PSCI 105, PSCI 150 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.

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.

PSY 200 Psychological Statistics and Design (3) (2 lecture, 2 laboratory) Prerequisite: PSY 120. Required laboratory arranged. Introduction to scientific methods and statistical analysis procedures basic to research in Psychology. Probability, distribution statistics and hypothesis testing emphasized. Includes computer applications for research report writing, data gathering and analysis.

PSY 230 Human Growth and Development (4) (3 lecture, 3 laboratory) Laboratory required. Negative PPD tuberculin skin test within past six months required. Study basic concepts and issues of growth and development from conception through senescence. Emphasis on cognitive, psychomotor and socioemotional development.

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.

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) Prerequisites: 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 from perspectives of human relations, communication and group dynamics. Practice effective small and large group membership and leadership roles relevant to growth, therapy and task 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 of Human Sexuality (3) Prerequisite: PSY 120. Examine psychological, biological and social factors involved in the development of gender identity and sexual behavior over the lifespan. Study both normal and abnormal processes; issues and problems.

PSY 366 Industrial Psychology (3) Discover basic method employed by psychologists in selection, placement, training and motivation of industrial personnel. Examine psychological factors influencing morale, production and job satisfaction.

PSY 369 Environmental Psychology (3) Survey major issues involving environment/behavior relationships, emphasizing physical and social factors influencing how individuals react to and act on the environment. Apply psychological principles to current environmental issues.

PSY 389 Research in Human Development (3) Become familiar with methodologies, ethical issues and research literature in the study of human development. Learn critical thinking and scientific writing skills through the process of conducting research.

PSY 400 Research Design and Analysis (5) (4 lecture, 2 laboratory) Prerequisites: PSY 120, PSY 200. Psychology 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. Laboratory required. Fee required.

PSY 407 Introduction to Counseling Theories (3) Prerequisites: 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) 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 425 Seminar: Psychological Issues (2) Prerequisite: PSY 120. Majors and minors and seniors only. Study, report and discuss psychological issues and problems identified through class discussion and study. Review and discuss research findings and conduct independent research projects.

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) Prerequisites: 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) Prerequisite: 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. Fee Required.

PSY 481 Comparative Psychology (3) (2 lecture, 2 laboratory) Prerequisite: PSY 120. Required laboratory arranged. Study innate and learned, individual and social, normal and abnormal behavior of insects, fish, amphibia, reptiles, birds and mammals. Explore ethological and experimental techniques through lecture and laboratory.

PSY 482/582 Behavioral Genetics (2) 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 489 Seminar and Applications in Human Development (3) Prerequisite: PSY 389. Work minimum of 10 hours per week. Design and implement an applied research project in the content of the seminar and a selected applied setting.

PSY 490 History and Systems in Psychology (3) Prerequisite: PSY 120. Learn about psychological ideas and systems, psychology and philosophy of science, goals, laws, paradigms and evolution of the science of psychology. Many graduate programs in psychology recommend taking this at undergraduate level.

PSY 491 Psychology Field Experience (1-6) Junior and above. Psychology 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 grade. Repeatable, maximum six credits.

PSY 493 Practicum in Psychology (1-3) Consent of instructor and department chairperson. Students assist psychology professor with research or laboratory. Thirty-eight (38) clock hours must be spent for each hour of credit. Students may apply a maximum of four (4) credits to a psychology major. Repeatable, maximum six credits, under different subtitles. S/U grade.

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 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

PSY 550 Cognitive Development (3) A survey of empirical research and theory on the cognitive development of children. Classic and contemporary theoretical approaches will be considered as will such specific topics as the development of attention, perception, memory, intelligence and reasoning.

PSY 482/582 Behavioral Genetics (2) 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 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 601 Research Seminar (2) Entering graduate students become familiar with process of psychological research in general and with ongoing research in psychology department in particular. Project development and research ethics emphasized.

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. Repeatable, maximum four credits. S/U grade.

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 624 Human Neuropsychology (3) Basic nervous system structure and function. Research approaches employed in study of nervous system-behavior relationships. Cortical function and physiological bases of sensation, learning and motivation are considered.

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) Survey major social psychology areas, learning social observation techniques, nature and factors of human social behavior, cooperation, prosocial behavior, aggression, change, interpersonal attraction and impression management. Observe social psychological phenomena in laboratory sessions.

PSY 693 Research Practicum (1) Prerequisite: PSY 601. 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 grade.

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, report results. S/U graded. Repeatable, maximum 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 one time, maximum six credits.

Recreation

REC 203 Introduction to Recreation and Leisure (3) Designed to orient the beginning recreation major in the scope, breadth and nature of the professional recreation education program. Students will also be made aware of the influence of leisure on American society.

REC 204 Introduction to Therapeutic Recreation (3) Orientation to therapeutic recreation service. Learn the philosophy, principles and goals of adapted recreation activities that meet the needs of individuals with handicaps, disabilities or are in treatment hospitals, schools, homes, recreation and rehabilitation centers through reports, discussions, observations and visitations.

REC 251 Leisure, Recreation and the Older Adult (3) Discover the role of leisure and recreation in the lives of the elderly and how aging influences recreation programming methods and techniques. Learn concepts, practices, trends, current issues in aging and research. Visits, observations and practicum required.

REC 264 Social and Cultural Recreation Skills (3) Designed to acquaint students with an understanding of individuals and groups in recreational settings. Cultural arts, playgrounds and special events are covered in depth.

REC 269 Recreation Management Skills (4) Acquaint the student with the skills necessary to organize and manage recreation activities and facilities.

REC 394 Practicum in Recreation and Leisure Studies (1-3) Prerequisite: REC 203. Consent of instructor. Supervised experience in agency which provides recreation and leisure services. Supervisor evaluation and written report required. S/U graded. Repeatable, maximum of six credits.

REC 395 Special Topics in Recreation (1-3) Designed to investigate a specific aspect of recreation. S/U graded. Repeatable, maximum of six credits under different subtitles.

REC 408 Workshop in Recreation (1-3) Opportunities for study in professional interest areas of participants, but varying according to experts conducting the workshop. S/U graded. Repeatable, under different subtitles.

REC 415 Clinical Aspects of Therapeutic Recreation (3) Prerequisite: REC 204. Concentrate on treatment issues, needs and procedures and/or medications and their side effects in this introduction to common disabilities and illnesses and their implications to therapeutic recreation. Considerations of the current clinical practices will be explored. Restricted course.

REC 416 Procedures and Techniques of Therapeutic Recreation (3) Prerequisite: REC 415. Gain exposure to methods and techniques used for assessing leisure needs, problem areas, treatment issues and effective treatment planning. Develop facilitation techniques for achievement of client goals and objectives. Restricted course.

REC 421 Contemporary Problems in Therapeutic Recreation Service (3) Prerequisite: REC 204. Learn the history, philosophy of the current practice of providing recreation services to special populations through educational experiences in observation, visitations, reports, required reading, discussions and special projects. Explore current issues and research data.

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 Seminar in Recreation Program Development in Therapeutic Recreation (3) Study the foundations, principles and procedures utilized in developing recreation programs in therapeutic recreation.

REC 451 Administration of Leisure Delivery Systems (3) Prerequisite: REC 269. Majors only. Focus on the organization and administration of community recreation agencies, studying 10 essential areas: fact-finding, legal aspects, municipal organization, department structure, financing, records and reports, publicity, public relations, personnel and professionalism.

REC 468 Programs in Recreation (3) Prerequisites: REC 203, REC 204, REC 269. Majors/minors only. Learn to effectively plan varied types of recreation programs for community centers, pools, parks, sports complexes and playgrounds. Concern will be given to special groups such as teens, the aged, young adults and the handicapped.

REC 472 Recreation Leadership (3) Prerequisite: REC 203, REC 269. A study of the philosophy, techniques, nature and methods of leadership as it relates to the leisure services profession. The course includes observation and practical experience.

REC 492 Internship in Recreation (12) Consent of instructor. Make the transition from the classroom to the professional field. Assume the normal responsibilities as the entry level professional in the practical situation. Requires one semester of full time activity under professional guidance.

REC 495 Senior Seminar (3) Majors only. Research, observe, participate, present and finalize the necessary requirements prior to enrolling in REC 492 Internship in Recreation. Study concepts important to transition from student to professional. Review of evaluation and research techniques.

REC 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.

REC 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

REC 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.

REC 675 Planning Areas and Facilities in Recreation (3) Study major processes of planning, construction and maintenance of recreation facilities and areas. Visits and projects required.

REC 676 Seminar in Contemporary Problems in Recreation (3) Examine in detail the major problems in recreation and leisure in modern America. Emphasis will be given to the use of problem solving methods.

REC 677 Parks and Recreation Management (3) Concentration on the more complex areas of present-day management, including financial resources, budgeting, federal programs, bonds, conference planning, annual reports and use of contract services.

REC 678 Organization and Operation of Park and Recreation Services (3) Develop ability to effectively organize and train staff to operate programs and facilities unique to park and recreation services. Emphasize employment practices, staff supervision and evaluation, liability, public relations and certification.

REC 692 Graduate Internship (3-12) Consent of instructor. Put into practice the knowledge and skills learned in the classroom and assume responsibilities in administration, supervision and evaluation, as well as conducting various activities. Students must complete 12 hours of Recreation coursework before internship. Unlimited repeatability.

Russian

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.

RUS 102 Elementary Russian II (5) Prerequisite: RUS 101. Continuation of 101. Conversational Russian using oral techniques with reading and writing drills. Stresses comprehension, structure, pronunciation, fluency and cultural awareness.

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 441/541 Methods of Teaching Secondary School Science (3) Full admission to PTE or certification at the undergraduate level required. Corequisite: EDLS 363. 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 470/570 Teaching Science in the Elementary School (3) (2 lecture, 2 laboratory) Full admission to PTE or certification at the undergraduate level required. Develop a knowledge of objectives, methods and materials needed for teaching a functional elementary science program. Fee required.

SCED 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.

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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

SCED 520 Problems in Teaching Physics (3) Consent of instructor. Study current trends in teaching high school physics and various problems confronting teachers.

SCED 441/541 Methods of Teaching Secondary School Science (3) Full admission to PTE or certification at the undergraduate level required. Corequisite: EDLS 363. 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 470/570 Teaching Science in the Elementary School (3) (2 lecture, 2 laboratory) Full admission to PTE 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. Fee required.

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 (2) Analysis of elementary and middle level science programs in terms of learning theory research and application including teaching strategies and influence of science, technology and society on science teaching.

SCED 676 Evaluation of Classroom Performance in Science (2) A study of test construction and use by science teachers. The philosophy, purposes and values of classroom and standardized tests are included. Test administration, scoring and proper physical form are considered.

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 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: STAT 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.

Science

SCI 100 History of Science — 20th Century (3) Trace the historical and philosophical development of 20th century science. Impacts on humans, human systems or institutions and contemporary reactions to science and technology will be considered.

SCI 103 Physical Science for the 21st Century (3) Optional laboratory available (SCI 104). Important concepts in physical science applications to 20th century problems and anticipated applications in the 21st century. Taught by Physics or Chemistry.

SCI 104 Physical Science Laboratory (1) (3 laboratory) Optional laboratory for students concurrently taking SCI 103. Experiments will reinforce principles and laws presented in SCI 103.

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.

SCI 109 The Cosmos (3) Present concepts of the universe, including the "big bang" and "steady state" theories, black holes and continuing expansion. Recent television programs such as "Cosmos" will be studied. Taught by Physics.

SCI 110 Sights and Sounds (3) Optional laboratory available (SCI 111). Descriptive study of wave motion in sound and light, emphasizing the associations with music and art. Primarily for the student with limited science background. Taught by Physics.

SCI 111 Sights and Sounds Laboratory (1) (3 laboratory) Optional laboratory for students concurrently taking SCI 110. Experiments will reinforce principles and laws presented in SCI 110.

SCI 112 The Microcosm (3) Elementary study of the structure of matter. Atomic and subatomic models. Wave-particle nature of matter and light. Nucleus, X-rays, quanta, uncertainty principle. Primarily descriptive. Taught by Physics.

SCI 114 "The Ascent of Man" (3) A non-mathematical study of the major developments, impacts and controversies of science throughout recorded history. Follows television series and book by J. Bronowski. Taught by Physics.

SCI 115 Equity Issues in a Technological Society (3) Develop science/mathematics process skills. Become familiar with activities designed to increase the interests and skills of subgroups under-represented in science/mathematics/technology professions.

SCI 225 Introductory Photo Science (3) Prerequisite: SCI 103 or equivalent. The history of photographic technology. Principles of optics, light and filters, film sensitivity. Simple photographic assignments.

SCI 265 Physical Science Concepts for Elementary Teachers (4) (3 lecture, 2 laboratory) Investigation of basic physical science concepts, emphasizing their application to the physical world. For elementary education majors interested in a general understanding of science. Fee required.

SCI 291 Scientific Writing (3) Prerequisite: ENG 122. Techniques of problem identification, literature survey, data interpretation and synthesis and technical reports.

SCI 391/591 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.

SCI 505 Physical Science Concepts (3) (2 lecture, 3 laboratory) For elementary/middle school teachers. Fundamental concepts of physical science are considered in a lecture/laboratory setting.

SCI 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.

SCI 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

SCI 535 Principles of Physics I (3) (2 lecture, 3 laboratory) Investigation of basic principles of kinematics, dynamics, momentum, work and energy with technological applications. For certified teachers interested in improving understanding and pedagogic delivery of physics concepts.

SCI 536 Principles of Physics II (3) (2 lecture, 3 laboratory) Investigation of basic principles of energy related to the study of thermodynamics and wave motion with technological applications. For certified teachers interested in improving understanding and pedagogic delivery of physics concepts.

SCI 537 Principles of Physics III (3) (2 lecture, 3 laboratory) Prerequisite: SCI 535, SCI 536 or equivalent. Investigation of basic principles of electricity and magnetism with technological applications. For certified teachers interested in improving understanding and pedagogic delivery of physics concepts.

SCI 538 Principles of Physics IV (3) (2 lecture, 3 laboratory) Investigation of basic principles of quantum physics and special relativity with applications in atomic, nuclear and astrophysics. For certified teachers interested in improving understanding and pedagogic delivery of physics concepts.

SCI 391/591 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.

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.

SOC 120 Marriage and the Family (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.

SOC 141 Introduction to Criminal Justice (3) A survey of the three components of the criminal justice system: police, courts and correction. Emphasis on the structural and situational factors influencing the way these agencies of social control operate.

SOC 170 Social Problems (3) Theoretical and conceptual perspectives on social problems and related social policy implications. Definitional and social causation models of social problems are examined.

SOC 221 Sociology of Sex Roles (3)

Prerequisite: SOC 100 or equivalent. Examine gender stratification and social inequality. Topics include cultural definitions of masculinity and femininity, socialization and social change.

SOC 235 Social Change (3) Prerequisite: SOC 100 or equivalent. Study various sociological approaches to change including social movements and revolutions as the product of multiple 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.

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 270 World Population Problems (3)

Prerequisite: SOC 100 or equivalent. Examine population problems in various societies in the world. Review theories of population growth. Relate the population problem to factors that indicate the web of interdependency.

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 302 Variable Topics in Sociology (3)

Prerequisite: SOC 100 or equivalent. Topics may include sociology of religion, human ecology, social conflict, fascism, urban sociology, etc. Repeatable up to two times, 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 100 or 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 330/530 Social Organizations (3)

Prerequisite: SOC 100 or equivalent. Study the social structure of modern bureaucratic organizations. Review human behavior in organizations from a social psychological 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 351/551 Classical Social Theory (3)

Prerequisite: SOC 100 or equivalent. Study the major pioneering classical social theorists who established the foundations of modern sociology during the late 19th and early 20th centuries. Focus on the emergence of sociology as a discipline.

SOC 352 Contemporary Social Theory (3)

Prerequisite: SOC 100, SOC 351. Review the major modern theoretical paradigms and prominent contemporary theorists in sociology. Examine contemporary issues in sociology.

SOC 360 Computer Applications in the Social Sciences (3) Prerequisite: SOC 100 or equivalent.

Basic skills in the application of computer technology to substantive issues in sociology. Data collection, data analysis, simulation and data archives. Mainframe, mini- and microcomputer applications.

SOC 361/561 Social Research (3) Prerequisite: SOC 100 or equivalent, STAT 150.

Introduce research methodologies in the social sciences. Study the logic of research, role of theory, measurement, sampling and research designs.

SOC 362/562 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 — reduction in error and variance models; chi square.

SOC 371/571 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 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 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 or equivalent. Culminating seminar to provide opportunity for students to experience sociology by conducting a research project on a topic of interest.

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 423/523 Violence and the Family (3)

Prerequisite: SOC 100 or equivalent. 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 444/544 Sociology of Criminal Law (3)

Prerequisite: SOC 100 or equivalent. Survey the origins of criminal law, study its structure and administration and the effects of legal sanctions.

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 490 Internship (3-9) Prerequisites: 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 493 Practicum in Family Studies (3-9)

Prerequisites: SOC 100, SOC 324, SOC 352, SOC 361. Majors only. 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 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.

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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

SOC 520 Seminar in the Family (3)

Explore marriage in depth, focusing primarily on American marriage. Also, contrast the American system with that of other societies.

SOC 423/523 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 330/530 Social Organizations (3)

Study the social structure of modern bureaucratic organizations. Review human behavior in organizations from a social psychological perspective.

SOC 444/544 Sociology of Criminal Law (3) Survey the origins of criminal law; study its structure and administration and the effects of legal sanctions.

SOC 550 Philosophical Issues in Sociology (3) Prerequisite: SOC 351 or equivalent. Explore a variety of philosophical problems, issues and contentions forming a backdrop to theoretical and empirical sociology.

SOC 351/551 Classical Social Theory (3) Study the major pioneering classical social theorists who established the foundations of modern sociology during the late 19th and early 20th centuries. Focus on the emergence of sociology as a discipline.

SOC 554 Criminological Theories (3) Analyze and evaluate the major historical and contemporary theories of criminal behavior.

SOC 361/561 Social Research (3) Prerequisites: SOC 100 or equivalent, STAT 150. Introduce research methodologies in the social sciences. Study the logic of research, role of theory, measurement, sampling and research designs.

SOC 362/562 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 — reduction in error and variance models; chi square.

SOC 563 Qualitative Methods (3) Examination of major qualitative methods in sociology: ethnography, participant, phenomenological sociology, ethnomethodology, Verstehen sociology, hermeneutics and other methods. Emphasis is on field research and application of specific qualitative methods.

SOC 371/571 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 602 Seminar in Perspectives in Sociology (3) Variable topics may include theory construction, research and theoretical development as it occurs in various areas of sociology, or current issues and problems within the profession. Repeatable up to two times, under different subtitles.

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 632 Seminar in Social Psychology (3) Prerequisite: SOC 332 or equivalent. Analyze major perspectives and discuss certain issues, problems and trends. Emphasize specific theoretical approaches in the field: interaction, cognitive, reinforcement, field and social learning theories, etc.

SOC 639 Seminar in Clinical Sociology (3) Examine important current issues and activities related to clinical sociology, survey research methods and intervention techniques used by clinical sociologists, consider ethics of clinical sociology, emphasize critical thinking, research and writing.

SOC 650 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 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 680 Social Policy Analysis (3) Examines relationship between social policy and society. Socio-cultural conditions and social institutions which affect policy formation are studied. Utilization of sociological concepts and methods in applied settings.

SOC 690 Sociology Internship (2) M.A. candidates in Sociology have opportunity to assist, under supervision, teaching of a Sociology one hundred level course. Meet with small course section two hours per week, prepare and proctor written exams, review and clarify material covered in prior lectures and lead section discussions of current and topical matters.

SOC 691 Research Internship (1-6) Gain graduate level research and career-relevant work experience. Design a research project with the internship advisor in cooperation with a social agency representative. Repeatable, maximum six credits.

SOC 699 Thesis (1-6) Required of Master of Arts Candidates in Sociology on recommendation of major advisor. Repeatable, maximum six credits.

Social Science

SOSC 341 Teaching Secondary Social Studies (3) Full admission to PTE 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 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 605 Advanced Instruction in Secondary Social Studies (3) Full admission to PTE or certification at undergraduate level required. Consider recent trends in the organization and teaching of social studies courses in the secondary school and evaluate new courses of study, new materials and new equipment.

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.

SPAN 102 Elementary Spanish II (5) Prerequisite: SPAN 101 or equivalent. A continuation of SPAN 101.

SPAN 201 Intermediate Spanish I (3) Prerequisite: SPAN 102 or two years of high school Spanish. Review of the basic principles of the language and emphasize oral Spanish communication. Become familiar with Spanish and Latin American civilization.

SPAN 202 Intermediate Spanish II (3) Prerequisite: SPAN 201 or two years of high school Spanish. Review of basic principles of the Spanish language and emphasize oral communication. Become familiar with Spanish and Latin American civilization.

SPAN 255 Music of the Hispanic World (3) Prerequisite: Two years of high school Spanish or one year of college Spanish. An introduction to Hispanic culture through music. Music, songs and instruments will be studied in their cultural perspectives. Course helps to develop Spanish language, vocabulary and pronunciation. Taught in Spanish.

SPAN 301/501 Spanish Grammar (3) Prerequisite: Three years of high school Spanish or equivalent. A systematic study of the more complex theories and forms of Spanish grammar with emphasis on mood, tense and voice.

SPAN 302/502 Spanish Composition (3) Prerequisite: SPAN 301. Designed to increase the student's composition skills in Spanish through the use of original essays, descriptions, compositions, research papers and translations.

SPAN 303/503 Spanish Conversation (3) Prerequisite: Three years of high school Spanish or equivalent. 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: Three years of high school Spanish or equivalent. 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 321/521 Spanish Civilization and Culture (3) Prerequisite: Two years of college Spanish or equivalent. 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 331/531 Latin American Civilization and Culture (3) Prerequisite: Two years of college Spanish or equivalent. 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 350/550 Masterpieces of Spanish Literature (3) Prerequisite: SPAN 321. 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 351/551 Masterpieces of Latin American Literature (3) Prerequisite: SPAN 350. Study of the masters of contemporary Latin American literature and the late 19th and 20th century Spanish literature.

SPAN 405/505 Spanish Phonetics and Dialects (3) Prerequisite: Three years of high school Spanish or equivalent. 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 407/507 Spanish for Oral Proficiency (3) Prerequisite: Four years of high school Spanish or equivalent. A course designed to develop oral proficiency by exposing students to advanced and superior linguistic functions.

SPAN 408 Study Abroad Program: Coursework (9) Prerequisite: Two years of college Spanish or permission of department. Gives the student practical experience in the use of Spanish. Includes formal instruction in conversation, composition and culture at the foreign study center. To be taken with SPAN 409.

SPAN 409 Study Abroad Program: Project (3) Prerequisite: Two years of college Spanish or permission of department. Students research contemporary and historical cultural phenomena of Spain or Mexico by completing an area studies project of the study center's region. To be taken with SPAN 408.

SPAN 411 Spanish for Bilingual Education I (3) Prerequisite: Two years of college Spanish or equivalent. Develops Spanish language skills for teaching language arts and math. ACTFL/ETS Spanish Oral Proficiency Interview must be taken after completing SPAN 412 to receive Bilingual Education Certification.

SPAN 412 Spanish for Bilingual Education II (3) Prerequisite: SPAN 411. Develops Spanish language skills for teaching science and social studies. ACTFL/ETS Spanish Oral Proficiency Interview must be taken after completing SPAN 412 to receive Bilingual Education Certification.

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 452/552 Mexican Literature (3) Prerequisite: Two years of college Spanish or equivalent. A study of the most outstanding works of Mexican literature. Examines the works from the Mexican Revolution, Criollismo, Magical Realism and contemporary Social-Realism.

SPAN 453/553 Spanish Literature of the 20th Century (3) Prerequisite: two years of college Spanish or equivalent. Study Spanish literature from 1940 to the present. Analyze literary values of the works and their historical, linguistic, political and socioeconomic implications.

SPAN 454/554 Latin American Literature of the 20th Century (3) Prerequisite: Two years of college Spanish or equivalent. A study of the major works of prominent Latin American writers. To include the works of Garcia Marquez, Rulfo, Vargas, Llaso, Fuentes, Cortazar, Carpentier, Poniatowska, Vallejo and Carballido.

SPAN 455/555 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 458 Cervantes (3) Prerequisite: Two years of college Spanish or equivalent. To become acquainted with the creative process of the author, the structure of the novel and the characters and understand the life and culture of Spain during this period.

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 301/501 Spanish Grammar (3) Prerequisite: Three years of high school Spanish or equivalent. A systematic study of the more complex theories and forms of Spanish grammar with emphasis on mood, tense and voice.

SPAN 302/502 Spanish Composition (3) Prerequisite: SPAN 301. Designed to increase the student's composition skills in Spanish through the use of original essays, descriptions, compositions, research papers and translations.

SPAN 303/503 Spanish Conversation (3) Prerequisite: Three years of high school Spanish or equivalent. 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 405/505 Spanish Phonetics and Dialects (3) Prerequisite: Three years of high school Spanish or equivalent. 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 407/507 Spanish for Oral Proficiency (3) Prerequisite: Four years of high school Spanish or equivalent. 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. Unlimited repeatability.

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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

SPAN 321/521 Spanish Civilization and Culture (3) Prerequisite: Two years of college Spanish or equivalent. 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 331/531 Latin American Civilization and Culture (3) Prerequisite: Two years of college Spanish or equivalent. 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 350/550 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 351/551 Masterpieces of Latin American Literature (3) Prerequisite: SPAN 550. Study of the masters of contemporary Latin American literature and the late 19th and 20th century Spanish literature.

SPAN 452/552 Mexican Literature (3) Prerequisite: Two years of college Spanish or equivalent. A study of the most outstanding works of Mexican literature. Examines the works from the Mexican Revolution, Criollismo, Magical Realism and contemporary Social-Realism.

SPAN 453/553 Spanish Literature of the 20th Century (3) Prerequisite: Two years of college Spanish or equivalent. Study Spanish literature from 1940 to the present. Analyze literary values of the works and their historical, linguistic, political and socioeconomic implications.

SPAN 454/554 Latin American Literature of the 20th Century (3) Prerequisite: Two years of college Spanish or equivalent. A study of the major works of prominent Latin American writers. To include the works of Garcia Marquez, Rulfo, Vargas, Llaso, Fuentes, Cortazar, Carpentier, Poniatowska, Vallejo and Carballido.

SPAN 455/555 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 560 Spanish Civilization and Culture (2) Prerequisite: Three years of college Spanish or equivalent. 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) Prerequisite: Three years of college Spanish or equivalent. 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 is emphasized.

SPAN 562 Mexico and United States Hispanic Civilization and Culture (2) Prerequisite: Three years of college Spanish or equivalent. 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) Prerequisite: Three years of college Spanish or equivalent. 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 three credits.

SPAN 570 Readings in United States Hispanic Literature (1-3) Prerequisite: Three years college Spanish or equivalent. 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 three credits.

SPAN 571 Readings in Spanish Literature (1-3) Prerequisite: Three years of college Spanish or equivalent. 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) Prerequisite: Three years of college Spanish or equivalent. 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 three credits.

SPAN 573 National Literatures (2) Prerequisite: Three years of college Spanish or equivalent. Give a basic understanding of the most important writers and their works of a given Spanish-speaking country.

SPAN 574 Masterpieces of 20th Century Spain (2) Prerequisite: Three years of college Spanish or equivalent. Study of the Masterpieces of 20th Century Spanish literature. Topics might include the generation of 1898, poetry and theatre of 20th century, pre-Civil War novel and post-Civil War novel.

SPAN 575 Masterpieces of 20th Century Latin America (2) Prerequisite: Three years of college Spanish or equivalent. 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) Prerequisite: Three years of college Spanish or equivalent. 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) Prerequisite: Three years of college Spanish or equivalent. 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 three credits.

SPAN 581 Advanced Spanish Grammar (2) Prerequisite: Three years of college Spanish or equivalent. 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) Prerequisite: Three years of college Spanish or equivalent. A course designed to develop oral proficiency by exposing students to superior linguistic functions.

SPAN 583 Oral and Written Discourse (2) Prerequisite: Three years of college Spanish or equivalent. 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 584 Spanish Pronunciation and Dialects (2) Prerequisite: Three years of college Spanish or equivalent. Study of the semantic, phonological and syntactic characteristics of the Spanish language dialects spoken in the United States. Special emphasis on Spanish pronunciation is included.

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.

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 241 Forensics (1-3) Experience intercollegiate forensics; debate and individual events. Repeatable, maximum eight credits. S/U graded.

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.

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 341/541 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 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 351/551 Directing Forensics (3) Study philosophy, principles, methods and problems of directing debate and individual events at the secondary school level.

SPCO 352/552 Methods of Teaching Secondary Communication (3) PTE 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 354 Directing Speech Communication Activities (3) (2 lecture, 2 laboratory) Prerequisites: SPCO 100, SPCO 103, SPCO 111. Instruction and experience creating, producing, directing and acting in a variety of performance experiences applicable to public school teachers.

SPCO 404/504 Rhetorical Theory (3) Systematic review of the major contributions to rhetorical theorists for their probable impact on communication.

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 431/531 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 444/544 Argumentation Theory (3) Investigate the nature of argumentation in personal and social relationships. Primary attention is paid to how people use reason-giving processes to resolve personal and social conflicts.

SPCO 461/561 Seminar in Speech Communication (1-3) Investigate issues of current concern for SPCO professionals with subject varied according to faculty expertise. Repeatable, maximum nine credits, under different subtitles.

SPCO 480 Research in Speech Communication (2-5) Prerequisite: SPCO 201. Learn the basic skills involved in speech communication research. Prepare a research proposal, conduct the study and prepare a final report on timely communication problems. Repeatable one time, maximum six credits. (Minimum of 37 clock hours needed per credit hour.)

SPCO 491 Speech Communication Theory (3) Consent of instructor. Graduating seniors only. Summative course of the nature and function of human communication theory and research including an overview of the new traditions of theory and current perspectives in the discipline. Assessment of student practicum competency.

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 three semester credit hours may be counted toward the major. Repeatable, maximum five credits.

SPCO 502 Teaching College SPCO Courses (1)

Required of all graduate teaching assistantships in SPCO. S/U Graded. Repeatable, maximum three credits.

SPCO 404/504 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 524 Conflict Management (3)

Focus on the processes involved in conflict, conflict analysis and communication responses to conflict.

SPCO 431/531 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 534 Communication Consulting (3)

Learn step-by-step about the communication consulting process and the communication theories and concepts that have application to communication consulting.

SPCO 341/541 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 444/544 Argumentation Theory (3)

Investigate the nature of argumentation in personal and social relationships. Primary attention is paid to how people use reason-giving processes to resolve personal and social conflicts.

SPCO 351/551 Directing Forensics (3)

Study philosophy, principles, methods and problems of directing debate and individual events at the secondary school level.

SPCO 352/552 Methods of Teaching

Secondary Communication (3) PTE 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 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 461/561 Seminar in Speech

Communication (1-3) Investigate issues of current concern, for SPCO professionals with subject varied according to faculty expertise. Repeatable, maximum 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 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 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. Repeatable, maximum six credits. S/U graded.

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.

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.

STAT 311 Basic Statistical Methods (4)

Prerequisite: MATH 124, STAT 150 or equivalent. Testing hypothesis, ANOVA, chi-square analysis, non-parametric techniques and introduction to regression. Course primarily for statistics minors and major emphases.

STAT 406 Multiple Linear Regression (3)

Prerequisite: STAT 311 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: STAT 311 with the grade of "C" or better. Introduction of 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.

STAT 501 Statistical Methods I (4)

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. Applications and statistical reasoning about central tendency, standard scores, percentiles, correlation regression and probability distributions. Studying inferences arising from distribution functions: t, F, chi-square, binomial, normal.

STAT 502 Statistical Methods II (4)

Prerequisite: STAT 501 or consent of instructor. Hypothesis formulation and testing; estimation and confidence limits; one-and two-sample tests; and statistical decision theory. Study applications and interpretation of single and multiple classification designs. Topics include use of classification as control methods of un-weighted means.

STAT 511 Mathematical Statistics with

Applications I (4) Prerequisite: MATH 233 or consent of instructor. Study of probability, random variables, distribution, movements, expected values and standard probability laws, probability bounds and point estimation.

STAT 512 Mathematical Statistics with

Applications II (4) Prerequisite: STAT 511. Continuation of STAT 511. Learn about sampling distribution, estimation techniques, maximum likelihood, test of hypothesis, confidence intervals, regression and chi-square tests.

STAT 550 Applied Probability and Statistics (3) Graduates only. Applied statistics and probability concepts to include history, counting techniques, distributions and inference (confidence intervals, ANOVA, tests, linear regression) will be covered in a context for use in secondary mathematics.

STAT 604 Advanced Experimental Design (3) Prerequisite: STAT 502. Continuation of STAT 502. Study high-order factorial design, three-factor design with repeated measurements, trend analysis and response surface analysis, transformation, pre- and post-multiple comparison considerations, power of F-tests, fixed, mixed and random models.

STAT 605 Multivariate Analysis I (3) Prerequisite: STAT 502. Receive introduction to multivariate analysis of variance, multivariate one- and two- sample tests on means, canonical correlation, profile analysis and discriminate function.

STAT 606 Multiple Linear Regression Models (3) Prerequisite: STAT 502. Take the 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 and stagewise; and part-regression.

STAT 607 Non-Parametric Statistics (3) Prerequisite: STAT 502. Study non-parametric tests of research hypotheses relative to the data to which the test is applicable; the rationale underlying the test; examples of application of the test in behavioral research; and comparison of the test with its parametric equivalent.

STAT 609 Sampling Methods I (3) Prerequisite: STAT 502. 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 sources of non-sampling errors.

STAT 611 Advanced Theory of Statistics I (4) Prerequisite: STAT 512 or equivalent. Advanced topics in statistics to include random variables, distributions, limit theorems, transformations, mathematical expectation, joint distributions, sampling and sampling distribution.

STAT 612 Advanced Theory of Statistics II (4) Prerequisite: STAT 611. Continuation of STAT 611 to include theory of point estimation, sufficient statistics, interval estimation, testing of hypotheses, most powerful tests, likelihood ratio tests, Chi Square tests and regression tests.

STAT 613 Matrices for Statisticians (3) Prerequisites: MATH 525, STAT 604. Advanced topics in matrix algebra with applications to statistics. Topics will include quadratic forms, vector spaces, eigenvalues, eigenvectors, generalized and conditional inverses, systems of linear equation, approximate solutions and patterned matrices.

STAT 614 Linear Models (3) Prerequisite: STAT 613. Develop the theory of linear models as a structure for handling problems in regression and correlation, analysis of variance and experimental design.

STAT 615 Multivariate Analysis II (3) Prerequisite: STAT 605. Consider Spearman's ρ -factor, eigenvectors, eigenvalues, principal axis analysis and promax models. Also consider the theory of oblique and orthogonal solutions and the communality problem.

STAT 616 Regression: Advanced Topics (3) Prerequisite: STAT 606. Advanced topics in regression will include diagnostics, remedial measures, qualitative variables, ridge regression, stepwise procedures, autocorrelation, nonlinear regression and binary dependent variables.

STAT 619 Sampling Methods II (3) Prerequisite: STAT 609. Advanced aspects of stratified and multistage cluster sampling.

STAT 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.

STAT 641 Seminar: Special Topics (1-4) 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.

STAT 689 Internship in Applied Statistics (1-10) A supervised program of observation and participation in a one-semester research assignment. The internship requires a minimum of 38 hours of student field experience for each credit hour given. Repeatable, maximum 10 credits. S/U graded.

STAT 699 Thesis (1-6) Optional for Master of Science program in Applied Statistics and Research Methods. Repeatable, maximum six credits. S/U graded.

STAT 742 Seminar (1-4) Prerequisite: STAT 605 or consent of instructor. Study advanced topics in statistics, mathematics, research design and information processing. Repeatable, maximum four credits.

STAT 755 Supervised Practicum in College Teaching (1-6) Practice college teaching under supervision. S/U graded. Unlimited repeatability.

STAT 797 Doctoral Proposal Research (1-4) Required of all doctoral students. S/U graded. Repeatable, maximum of four credits.

STAT 799 Doctoral Dissertation (1-12) Required of all doctoral candidates. Students must earn a minimum-maximum of 8-12 hours of credit for the dissertation in partial fulfillment of the requirements for the doctoral degree. S/U graded. Repeatable, maximum 12 credits.

Teaching English as a Second Language

TESL 301 TESL Practicum I (2) A beginning level field experience in Teaching English as a Second Language. S/U graded.

TESL 302 TESL Practicum II (2) Prerequisite: TESL 301. An intermediate/ advanced level field experience for students taking a TESL minor. S/U graded.

Theatre Arts

THEA 100 Individual Performance in Theatre (2) Open to all UNC students. Participation in Little Theatre of the Rockies productions. Student must participate in 90 hours. Unlimited repeatability.

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 actor, director, choreographer, technicians, designers and critic will be explored through live presentations. Emphasis on research.

THEA 135 Playscript Analysis (3) Majors/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 Survey of Technical Theatre (3) Required laboratory arranged. Majors/minors only. Course for Theatre majors/minors that 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. Fee required for majors/minors.

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. This course will be offered in Fall Semester for Majors/minors only, and in the Spring it will be open to all students.

THEA 190 Stage Speech I (1) A laboratory course designed to help the student develop good speech for the stage through intelligent use and care of the speaking instrument and appreciation and control of the language of the playwright, the play and the character.

THEA 191 Stage Speech II (1) Prerequisite: THEA 190 or consent of instructor. The final course in a two-course series dealing with the development of intelligent use and care of the speaking instrument. Primary emphasis is on Linklater and Lessac approaches.

THEA 210 Graphics and Management (3) (2 Lecture, 1 Laboratory) Prerequisites: THEA 149, THEA 135. A study of the graphics of scene construction, design and rigging; backstage organization and stage management; basic skills in mechanical drafting, technical script analysis, period research and stage management organization.

THEA 240 Beginning Stage Directing (3) Prerequisites: THEA 135, THEA 149 and THEA 160 or permission 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 250 Stage Make-Up I (1) Prerequisites: THEA 160. A basic course designed to acquaint the student with the principles of stage make-up.

THEA 251 Advanced Stage Make-Up (1) Prerequisite: THEA 250 or consent of instructor. A course designed to prepare the student to produce professional quality make-ups, going beyond the basics into special problems in make-up, group make-up, quick change make-ups, three-dimensional prosthetics, make-up for other media and make-up for educational theatre.

THEA 260 Scene Study (2) 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 (1) (2 contact hours per week) Two part series of laboratory courses in the preparation of actor's skills in movement. Emphasis is movement analysis, body alignment and corrections.

THEA 276 Stage Movement II (1) (2 contact hours per week) Prerequisite: THEA 275. Second in a two-part series of laboratory courses in the preparation of actor's skills in movement. Emphasis is movement analysis, body alignment and corrections.

THEA 281 Improvisation and Creative Dramatics (3) (2 lecture, 2 laboratory) A study in creative drama and improvisation including its value to the general community and to human development, content areas, methods of application and design for groups with special needs, such as senior adults, handicapped, elementary and secondary programs.

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. S/U graded.

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 320 Stage Costume Design (3) Prerequisite: THEA 149 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 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.

THEA 331 History of Theatre II (3) A continuation of THEA 330, focusing on American, European and Eastern theatre. Emphasis on research.

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 350 Summer Theatre (10) Acceptance by Theatre Arts staff required. Eight weeks of eight-hour daily rehearsals for summer productions. Repeatable, maximum 40 credits.

THEA 353 Theatre Production (2) (6 contact hours per week) Acceptance by audition only. Production and presentation of touring theatre before live audiences in this laboratory class. Repeatable, maximum eight credits.

THEA 360 Advanced Acting Styles I (2) 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 four credits.

THEA 361 Advanced Acting Styles II (2) 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 four credits.

THEA 370 Stage Combat (2) (4 contact hours per week) Study of combat techniques used in the theatre, including blade work, hand-to-hand and stage falls.

THEA 371 Mime, Pantomime and Mask (1) (2 contact hours per week) A laboratory course in the preparation of the actor's skills in movement. Emphasis upon mime and pantomime.

THEA 372 Period Movement (1) (2 contact hours per week) Prerequisites: THEA 275, THEA 276. Corequisite: THEA 361; for acting emphasis only. A laboratory course in the preparation of the actors' skills in movement. Emphasis upon period movement.

THEA 385 Methods of Teaching Drama in the Secondary School (3) Corequisite: EDLS 363. PTE 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 secondary 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 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 411 Stage Lighting (3) (2 Lecture, 1 Laboratory) Prerequisite: THEA 210. An introduction to lighting theory and lighting design applicable to all staging practices.

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 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 440 Directing the One-Act Play (1) 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 464 Audition Techniques (2) Prerequisites: THEA 160, THEA 260. Acting Emphasis only. Covers all the various aspects of audition techniques. Units include: extensive work on selection of material and preparing and presenting auditions. Additional experiences will include resume, picture preparations and guest instructor information.

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. Unlimited repeatability.

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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

THEA 585 Theatre Production in High School (2) PTE or certification at undergraduate level English and/or speech teachers involved in direction of high school plays are offered this basic production course. Not for TA majors without instructor's permission.

THEA 600 Introduction to Graduate Studies (3) Graduate study and descriptive research in Theatre Arts. Required of all first year graduate students. To be taken early in the graduate program.

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 four credits.

THEA 610 Seminar in Technical Theatre (3) Prerequisites: THEA 310, THEA 411 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. Unlimited repeatability.

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 630 Seminar in Theatre History (3) Prerequisites: THEA 330, THEA 331. May be repeated for credit. A seminar study of specialized topics in the history of the theatre. Emphasis is placed on research.

THEA 640 Seminar in Directing and Acting (3) Study the practical application of various theories of acting and directing. Emphasis is placed on research study. Repeatable, maximum six credits.

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. May be counted for 2 hours in Individual Performance in Theatre by graduate majors. May be repeated for maximum 30 hours credit.

THEA 685 Seminar in Educational Theatre (3) Study specialized topics in creative dramatics, children's theatre, teaching in high school, theatre production activities in high school, curricula and other concerns of educational theatre. Emphasis on educational research. Repeatable, maximum nine credits.

THEA 699 Thesis (6) Required of all Master of Theatre Arts students. A comprehensive, well-written and scholarly thesis must be submitted to the Graduate School. The grade for the course will be the grade given the thesis. S/U graded. Repeatable, may be taken two times to a maximum of six credits.

Women's Studies Program

WS 120 Women and Men in Perspective (3) Interdisciplinary focus used to illustrate effects of gender stereotyping and develop strategies to produce civilized environments by enhancing the interpersonal relationships of females and males.

WS 148 Introductory Seminar in Women's Studies (3) Review issues, concerns, research and methodologies of Women's Studies and, through individual and group processes, explore relationships to self and society.

WS 308/508 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 310/510 Philosophy of Feminism (3) Utilizing the feminist theory developed by Simone de Beauvoir, traditional and feminist philosophical analyses of women will be critically examined.

WS 320/520 Women in United States History (3) Research and interpret the contributions of women to the history of the United States. Revision history through a feminist perspective.

WS 373 Women-Identified Theory (3) Critically analyze lesbian studies, literature and theory from a feminist perspective.

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 448/548 Women's Studies Senior Seminar (3) Prerequisites: WS 148 and 10 semester credits in approved Women's Studies electives. Utilize the feminist perspective to develop interdisciplinary methodologies and paradigms pulling together the various disciplinary areas covered by Women's Studies.

WS 492 Internship (2-10) Nine semester credits in approved Women's Studies courses required. Supervised field practice on research relating to women's concerns and issues. Paper analyzing experience required. Repeatable, maximum 10 credits.

WS 308/508 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.

WS 310/510 Philosophy of Feminism (3) Utilizing the feminist theory developed by Simone de Beauvoir, traditional and feminist philosophical analyses of women will be critically examined.

WS 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 graded, unless section is approved (by the Graduate School) as letter graded. Repeatable, under different subtitles.

WS 320/520 Women in United States History (3) Research and interpret the contributions of women to the history of the United States. Revision history through a feminist perspective. Special assignments for graduate students.

WS 448/548 Women's Studies Graduate Seminar (3) Enrollment in Graduate Interdisciplinary Degree Program required or consent of instructor. Primarily for students emphasizing Women's Studies in the Graduate Interdisciplinary Degree Program. Utilize the feminist perspective to develop interdisciplinary methodologies and paradigms pulling together the various disciplinary areas covered by Women's Studies.

WS 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.

WS 692 Internship (2-10) Knowledge of Women's Studies techniques and concerns required. Supervised field practice on research relating to Women's Studies concerns and issues. Graduate-quality paper analyzing experience required. Repeatable, maximum 10 credits.

Zoology

ZOO 115 Human Biology (3) (2 lecture, 3 laboratory) The study of humans including evolution and genetics, basic anatomy and physiology and their place in the biological world. Credit not allowed for biological science majors. Fee required.

ZOO 245 Introduction to Human Anatomy 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 ZOO 245 and ZOO 350. Fee required.

ZOO 330 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. Fee required.

ZOO 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. Fee required.

ZOO 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. Fee required.

ZOO 333/533 General Parasitology (4) (3 lecture, 3 laboratory) Prerequisite: BIO 111 or ZOO 115. 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. Fee required.

ZOO 334/534 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. Fee required.

ZOO 335/535 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. Fee required.

ZOO 341 Human Anatomy (3) (2 lecture, 3 laboratory) Prerequisites: ZOO 115 or BIO 111. Study the organ systems of the human body, their structure and integration. Laboratory includes examination of mammalian organs and cadaver. Fee required.

ZOO 345 Comparative Vertebrate Morphogenesis (4) (3 lecture, 3 laboratory) Prerequisite: BIO 111 or ZOO 115. Two semesters of introductory biology. A study of the comparative developmental processes of vertebrates as they relate to the adult structure of the adult organ systems. Developmental anatomy and adult morphology of the sharks through mammals are considered for laboratory study and dissection. Fee required.

ZOO 350 Human Physiology (4) (3 lecture, 3 laboratory) Prerequisites: ZOO 341 or ZOO 345 and CHEM 131 or CHEM 208. Examine in detail the functions of the organ systems of the human body, especially those involved with the maintenance of normal function. Fee required.

ZOO 355 Medical Pharmacology (3) (2 lecture, 3 laboratory) Prerequisite: ZOO 350. Make a detailed study of the principles underlying absorption, distribution, metabolism, excretion and interaction of drugs in humans. Calculation of drug dosages required.

ZOO 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. Fee required.

ZOO 448 Histology/Microtechnique (3) (1 lecture, 4 laboratory) Prerequisite: BIO 111. Study the basic mammalian tissues at the microscopic level and acquire the skills necessary for preparation of study and research materials. Fee required.

ZOO 333/533 General Parasitology (4) (3 lecture, 3 laboratory) Prerequisite: BIO 111 or ZOO 115. 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.

ZOO 334/534 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. Fee required.

ZOO 335/535 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. Fee required.

ZOO 542 Vertebrate Histology (4) (3 lecture, 3 laboratory) Prerequisite: ZOO 341 or ZOO 345. Intensive study of normal tissues and organs of vertebrates, particularly mammals.

ZOO 551 Mammalian Physiology I (4) (3 lecture, 3 laboratory) Prerequisites: ZOO 341 or ZOO 345 or equivalent; CHEM 208 or CHEM 481. Examine the cardiovascular and pulmonary systems in depth, integrating the functions of the nervous and endocrine systems. Fee required.

ZOO 552 Mammalian Physiology II (4) (3 lecture, 3 laboratory) Prerequisites: ZOO 551 or ZOO 350 or equivalent; CHEM 208 or CHEM 481. Consider in detail the digestive, muscular and excretory systems, particularly the integrative functions of these systems in maintenance of homeostasis. Fee required.

ZOO 560 Animal Ecology (4) (3 lecture, 3 laboratory) Prerequisite: BIO 460. Gain a comprehensive understanding of animal ecology. Animal population dynamics, behavioral ecology and quantitative methods for measurement and evaluation of animal systems. Fee required.

ZOO 595 Special Topics in Zoology (2) Study of any zoological topic at an advanced level. Repeatable up to one time, under different subtitles.

ZOO 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.

ZOO 636 Advanced Invertebrate Zoology (4) (3 lecture, 3 laboratory) Prerequisite: ZOO 332. Compare the classification, anatomy, physiology, morphogenesis and natural history of the invertebrates, exclusive of insects and most parasitic forms.

ZOO 645 Comparative Vertebrate Adaptations (4) (3 lecture, 3 laboratory) Prerequisites: ZOO 345 and ZOO 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.

ZOO 699 Thesis (1-6) Prerequisite: BIO 694. Repeatable, maximum six credits. S/U graded.

Administration and Faculty

Board of Trustees

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 Ada Diaz Kirby, Denver (1991-1995), Vice Chair
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 Ann Garrison, Faculty Trustee (1994-1995)
 Imani Abdul Rashid, Student Trustee (1994-1995)
 Tom Barbour, Secretary
 Steven N. Garcia, Treasurer

The first figure in parentheses is the date of the first appointment; the second figure is the date of expiration of the present term.

General Administration

President

Herman D. Lujan (1991) — B.A., St. Mary's College of California; M.A., University of California, Berkeley; Ph.D., University of Idaho (G)

Provost

Stephen T. Hulbert, (1988) — B.S.Ed., Worcester State College; M.Ed., University of Massachusetts at Amherst; D.Ed., State University of New York at Albany (G)

Vice Presidents

Steven N. Garcia, (1992) Finance and Administration — B.G.S., M.P.A., University of Kansas; Ed.D., University of Washington
 Nancy A. Scott, (1984) Student Affairs — B.S., M.A., Ed.D., University of Colorado (G)(DR)
 Tom Barbour, (1977) (Interim) University Affairs — B.S., University of Northern Colorado

Vice Provost

Charles "Gil" Schmidt, (1991) Office of the Provost — B.A., Sonoma State University; M.A., University of Illinois; Ph.D., University of Washington (G)

Assistant to President

Matthew Walton, (1992) Legal Services — J.D., University of Denver; B.A., University of Michigan

Associate Vice President

Robert P. Merz, (1972) Student Affairs — B.A., St. Thomas College, STB, Catholic University of America; M.A., St. Thomas College; M.Ed., Colorado State University; Ed.D., University of Northern Colorado

Assistant Vice Presidents

Carolyn Cody, (1967) Assistant Vice Provost for Academic Affairs — B.S. North Texas State University; M.A., University of Northern Colorado; Ph.D. Texas Women's University (G) (DR)
 Virginia M. Feagler, (1993) Assistant Vice Provost for Academic Resources, Office of the Provost — B.A., M.S., Indiana University; M.A., University of Denver

Francis A. Griffith, (1984) Assistant Vice Provost for Assessment, Office of the Provost — B.S. University of Maryland; M.S., Ph.D., Pennsylvania State University (G)
 Judy Jones, (1990) Student Affairs — B.S., University of Kansas; M.A., Indiana University; Ph.D., University of Northern Colorado
 Frances L. Schoneck, (1988) Finance and Administration — B.A., University of Northern Colorado; C.P.A., C.I.A.
 Gerald E. Tanner, (1959) Auxiliary Services — B.A., M.A., Ph.D., University of Northern Colorado (G)

Assistant to Vice President

Alan V. Comedy, (1991) Assistant to the Vice President of Administration — B.A., Willburforce University; M.Ed., Antioch College; J.D., Catholic University of America

Dean of Students

Jean Schober Morrell, (1974) — B.S., Bowling Green State University; M.A.T. Oakland University; M.A., Bowling Green State University; Ph.D., University of Northern Colorado

Registrar

Jeffery N. Bunker, (1989) — B.S., M.Ed.; Brigham Young University

Internal Auditor

Douglas C. Otte, (1988) — B.S., Colorado State University

College of Arts and Sciences

Roger A. Kovar, (1970) Dean — B.A., Doane College; Ph.D., University of Wyoming
 John K. Gapter, (1963) Associate Dean — B.S., M.S., Ph.D., Colorado State University
 Maria Lopez, (1972) Associate Dean — B.A., University of Northern Colorado; M.A., Ph.D., University of Iowa

College of Business Administration

Robert Lynch, (1973) Dean — B.A., State University of New York; Ph.D., University of Northern Colorado (G)
 Joe F. Alexander, (1990) Associate Dean — B.B.A., Harding University; M.B.A., D.B.A., Memphis State University (G)
 Forrest Swick, (1994) Systems Administrator — B.S. University of Northern Colorado

College of Education

Gary R. Galluzzo, (1990) Dean — B.A., Utica College; M.S., Ph.D., Syracuse University (G) (DR)
 Michael J. Gimmestad, (1977) Associate Dean — B.A., St. Olaf College; M.S., Indiana University; Ph.D., University of Minnesota (G)(DR)
 Harvey Rude, (1982) Associate Dean — B.S. Moorhead State University; M.A., Ed.D., University of Northern Colorado (G)(DR)

Laboratory School

Daniel Lewis, (1994) Co-Principal — B.A., M.A., Ph.D., University of Northern Colorado
 Kathleen Milligan, (1994) Co-Principal — B.A., Tufts University; M.Ed., University of South Carolina; Ph.D., University of South Carolina

College of Health and Human Sciences

Vincent Scalia, (1977) Dean — B.S., St. Peter's College; M.S., University of Arizona; Ed.D., University of Northern Colorado (G)(DR)
 Donna Bottenberg, (1976) Associate Dean — B.A., M.A., University of Northern Colorado; Ph.D., University of Colorado (G)(DR)

College of Performing and Visual Arts

Howard Skinner, (1963) Dean — B.A., Sterling College, Kansas; — B. Mus., M. Mus., MacPhail College of Music; D. Mus., Northwestern University (G)(DR)

College of Continuing Education

Nancy Reddy, (1986) Interim Dean — B.A., M.A., South Dakota State University; Ed.D., University of South Dakota
 Alice Dionne, (1993) Interim Associate Dean, Director of Summer Session and Evening Division — B.S., University of Washington; M.P.A., University of Alaska Anchorage

Graduate School

Kyle R. Carter, (1987) Dean of Graduate School and University Research — B.A., Mercer University; M.A., Ph.D., University of Georgia (G)(DR)
 Priscilla J. Kimboko, (1984) Associate Dean — B.A., M.A., Ph.D., Portland State University (G)(DR)
 William A. Barnard, (1972) Assistant Dean — B.A., M.A., Western Washington State College; Ph.D., Colorado State University (G)(DR)

University Libraries

Gary M. Pitkin, (1987) Dean — B.A., M.A., University of Wisconsin-Milwaukee; Ed.S., Appalachian State University; Ed.D., University of Northern Colorado
 George R. Jaramillo, (1980) Director, Library Public Services and Personnel — B.A., University of New Mexico; M.S.L.S., M.Ed., University of Illinois
 Helen I. Reed, (1990) Director, Library Access Services and Budgets — A.B., Allegheny College; A.M.L.S., University of Michigan

Division of Aerospace Studies

Susan M. Weaver, (1989) — B.S., Cornell University; M.S. Western New England College

Division of Military Science

David R. Shaw, (1990) — B.A., Northeastern Oklahoma State University

Directors

Christopher J. Ahern, (1993) Information Services — B.A., University of Northern Colorado
 Andy Blank, (1980) Residence Life — B.S., University of Montana
 Ronald S. Camp, (1968) Academic Technology Services — A.A., Joplin Junior College; B.A., M.A., University of Missouri-Columbia
 David A. Cessna, (1989) Career Services — B.A., University of Northern Colorado; M.Ed., Colorado State University
 Reiko Clark, (1988) International Student Services — B.A., Tsurumi Women's College (Japan); M.A., Hofstra University

Coleridge M. Churchill, (1995) Marcus Garvey Cultural Center — Ph.D., University of Northern Colorado; M.A., Indiana State University; M.A., St. Louis University; B.A., Indiana State University; B.S., University of Iowa

Raymond J. Degenhart, (1977) Budget — A.A., Northeastern Junior College; B.S., Colorado State College; M.S., Ph.D., University of Northern Colorado

Alice Dionne, (1993) Summer Session and Evening Division — B.S., University of Washington; M.P.A., University of Alaska-Anchorage

Jim Falls, (1974) Intercollegiate Athletics — B.A., Lake Superior State University; M.Ed., North Michigan University

Thomas J. Gavin, (1984) Institutional Research — B.S., Wisconsin State University; M.A., Ball State University; Ph.D., University of Oregon

Gary Quillickson, (1988) Admissions — B.A., M.A., University of South Dakota

Richard W. Hall, (1994) Development — B.A., Metropolitan State College at Denver

Jerril Hancock, (1985) Re-entry Student Services/Counselor — B.S., William James College; M.A., University of Northern Colorado

Dennis Hayzlett, (1990) Personnel Services — B.A., University of Colorado-Boulder; M.A., University of Northern Colorado

Beth Hellwig-Olson, (1992) Student Activities — B.A., New Mexico State University; M.Ed., Colorado State University

Kenneth H. Humphrey, (1984) Colorado North Central Association of Colleges and Secondary Schools — B.S., Indiana University; M.Ed., Utah State University; Ed.D., University of Northern Colorado

Larry A. James, (1970) Campus Recreation — B.S., M.A., University of Northern Colorado

Nancy L. Kauffman, (1994) Disabled Student Services — B.A., M.A., University of Northern Colorado

Bernard C. Kinnick, (1966) Student Health Center — B.A., St. John's University; M.A., University of North Dakota; Ed.D., Auburn University (G)(DR)

Norman D. Laurence, (1990) Facility Services — B.Arch., University of Colorado

Scott Lelsinger, (1988) Assistant Director, Athletic/Sports Information — B.A., Wartburg College; M.A., University of Northern Colorado

Michael E. Maestas, (1985) Student Financial Resources — B.A., M.A., Adams State College

Jeanne Miller, (1993) Counseling Center — B.A., University of Houston; M.A., Texas Tech University; Ph.D., California School of Professional Psychology, San Diego

Carol Hoglund, (1993) Controller — B.S., Regis

Mark Radtke, (1988) Government Relations, Marketing/Special Events — B.A., Colorado State University

Ray Romero, (1974) Center for Human Enrichment — B.A., M.A., University of Northern Colorado

Michael Salazar, (1992) Hispanic Cultural Center — B.A., University of Colorado; M.P.A., University of Denver

Larry Shaw, (1993) Sponsored Programs, Research Corporation — B.A., University of Utah; M.A., California State University-Sacramento

Terrance D. Urista, (1988) Chief, University Police — Colorado Law Enforcement Academy, FBI National Academy, A.A., Alms Community College

Melanie Wilson, (1993) Women's Resource Center — B.S., Northern Arizona University; M.S., Miami University; Ph.D., University of Northern Colorado

James Zakely, (1983) Academic Advising Center — A.A., Mesa Junior College; B.A., Colorado State University; M.S., Western Illinois University

Faculty

(G) Indicates Graduate faculty

(DR) Indicates Doctoral Research faculty

College of Arts and Sciences

Osita G. Afoaku, (1993) Assistant Professor of Black Studies — B.A., University of Ife, Nigeria; M.A., Ph.D., Washington State University

Diane L. Albertini, (1992) Instructor of English — B.A., University of Wyoming; M.A., Colorado State University

Mark B. Alcorn, (1986) Associate Professor of Psychology — B.A., Occidental College; M.A., Ph.D., University of Southern California (G)

Linda S. Allen, (1992) Assistant Professor of Speech Communication — B.A., Idaho State University; M.A., University of Wisconsin; Ph.D., University of Oregon (G)

Dean Allison, (1993) Assistant Professor of Mathematical Sciences — B.S., M.A., Ph.D., University of Missouri (G)

David L. Anderson, (1976) Associate Professor of Journalism — B.J., University of Missouri; M.A., University of Massachusetts

Michael D. Applegate, (1990) Instructor of Journalism and Mass Communications — B.A., M.A., University of Northern Colorado

Patricia Arneson, (1990) Associate Professor of Speech Communication — B.A., St. Cloud State University; M.S., Southern Illinois University; Ph.D., Ohio University (G)

David R. Aske, (1993) Assistant Professor of Economics — B.S., Mankato State University; Ph.D., University of Nebraska (G)

Terry L. Ballman, (1992) Associate Professor of Hispanic Studies — B.A., M.A., California State University; Ph.D., University of Texas (G) (DR)

Ted Bashore, (1991) Professor of Psychology — B.A., University of California; M.A., Ph.D., University of Colorado

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- Allen Huang**, (1978) Professor of Special Education — B.A., National Chengchi University; M.A., Eastern Kentucky University; Ed.D., University of Alabama (Q)(DR)
- Kenneth H. Humphrey**, (1984) Assistant Professor of Educational Leadership and Policy Studies — B.S., Indiana University; M.Ed., Utah State University; Ed.D., University of Northern Colorado
- Lewis B. Jackson**, (1989) Associate Professor of Special Education — B.A., University of North Carolina; M.S., Ed.D., Johns Hopkins University (Q) (DR)
- Michael L. Jacobs**, (1970) Professor of Foundations of Education — B.A., M.A., Ed.D., University of Rochester
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- Bernard C. Kinnick**, (1966) Professor of College Student Personnel Administration — B.A., St. John's University; M.A., University of North Dakota; Ed.D., Auburn University (Q)(DR)
- J. Melvin Lane**, (1967) Professor of Special Education — B.A., State College of Iowa; M.A., Ed.D., University of Northern Colorado
- Fong-Yun Lee**, (1990) Assistant Professor of Elementary Education and Reading Diploma, Shih Chien College, Republic of China; M.Ed., University of Pittsburgh; Ph.D., Arizona State University (Q)
- Patricia A. Lee**, (1990) Assistant Professor of Special Education — B.A., M.S., Ed.D., University of Kansas (Q)
- Randy J. Lennon**, (1982) Professor of Educational Psychology — B.A., University of California, Berkeley; M.A., Ph.D., Arizona State University (Q)(DR)
- Betty J. Lindauer**, (1990) Assistant Professor of Educational Field Experiences — B.A., M.A., Ed.D., University of Northern Colorado
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- Douglas A. MacIsaac**, (1989) Assistant Professor of Educational Field Experiences — B.A., Ed.S., Michigan State University
- Janice D. Martin**, (1992) Assistant Professor of School Psychology — B.S., M.A., George Mason University; Ph.D., Mississippi State University (Q) (DR)
- Teresa M. McDevitt**, (1985) Associate Professor of Educational Psychology and Affiliate Assistant Professor of Applied Statistics — B.A., University of California; M.A., Ed.S., Ph.D., Stanford University (Q)(DR)
- Robert P. Merz**, (1972) Assistant Professor of College Student Personnel Administration — B.A., St. Thomas College; STB, Catholic University of America; M.A., St. Thomas College; M.Ed., Colorado State University; Ed.D., University of Northern Colorado
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- Lucy Montoya**, (1992) Coordinator of Center for Diversity in Teaching — B.A., University of Southern California
- Francie R. Murry**, (1991) Assistant Professor of Special Education — B.A., M.Ed., Central Washington University; Ph.D., University of Virginia (Q)
- Richard L. Needham**, (1982) Associate Professor of Elementary Education and Reading — B.S., Oregon State University; M.Ed., Ed.D., University of Virginia (Q)(DR)
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- Stuart N. Omdal**, (1994) Assistant Professor of Special Education — B.A., Seattle Pacific University; M.A., Ph.D., University of Connecticut
- Jeanne E. Ormrod**, (1976) Professor of Educational Psychology — B.A., Brown University; M.S., Ph.D., Pennsylvania State University (Q)(DR)
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- Deborah A. Powell**, (1984) Associate Professor of Elementary Education and Reading — B.S., Indiana University; M.S., Purdue University; Ed.D., Indiana University (Q)(DR)
- Judith A. Fraul**, (1967) Professor of Counseling Psychology — B.A., Western Illinois University; M.A., Ed.D., Indiana University (Q)(DR)
- Steven Pulos**, (1990) Associate Professor of Educational Psychology — B.A., M.A., San Francisco State University; Ph.D., York University, Toronto (Q)(DR)
- D. Kim Reid**, (1991) Professor of Special Education — B.A., Montclair State College; M.Ed., Ph.D., Temple University (Q)(DR)
- Barbara G. Rhine**, (1991) Assistant Professor of Special Education — B.A., Pittsburgh State University; M.A., Ed.D., University of Northern Colorado (Q)
- David H. Roat**, (1968) Professor of Foundations of Education — B.A., Albion College; M.A., Ph.D., Michigan State University
- Harvey Rude**, (1982) Professor of Special Education — B.S., Moorhead State University; M.A., Ed.D., University of Northern Colorado (Q)(DR)
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- Dale Shaw**, (1973) Professor of Educational Psychology and Affiliate Professor of Applied Statistics A.B., Colorado College; M.A., Kansas State University; Ph.D., University of Northern Colorado (Q)(DR)
- Sarah F. Shaw**, (1967) Professor of Counseling Psychology — B.S., West Virginia University; M.A., Marshall University; Ed.D., Indiana University (Q)(DR)
- Fredrick L. Silverman**, (1984) Professor of Elementary Education and Reading — B.A., Southern Methodist University; M.A., University of Chicago; Ed.D., University of Houston (Q)(DR)
- Yvonne Siu-Runyan**, (1989) Associate Professor of Elementary Education and Reading — B.Ed., University of Hawaii; M.A., Michigan State University; Ph.D., University of Toledo (Q) (DR)
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- Susan E. Spooner**, (1983) Professor of College Student Personnel Administration — B.S., Purdue University; M.S., University of Wisconsin- Madison; Ph.D., Purdue University (Q)(DR)
- Jennifer Stevenson**, (1994) Assistant Professor of Elementary Education and Reading — B.A., College of Wooster; M.S., Ph.D., University of Wisconsin, Madison
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- Karen A. Roberto**, (1984) Professor of Gerontology — B.A., Indiana University of Pennsylvania; M.S., Ph.D., Texas Tech University (G)(DR)
- Carol Roehrs**, (1989) Assistant Professor of Nursing — B.S., M.S., University of Colorado
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- Vincent A. Scalia**, (1977) Professor of Human Rehabilitative Services — B.S., St. Peter's College; M.S., University of Arizona; Ed.D., University of Northern Colorado (G)(DR)
- Carole M. Schneider**, (1992) Associate Professor of Kinesiology and Physical Education — B.S., Briar Cliff College; M.S., Iowa State University; Ph.D., University of Minnesota (G) (DR)
- Jim Stehl**, (1988) Professor of Physical Education — B.S., Rutgers University; M.S., Ph.D., University of California-Los Angeles (G)(DR)
- David K. Stotlar**, (1988) Professor of Physical Education — B.S., Eastern Illinois University; M.Ed., Slippery Rock State; Ed.D., University of Utah (G)(DR)
- Linda Sullivan**, (1990) Assistant Professor of Nursing — B.S., Indiana University; M.S., University of Northern Colorado
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- Robbyn R. Wacker**, (1990) Associate Professor of Gerontology — B.S., B.A., M.S., University of Northern Colorado; Ph.D., Iowa State University (G)
- Marcia L. Walker**, (1991) Assistant Professor of Kinesiology and Physical Education — B.A., Oklahoma Baptist University; M.S., Oklahoma State University; Ph.D., University of New Mexico (G)
- Nancy E. White**, (1988) Professor of Nursing — B.S.N., University of Virginia; M.S.N., University of Colorado-Denver; Ph.D., University of Arizona (G)
- Richard R. Wolfe**, (1965) Professor of Human Rehabilitative Services — B.S., Thiel College; M.S., Westminster College; Ph.D., University of Pittsburgh (G)(DR)
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College of Performing and Visual Arts

- A. Eugene Aitken**, (1976) Professor of Music Director of Jazz Studies; — B.A., University of Washington; M.M., Ph.D., University of Oregon (G)(DR)
- Vergie Amendola**, (1991) Assistant Professor of Music — B.A., University of Northern Colorado; M.M., Northwestern University
- Edwin D. Baker**, (1965) Professor of Music — B.M., M.M., Indiana University (G)(DR)
- H. Gray Barrier**, (1983) Associate Professor of Music — B.M.E., East Carolina University; M.M., Northwestern University (G)
- Jonathan Bellman**, (1993) Assistant Professor of Music — B.A., University of California-Santa Barbara; M.M., University of Illinois at Urbana-Champaign; D.M.A., Stanford University (G)

- Diane Bolden Taylor**, (1993) Assistant Professor of Music — B.M., Milliken University; M.M. Indiana University
- Betty E. Carlisle**, (1969) Professor of Visual Arts — B.S., Eastern Montana College; M.A., University of Wyoming; Ed.D., University of Northern Colorado (Q)
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